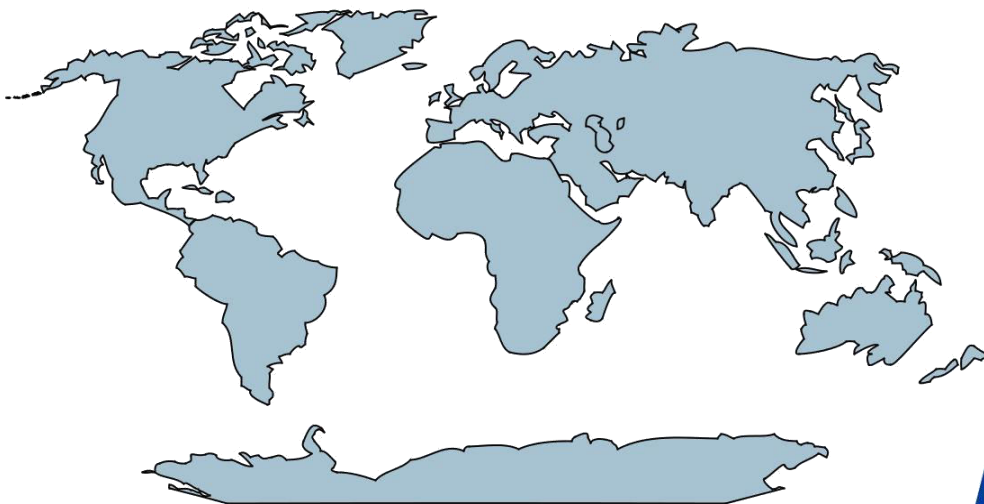


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STUDY OF FISH FAUNA OF BHAIRAVI RIVER

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ABSTRACT

The fish faunal diversity of Bhairavi River was studied monthly from 2019-2021 in three sites near the confluence with Damodar River. The study also includes the site near the confluence of Bhairavi River and Damodar River. The present study reveals that at Bhairavi River houses a good number of fresh water fishes belonging to 36 species, 6 order 12 families and 28 genera. Among 6 orders Cypriniformes was dominant with 16 fish species followed by the Order Siluriformes with 8 species, and order Perciformes with 8 species and Osteoglossiformes with 2 species. The study revealed that among 36 fishes species 35 fishes are categorized as Least Concerned according to the (IUCN 1994) Red Data Book but the fish Chitala chitala is declared as Near Threatened. The statistical data of fish diversity study was done following Simpson's index of diversity, Pielous Evenness and Margalef index of species richness.

Keywords: Ichthyofaunal diversity, Species, River.

INTRODUCTION

Rivers are major resource of a country. India is gifted with 14 major rivers covering above 20,000km², 44 medium rivers having catchment of about 2000 km² and 20,000 km² and many minor rivers covering the catchment area above 2,000km² (Das et al., 2017). Indian rivers are considered as major reservoirs of healthy rich and highly diversified ichthyofaunal community (Vass et al., 2011). In present communication an attempt has been made to identify Talwar and Jhingran (1991), Jayaram (1999), Day (1957–78) and enlist the ichthyofaunal diversity of Bhairavi River. Bhairavi River is one of the major tributary of river Damodar. The Bhairavi River (also known as Bhera River) originates from hills of Ranchi and joins Damodar River by making a water fall. Study of fish faunal diversity of Bhairavi river is the prerequisite for proper management and conservation of the riverine recourse. The river valley is densely crowded with coal mines and coal washeries along with these sources of pollution the river valley modification for the sake of the modernization is increasing day by day. As the consequence the fishes of Bhairavi River has to face the threat of damage caused by the pollution. The present study aims to reveal the present status of fish faunal diversity of Bhairavi river those still survive in the threatened aquatic atmosphere.

Material and Method

The study of hydrology was done continuously for 15 days in every month during 2019-2021 at three sites also at Bhairavi River near confluence with Damodar River. The fish samples were collected by engaging fishermen from 6 AM to 6 PM. The fish collection was also done from fish landing station near the Gorge of Damodar River.

Diversity indices

Species diversity was determined by analyzing the catch data and data collected from the fish landing stations. Species richness was determined by Index of Richness (R) (Margalef 1958). Species evenness was calculated by Evenness index (E) (Hill 1973). Diversity of fish species was determined by Index of Diversity (Shannon and Weiner 1963), Dominance index (Simpson's index) (Simpson 1949). Species diversity is in direct proportion with Shannon's index and Dominance index has inverse relation.

RESULT AND DISCUSSION

Present study of ichthyofaunal diversity of Bhairavi River revealed the river houses a good number of edible fishes and proper conservation and management of fish species of this river is earnestly needed. The study of richness and diversity of the river fishes shows that a good number of edible fishes are present in the river and often shows migration to Damodar River through the confluence area (Fig. 1). The systematic list of the Bhairavi River fishes revealed a list of 36 fishes belonging to orders, families and genera (Table 1.). In the present study order Cypriniformes was most dominant followed by orders Siluriformes and Perciformes with same number of species and order Osteoglossiformes.

Several research works on river fishes revealed that indigenous fishes shows a mosaic pattern of fish species diversity Sakhare 2001, Singh 2001, Pisca et al., 2000, Salasker and Yeergi 2004 and Srikanth et al., 2009; The present observation corroborates observations of fish diversity in different rivers Amboli 2012; Sarkar 2012; Sinha and Jamal, 2015; Ranjan and Verma 2017; Jain et al., 2019. The present study reveals that the fishes belonging to order Cypriniformes were dominant with 16 species, 7 Genus under the single family Cyprinidae.

The fishes belonging to Order Perciformes includes 5 families and 8 Genus, whereas fishes belonging to order Siluriformes includes 8 species includes fishes of 3 families and 6 Genus. The fishes belonging to Orders Osteoglossiformes represents 2 fish species under single Genus and family, Order Clupeiformes, and Synbranchiformes were represented by single species as well. The study revealed that the species belonged to the family(Fig. 2.) Cyprinidae shows dominance with 16 species of fishes followed by the family Bagridae 4 fishes species, whereas the families Schilbeidae and Ambassidae with 3 fish species, family Channidae, Mugilidae and Notopteridae with 2 fish species, other 6 families Clupeidae, Synbranchidae, and Siluridae, Gobiidae, Anabantidae, Channidae represented single species of fish. The Statistical analysis indicates that the fish species richness is high along with a high diversity index(Table 2). The Shannon weiner fish diversity index of Bhairavi river ranged from 4.2-4.6. The Simpsons dominance index value ranges from 0.901-0.908. The Pilelou's evenness values ranged from 0.742-0.748. However Margalef index ranged from 8.8420-8.8429. The most significant finding is that the Near Threatened fish species Chitala chitala are found in good numbers in this river. The river should be brought under proper conservation and the upper valley regions of this river should be studied to know the possible habitat restoration to bring all the breeding grounds of the fishes under observation (Bergerot et al., 2008).

Table 1. List of Fishes of Bhairavi River

Sl. No.	Scientific Name	Local Name	Status
			Iucn
Order:Osteoglossiformes Family:Notopteridae			
1.	Notopterus Notopterus (Pallas)	Pholui	Lc
2.	Chitala Chitala (Pallas)	Chital	Near Threatened
Order Clupeiformes Family: Clupeidae			
3.	Gudusia Chapra(Hamilton Buchanan)	Khaira	Lc(Decreasing)
Order Cypriniformes Family; Cyprinidae			
4.	Puntius Ticto (Hamilton Buchanan)	Ticto Barb	Lc
5.	Puntius Sophore(Hamilton Buchanan)	Stigma Barb	Lc
6.	Puntius Sarana(Hamilton Buchanan)	Saral Punti	Lc
7.	Puntius Chola(Hamilton Buchanan)	Punti Fish	Lc
8.	Amblypharyngodon Mola (Hamilton Buchanan)	Mourola Fish	Lc
9.	Satmostoma Bacaila(Hamilton Buchanan)	Large Minnow	Lc
10.	Brachydanio Rerio (Hamiltonbuchanan)	Techokha	Lc
11.	Danio Aequipnnatus (Mcclelland)	Small Minnow	Lc
12.	Esomus Danricus (Hamilton Buchanan)	Dankia	Lc
13.	Rasbora Daniconius (Hamilton Buchanan)	Blackline Rasbora	Lc
14.	Cirrhinus Mrigala(Hamilton Buchanan)	Mrigel Fish	Lc
15.	Cirrhinus Reba(Hamilton Buchanan)	Reba Fish	Lc
16.	Labeo Dero (Hamilton Buchanan)	Dero Fish	Lc
17.	Labeo Rohita (Hamilton Buchanan)	Rui Fish	Lc
18.	Securicula Gora (Hamilton Buchanan)	Gora Fish	Lc
19.	Aspidoparia Morar (Hamilton Buchanan)	Mora Fish	Lc
Order: Siluriformes Family: Bagridae			
20.	Mystus Cavasius(Hamilton)	Tangara	Lc
21.	Mystus Tengara(Hamilton)	Tengara	Lc
22.	Mystus Vittetus(Hamilton)	Tengara	Lc
23.	Aorichthys Seenghala (Sykes)	Aor Fish	Lc
Family Siluridae			
24.	Ompok Bimaculatus (Bloch)	Boal Fish	Lc
Family Schilbeidae			
25.	Ailia Coila (Hamilton Buchanan)	Coli Fish	Lc
26.	Gagata Cenia (Hamilton Buchanan)		

27.	Glyptothorax Telchitta(Hamilton Buchanan)		
Order: Synbranchiformes Family Synbranchidae			
28.	Monopterus Cuchia (Hamilton Buchanan)	Cuche Fish	Lc
Order: Perciformes Family: 1, Anabantidae			
29.	Chanda Nama (Hamilton Buchanan)	Chada Fish	Lc
30.	Parambassis Thomassi (Day)	Lal Chanda	Lc
31.	Pseudambasis Baculis (Hamilton Buchanan)	Chanda Fish	Lc
Family: Mugilidae			
32.	Rhinomugil Corsula (Hamilton Buchanan)	Khoesula Fish	Lc
33.	Sicamugil Cascasia (Hamilton Buchanan)	Kacki Fish	Lc
Family: Gobiidae			
34.	Glossogobius Giuris (Hamilton Buchanan)	Gobi Fish	Lc
Family Anabantidae			
35.	Anabas Testudineus (Bloch)	Koe Fish	Lc
Family: Channidae			
36.	Channa Orientalis Bloch Schneider	Lata Fish	Lc

Table 2. Diversity Indices of fishes from Bhairavi River.(2019-2021)

	2019	2020	2021
Shannon Weiner Diversity Index	4.618784	4.01846	4.28741
Simpson's Dominance Index	0.901485	0.902831	0.908420
Pielou's evenness Index	0.74258	0.74859	0.74201
Margalef 's Richness Index	8.84219	8.842013	8.842013

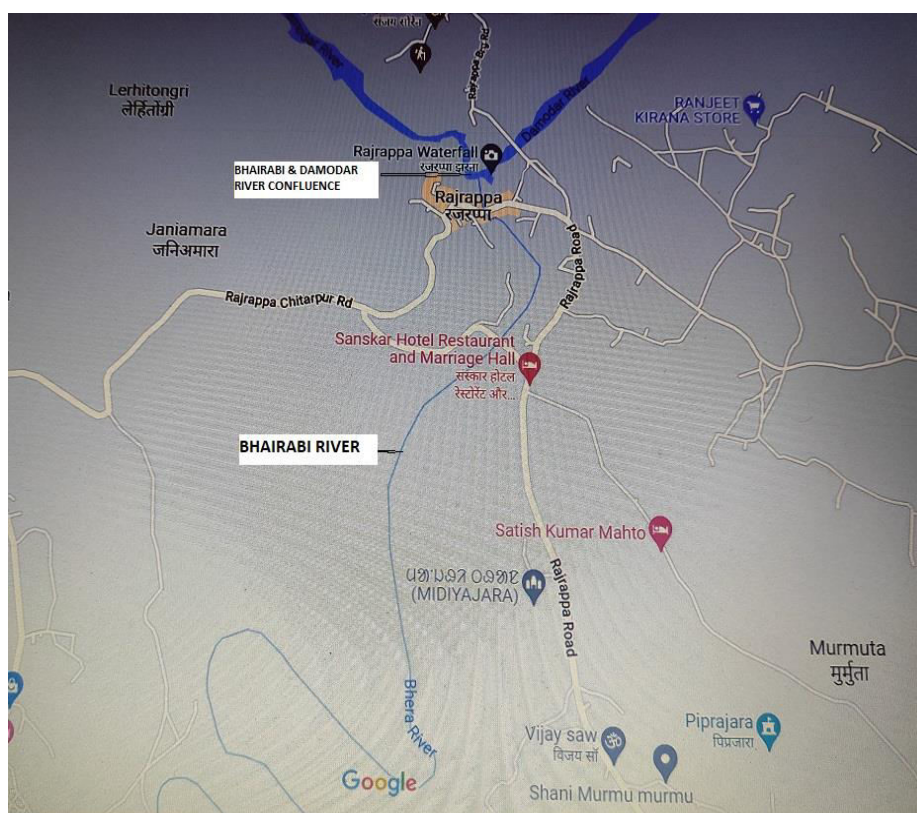


Fig. 1. Map of Bhairavi River

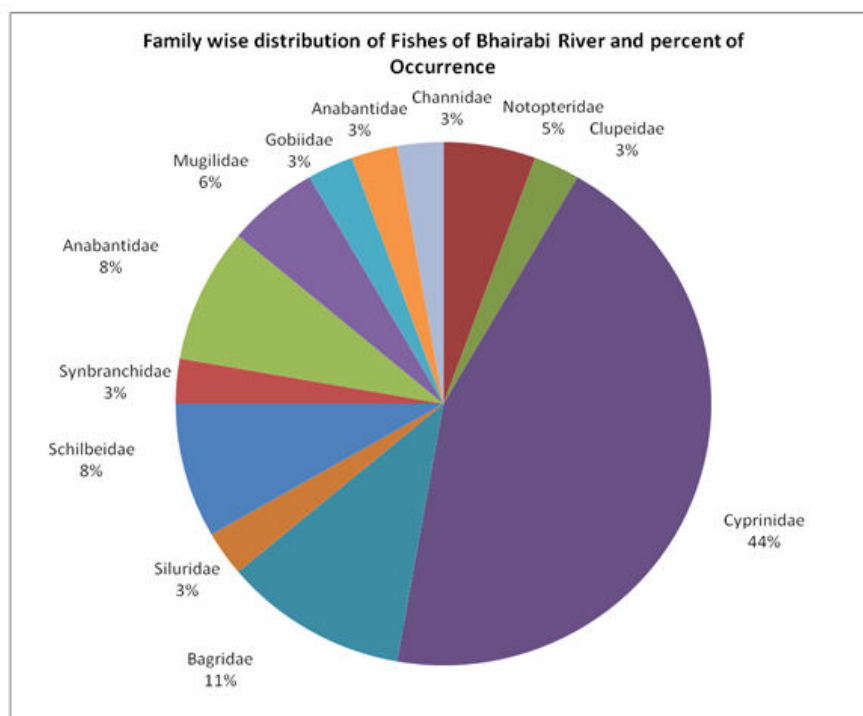


Fig. 2. Family wise distribution of fishes of Bhairavi River.

REFERENCE

- Amboli R.K. and Jha Y.N., Status of Cat Fish Diversity of River Kelo and Mand in Raigarh District, CG, India, *Int. Res. J. Biological Sci.*, 1(1), 71-73 (2012) .
- Bergerot B, Lasne E, Vigneron T, Laffaille Bergerot B, Lasne E, Vigneron T, Laffaille P. 2008. Prioritization of fish assemblages with a view to conservation and restoration on a large scale European basin, the Loire (France). *Biodivers Conserv.*, 17(9): 2247-2262.
- Carol J, Benejam L, Alcaraz C, Vila- Gispart A, Zamora L, Navarro E, Armengol J and Garcia-Berthou E .2006. The effects of limnological features on fish assemblages of 14 Spanish reservoirs. *Ecol Freshw Fish.*, 15: 66-77
- Day, F. (1957–78). *Fishes of India; being a natural history of the fishes known to inhabit the seas and freshwaters of India, Burma, and Ceylon*. Text and atlas in 4 parts. London: xx+778, 195.
- Das, A. K., Manna, R. K., Rao, D. S. K., Jha, B. C., Naskar, M. and Sharma, A. P. 2017. Status of the River Krishna: Water quality and riverine environment in relation to fisheries. *Aquatic Ecosystem Health & Management*, 20(1-2): 160-174.
- Jayaram, K. C., (1999). *The Freshwater Fishes of the Indian Region*, Narendra Publishing House, New Delhi,. 551.
- Jain, A., Surnar, S., Saini, V. P. and Ojha, M. L. 2019. Biodiversity of indigenous ornamental fish in Waki river system of Southern Rajasthan. *J. Entomol. Zool. Stud.*, 7(4): 293-298.
- Manab Kumar Saha and Bidhan C. Patra, Customers Preference for Aquarium Keeping: Market survey, Special Emphasis on Indigenous ornamental Fishes in four District of West Bengal, India, *Res. J. Recent Sci.*, 2(12), 43-53 (2013) .
- Pisca Ravi Shankar, Saraladevi B and Divakara Chary K (2000) The present status of Ibrahimbagh, a minor reservoir of Hyderabad. *Fishing Chimes* 20 (2): 41-43.
- Ranjan, R. and Verma, A. 2017. A study on diversity of ornamental fish species available in Bokaro district of Jharkhand, India. *Int. J. Zool. Stud.*, 2(5): 139- 142.
- Sarkar. L, and Banerjee, S. (2012). *Diversity and distribution of fishes in Damodar river system (India)*. Lap Lambert Academic Publishing. 230pp. ISBN:978-3-659-18484-0.

-
- Sakhare, V. B. 2001. Ichthyofauna of Jawalgoan reservoir. Maharashtra, Fishing Chimes, 19 (8): 45-47. Raj ADS and T Jayasekher. 2007. Hydrogeochemistry of the river basins of Kanyakumari district. Indian J. Environ.Prot., 27(2): 145-152.
 - Salasker PB and Yeergi SG .2004. Primary productivity of powailake, Mumbai Maharashtra. J Aqua Biol 19 (1): 19-22.
 - Singh Gurucharan .2001. Status of development of fisheries of Pong reservoir, Himachal Pradesh. Fishing Chimes, 21 (1): 88-90.
 - Srikanth K Ramu G and Benarjee G .2009.The study on fish diversity of Rammappa lake,Warangal district, Andhra Pradesh, India. J Aqua Biol., 24 (2): 57-60.
 - Sinha, A. and Jamal, A. 2015. Freshwater Ornamental Fish of Bihar. Bulletin No., 191: 80. ICAR Central Inland Fisheries Research Institute, Barrackpore, Kolkata.
 - Vass, K. K, Das, M. K, Tyagi, R. K, Katiha, P. K, Samanta, S., Srivastava, N. P., Bhattacharjya, B. K., Suresh, V. R, Pathak, V., Chandra, G., Debnath, D. and Gopal, B. 2011. Strategies for Sustainable Fisheries in the Indian Part of the Ganga Brahmaputra River Basins. International Journal of Ecology and Environmental Sciences, 37(4): 157-218.
 - Talwar, P. K. and Jhingran, A. G. (1991).Inland Fishes of India and Adjacent Countries.Vol I and II. Oxford and IBH Publishing Co. India, pp.115.

A CRITICAL STUDY OF THE CHALLENGES BEFORE SMALLHOLDER FARMERS IN MARATHWADA

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ABSTRACT

India is known as an agrarian country, which can be said to be mainly for doing something, India has the second largest agricultural land in the world, about 55% of India's population depends on agriculture for their livelihood, India is the world's largest livestock rearing country (mainly buffalo) in the world, wheat, rice and cotton crops consume the most agricultural land in India. Also milk, spices and seeds are grown more in India. India also ranks second in the world in crops like fruits, vegetables, tea etc. The Indian food processing industry holds a share of 32 percent in the world market. In India, the food processing industry ranks fifth in terms of combined exports and expected growth. A separate Department of Agriculture and Farmer Welfare is functioning at the central government level for the management of Indian agriculture. Through which the plans of the center are implemented with each state. Each state also has a separate agriculture department run by the government. Through which it becomes convenient to implement favorable schemes for those states. Maharashtra is one of the state which having good natural conditions for agriculture but marathwada is area of Maharashtra have scarcity of different amenities and natural conditions. This research paper wants to throughout the light on current challenges before smallholder farmers, their current status and expected future growth of basic amenities for good farming in marathwada region.

Keywords: Smallholders, Agriculture,

RESEARCH METHODOLOGY

Data Collection: For the preparation of this research paper both type of data are used. A) Secondary data are used which are collected from various sources includes different articles, Journals, Magazines, Periodicals, Research Works, News Papers, web sites of government of India for online market and all the research related Web sites. B) As concerned primary data collection there is huge universe in the study area but as per the convenience of the researcher we are surveyed by 50 farmers form the marathwada region with the required questionnaire and used it for the conclusion.

Objective of the Research Study: This research paper is highlighting on different issues and challenges before smallholder farmers in marathwada region. Following are the important objectives framed to write this paper.

To take an overview and status of the smallholders in marathwada region in maharashtra.

To analyze the actual challenges before smallholders in the study area.

To know the government efforts towards stallholder farmers in study area.

Limitations: This write-up is only for smallholders in marathwada region and not concerned with the other study area and other than smallholder farmers.

Research Question: Is there in challenges before smallholder farmers in marathwada region in Maharashtra?

INTRODUCTION

Maharashtra is known as one of the leading states for agriculture in India. Marathwada is a large region in Maharashtra, comprising of eight districts mainly Aurangabad, Beed, Jalna Latur, Nanded, Osmanabad, Parbhani and Hingoli. All these areas have low rainfall compared to other places, which directly affects the agriculture here. Due to the low level of agricultural production, the development here is comparatively less. The high dependence on agriculture and low productivity of agriculture as well as many problems facing agriculture are all affecting the people of this region, such as the migration of the people of this region to the big cities is increasing day by day. Another consequence of which is increasing pressure on the big cities of Marathwada. Considering the study of agriculture in Marathwada, which has various problems, it is noticed that the number of small landholding farmers is increasing day by day. This seems to have an adverse effect on the agricultural business. The problems faced by smallholder farmers are generally seen in Marathwada region as follows.

1. Continuing Division of Agriculture: The effect of Indian population is seen day by day on the division of agriculture. Indian population and dependent on agriculture and this ratio is 54 percent. India has been dividing farm ownership from generation to generation since independence. Therefore, the impact of land scarcity is seen

in all horizons. Therefore, the per capita area under agriculture seems to have reduced in India. Which seems to have a strong effect on his production?

2. Economic Situation of Small Land Farmers: When studying the economic situation of small land farmers in Marathwada, you can see that it is very fragile and miserable. Due to which all the farmers here are using traditional agriculture. Therefore, the amount of modern agriculture, group farming, industrial agriculture is very low in this area. This limits the farmers to carry out modern agriculture. Therefore, they are seen doing traditional agriculture.

3. Lack of Mechanization: Agriculture in Marathwada shows lack of mechanization, mainly due to the financial condition of the farmers here. Also, since the productive capacity of the farmers' land is low, they get less profit. Hence, their investment in mechanization seems less. Due to lack of mechanization, they have to make their livelihood in traditional agriculture as an alternative.

4. Lack of Water Management: Marathwada is known as a low rainfall region in Maharashtra. Despite this, there does not seem to be much planning and management for water here. As a result, farmers have to rely on natural rainfall except in some areas, which affects their agricultural productivity.

5. Increasing Proportion of Laboring Class: In Marathwada, the proportion of farmers in the laboring class is increasing due to all the reasons of lack of agricultural land, low production, bad economic conditions. Most of the sugarcane workers from these areas are found to be moving to Maharashtra, mainly due to their declining economic conditions due to low production in their own farms.

6. Low Implementation of Government Schemes: Politically though Marathwada is well documented, at the political level government schemes seem to be poorly implemented in this region. The main reason for this seems to be poor planning of agricultural water here. Even the local politicians have neglected the basic agricultural facilities here for many years.

As compared to Marathwada, Western and country parts of Maharashtra have implemented more government schemes, so they are more developed than Marathwada.

7. Lack of Agricultural Education: The amount of agricultural education is low in Marathwada. The same effect can be seen on the opportunities of local farmers in agriculture and agribusiness. They seem to have relatively little knowledge of agricultural opportunities, which is why the agricultural business in Marathwada has declined. As the productivity of agriculture is low, the corresponding amount of employment is equally low.

8. Migration to Big Cities: Due to various reasons such as lack of land holding, low productivity of agriculture, lack of agricultural education, less opportunities for advancement, the rate of migration of people from rural areas to big cities is increasing day by day. This has a serious effect on the rural life of Marathwada as well as on the urban life.

9. Development Rate of Marathwada: Most of the areas are facing social problems except for some specific cities in Marathwada. Like other parts, the development of educational, medical, industrial etc. is less visible here. Or this region has to depend even more on the big cities of Maharashtra. Therefore, it is important to have an all-round development of Marathwada.

10. Lack of Political Will: There is little conscious effort by the big political figures for the development of Marathwada. As a result, the rural population here seems to be involved in idle activities. The rural development here seems to be stuck in many social issues, which the political powers here take advantage of. But here politicians are rarely seen trying to take long-term developmental measures.

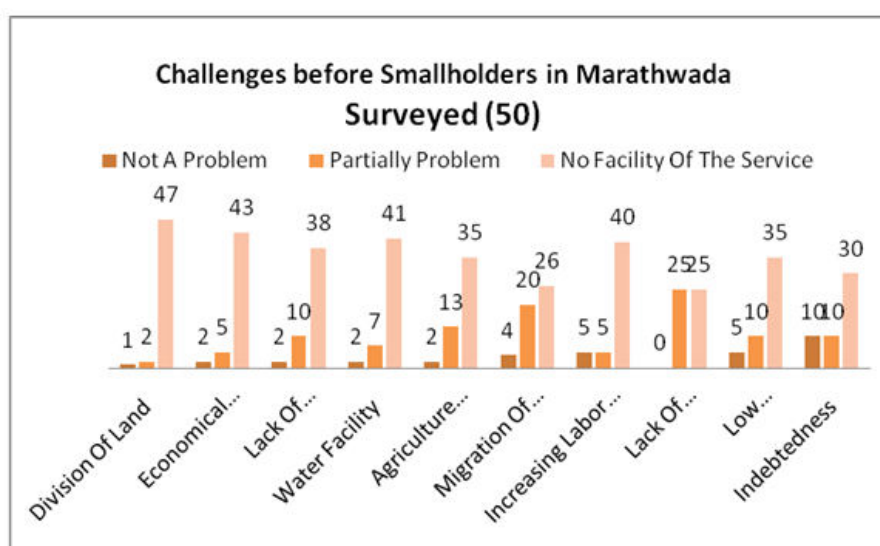
11. Lack of Infrastructure: Rural areas of Marathwada still suffer from lack of infrastructure. In which mainly the supply of electricity for agriculture is seen in a disturbed form, at the same time there is a severe shortage of roads, credit institutions and markets in the rural areas. This increases the cost to farmers of transporting agricultural produce to the markets, leading to a decline in their agricultural output. Also, due to lack of proper type of markets, agricultural produce has to be sold at very low prices. That is why the development of infrastructure in the rural areas of Marathwada is equally important.

12. Indebtedness: Farmers in Marathwada are beset by many problems and have to take loans for various reasons. Due to these various problems, their indebtedness is seen to increase regularly due to reduction in agricultural production. Due to the increase in agricultural debt, the problems faced by them are increasing, due to which the farmers in this area are facing serious problems like suicide, migration. It seems important to have a proper and scholarly planning at the government level.

As above many problems are facing the small landholding farmers of Marathwada. Therefore, comprehensive efforts are expected from all levels for this. So that agriculture and farmers in Marathwada live with dignity.

Pilot Survey: There are 50 smallholders in the marathwada region have been surveyed on different challenges before agriculture in marathwada region Maharashtra.

Challenges Before Smallholder Farmers	Not a Problem	Partially Problem	No Facility of the Service
Division of Land	1	2	47
Economical Condition	2	5	43
Lack of Mechanization	2	10	38
Water Facility	2	7	41
Agriculture Education	2	13	35
Migration of Farmers	4	20	26
Increasing Labor Class	5	5	40
Lack of Infrastructure	0	25	25
Low Implementation of Govt. Scheme	5	10	35
Indebtedness	10	10	30



CONCLUSION

When you study the above problems facing agriculture in Marathwada, you realize that there is an opportunity to work here at all levels. Conscious efforts at all levels are very important at socio-political as well as economic levels. If the agricultural problems of Marathwada are to be solved, water planning, agricultural education, infrastructure, importance of modern agriculture, availability of mechanization in this area will have to be properly addressed. Long-term measures have to be prepared and implemented properly for the agricultural development of Marathwada from the government level. For which financial and managerial planning from the government level is very important. If the government and the society succeed in doing this, the agriculture in Marathwada will survive and the smallholder farmers here will survive. Otherwise this smallholder farmer is prone to suicide, addiction, indebtedness, migration, crime, etc. Such social issues will always be faced. Thus many problems are faced by smallholder farmers. To resolve which efforts are expected to be made from the government social and every village level.

REFERENCES

- <https://www.toppr.com/guides>
- ATMA Guidelines, 2018, Ministry of Agriculture & Farmers Welfare, Government of India,
- <http://agriculture.gov.in/>
- <http://agricoop.nic.in/>
- <http://farmer.gov.in/>
- https://en.wikipedia.org/wiki/Commercial_farming

-
- SPICE, Vol. 1 No. 4: March 2003 (The Director General, National Institute of Agricultural Extension Management (MANAGE) Rajendranagar, Hyderabad - 500 030, India
 - Khehra S and Bal J S. 2014. Influence of organic and inorganic nutrient sources on growth of lemon (Citrus limon (L.) BURM.) cv. Baramasi. Journal of Experimental Biology and Agricultural Science 2(1): 126-129.
 - Krishan Chandra (2005), ORGANIC MANURES, Regional Centre of Organic Farming.
 - Robert Parnes (2013), Soil Fertility, A Guide to Organic and Inorganic Soil Amendments. <http://creativecommons.org/licenses/bynd/3>.
 - Biagio, T., Alessandra, T., Elvira, R., Maria, A., Giancarlo, R., & Francesco I. (2013). Effects of organo-mineral glass-matrix based fertilizers on citrus Fe chlorosis. Europ. J. Agronomy, 44, 32-37.

NEED OF ORGANIC FERTILIZERS IN TODAY'S MODERN INDIAN AGRICULTURE: AN OVERVIEW

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ABSTRACT

Fertilizers are important substances added in the soil to increase nutrients and promote soil fertility and also increases plant growth. Today fertilizer has become essential to modern agriculture to feed the growing population. Uses of fertilizers, particularly, the chemical fertilizers make blessings on human, which helped contain hunger and death in different corners of the world. Though chemical fertilizers increase crop growth and production, its overuse make hardened the soil, it decreases fertility, strengthened pesticides, polluted air and water, and released greenhouse gases, thereby bringing hazards to human health and environment. It has already been proved how chemical fertilizers pose serious challenges to the balanced and sustainable growth. All over the scientists and researchers are arguing in favour of organic fertilizers as the best solution to avoid soil pollution and many other threats to environment and life caused by overuse of chemical fertilizers. Continuous use of these chemical fertilizers depletes essential soil nutrients and minerals that are naturally found in fertile soil.

Keywords: Organic Fertilizers, Chemical fertilizers, Organic manure.

INTRODUCTION

In the world India is on second position for production and consumer of fertilizers. Every year Indian agriculture consumes more than 17 million tonnes of nitrogen, 6.9 million tonnes of phosphorus, and 2.8 million tonnes of potash. Fertilizer use has helped improve crop yield(1) but continuous use of fertilizers effect on environment such as eutrophication, emission of greenhouse gases, and distortion in the soil nutrient balance(2).

In modern days chemical fertilizer has become essential to develop Indian modern agriculture, due to continuous growing in population. Continuous use of fertilizers, especially, the chemical fertilizers increase crop production, their overuse make hardened the soil, it also decreases soil fertility, strengthened pesticides, polluted air and water, and released greenhouse gases, thereby bringing hazards to human health and environment as well. Accordingly, scientists and researchers are seen arguing in favour of organic fertilizers as the best solution to avoid soil pollution and many other threats to environment and life caused by overuse of chemical fertilizers.

Organic Farming is hour of the need to get rid of chemical fertilizers, pesticides and growth regulators etc.

The aim of this paper is to increase awareness about the importance of organic fertilizer on soil and also the importance of soil for future.

Organic Fertilizers

Organic fertilizers are those fertilizers which are manufactured using organic substances which are bio-degradable. Organic fertilizers are derived from plant & vegetable residues, animal matter & animal excreta or mineral sources (3). Substance that occurs naturally and is easily bio-degradable is organic and if this organic material enhances the richness of the soil, it is termed as organic fertilizer. A basic advantage of organic fertilizers is that they have complex biological structure. They take time and help of organisms present in soil to break down to simpler nutrient molecules (4). This process is slow and hence the full and timely consumption of the nutrients by plants is ensured unlike the chemical fertilizers. Manure, slurry, worm castings, peat, seaweed, sewage, and guano are the naturally occurring Green manure and compost, blood meal, bone meal and seaweed extracts, etc. are manufactured organic fertilizers.

Organic fertilizers are economically better than their chemical counterparts. They can be prepared locally on the farm. Made from locally procured material they always have a better availability. They are better on environmental aspects as well. They are made from renewable ingredients which will always be available.

Types of Organic Fertilizers

1. Manure

The Manure are organic in nature, used by farmers to provide food (plant nutrients) for the crop plants. There are a number of organic manures like farmyard manure, green manures. It is made from animal excreta (cow dung & goat droppings). Cattle Manure is a good source of nitrogen and organic carbon while goat manure is

rich in nitrogen and potash. It is used to improve soil productivity by correcting soil(5).physical, chemical and biological properties.



2. Compost

Compost is a mixture of ingredients used as plant fertilizer and to improve soil's physical, chemical and biological properties. It is organic matter decomposed through composting. The organic matter used here can be vegetable and plant waste, animal excreta.



3. Rock Phosphate

Rock phosphate, or phosphorite, is mined from clay deposits that contain phosphorus and is used to make organic phosphate fertilizers. It is sedimentary rock which contains high amount of phosphate minerals. It is used naturally to fix phosphate levels of soil.

4. Chicken Litter

Poultry litter is an excellent, low cost fertilizer if used properly. Land application of litter returns nutrients and organic matter to the soil, building soil fertility and quality. It consists of chicken manure and sawdust. It has high levels of nitrogen and potash. Consider superior for conditioning of soil for harvest than chemical fertilizers.



5. Bone Meal

Organic Bone Meal Fertilizer It is used as an organic fertilizer for plants. Bone meal takes time to break down, releasing nutrients into the soil slowly and providing plants with a steady dose of important phosphorous and calcium. It is a mix of ground slaughter house waste products like animal bones. It is a very good source of phosphorous and amino acids. Being organic it is also a slow-release fertilizer.



6. Vermicompost

Vermicomposting, or worm composting, turns kitchen scraps and other green waste into a rich, dark soil that smells like earth and feels like magic. Not only is it rich in nutrients but it's also loaded with the microorganisms that create and maintain healthy soil. It is a product of organic material degradation using various species of worms, to create a heterogeneous mixture of decomposing food waste.



Organic Manure

The use of chemical fertilizer is increasing day-by day for the sake of increasing production. By excess use of it, the fertility of soil and health also deteriorate. Therefore, the use of organic manure is one of the alternative ways for enhancing production and improves the soil health. It is not only cheaper; easily available ensures sustainable agriculture too.

Organic manures are natural products used by farmers to enhanced sustainable crop production. There are a number of organic manures like farm yard manure, green manures, compost prepared from crop residues and other farm wastes, and biological wastes - animal bones, slaughter house refuse.

Organic manures are natural products used by farmers to enhanced sustainable crop production. There are a number of organic manures like farm yard manure, green manures, compost prepared from crop residues and other farm wastes, vermicompost, oil cakes, and biological wastes - animal bones, slaughter house refuse. Organic manures are natural products used by farmers to provide food (plant nutrients) for the crop plants. There are a number of organic manures like farm yard manure, green manures, compost prepared from crop residues and other farm wastes, vermicompost, oil cakes, and biological wastes - animal bones, slaughter house refuse (6).

Importance of Organic Manures

- Organic manures increase the organic matter in the soil.
- Organic matter in turn releases the plant food in available form for the use of crops.
- Organic manures should not be seen only as carriers of plant food.
- These manures also enable a soil to hold more water and also help to improve the drainage in clay soils.
- They provide organic acids that help to dissolve soil nutrients and make them available for the plants.

Sources of Organic Manures

A. By products of farming and allied industries.

B. FYM, droppings, crop waste, residues, sewage, sludge, industrial waste.

Types of Organic Manures

1. Farm yard manure (FYM)
2. Green manures
3. Crop residues
4. Compost
5. Home compost
6. Concentrated organic manures

1. Farm yard Manure: Farm yard Manure is prepared basically using cow dung, cow urine, waste straw and other dairy wastes. It is highly useful and some of its properties are: FYM is rich in nutrients. When cow dung and urine are mixed, a balanced nutrition is made available to the plants. Availability of Potassium and Phosphorus from FYM is similar to that from inorganic sources. Application of FYM improves soil fertility.

Table-I: Nutritional Status of FYM (%)

Nitrogen	0.5000
Phosphorus	0.2500
Potassium	0.4000
Calcium	0.0800
Sulfur	0.0200
Zinc	0.0040
Copper	0.0003
Manganese	0.0070
Iron	0.4500

2. Green Manures: Many countries have changed from a region of food scarcity to food sufficiency by increased fertilizer use with subsidized prices, but use of organic manures including green manure, declined substantially. Inorganic fertilizers are becoming more expensive, therefore sustainability of soil productivity has become a question. Hence, alternate sources to supplement inorganic fertilizers are thought. Green manuring are low cost and effective technology in minimizing cost of fertilizers and safeguarding productivity (7).

Green Manure Crops: DHAINCHA (*Sesbania aculeate*), MANILA AGATHI (*Sesbania rostrata*)

3. Crop Residues: Crop residues are the non-economic plant parts that are left in the field after harvest. The harvest refuses include straws, stubble and Stover of different crops. Crop remains are also from thrashing sheds or that are discarded during crop processing. The greatest potential as a biomass resource appears to be from the field residues of sorghum, maize, soybean, cotton, sugarcane etc. These residues will contribute 100000 ton of nitrogen, 50000 ton of phosphorus and 200000 tons of potassium. However, crop residues need composting before being used as manure (8).

4. Compost: Compost is a rich source of organic matter. Soil organic matter plays an important role in sustaining soil fertility, and hence in sustainable agricultural production. In addition to being a source of plant nutrient, it improves the physico-chemical and biological properties of the soil (9).

Importance of Composting

Final weight of compost is very less.

Composting temperature kill pathogen, weed seeds and seeds.

Saleable product

Improves manure handling

Reduces the risk of pollution

Volume reduction of waste. During composting number of wastes from several sources are blended together.

Composting temperature kills pathogen, weed seeds and seeds.

Matured compost comes into equilibrium with the soil(10).

Excellent soil conditioner.

5. Home Compost: Organic waste and dried leaves become compost within 90 days.

CONCLUSION

Today, use of organic fertilizers is seen as a necessary agricultural technology. Organic fertilizers will make your soil—and plants—healthy and strong Manure application is a sustainable agricultural practice. To maximize the benefits of manure nutrients, prevent crop damage and minimize the risk of pollution Organic manures are cheapest sources of nutrient compare to synthetic fertilizers. Various sources of organic manures are described and individual nutrient statuses are summarized. All the sources are available in on farm. Farmers can adopt these practices for improve in production.

REFERENCES

1. Kishore, A, K V Praveen, and D Roy. 2013. Direct cash transfer system for fertilisers. Economic and Political Weekly 48(52): 54-63. <https://www.epw.in/journal/2013/52/review-rural-affairs-review-issues/direct-cash-transfer-system-fertilisers.html>

2. Adhya, T, T Sapkota, and R Khurana. 2016. AFOLU emissions. Version 1.0 dated July 15, 2016, from GHG platform India: GHG platform India-2007-2012 National Estimates-2016 Series. <http://ghgplatform-india.org/data-and-emissions/afolu.html>
3. Bokhtiar, S. M., & Sakurai, K. (2005). Effects of organic manure and chemical fertilizer on soil fertility and productivity of plant and ratoon crops of sugarcane. *Archives of Agronomy and Soil Science*, 51, 325-334.
4. Khehra S and Bal J S. 2014. Influence of organic and inorganic nutrient sources on growth of lemon (*Citrus limon* (L.) BURM.) cv. Baramasi. *Journal of Experimental Biology and Agricultural Science* 2(1): 126-129.
5. Krishan Chandra (2005), *ORGANIC MANURES*, Regional Centre of Organic Farming.
6. Robert Parnes (2013), *Soil Fertility, A Guide to Organic and Inorganic Soil Amendments*. <http://creativecommons.org/licenses/bynd/3>.
7. Biagio, T., Alessandra, T., Elvira, R., Maria, A., Giancarlo, R., & Francesco I. (2013). Effects of organo-mineral glass-matrix based fertilizers on citrus Fe chlorosis. *Europ. J. Agronomy*, 44, 32-37.
8. Rana SS. 2016. *Organic Farming*. Department of Agronomy, College of Agriculture, CSK Himachal Pradesh KrishiVishvavidyalaya, Palampur, 90p (DOI: 10.13140/RG.2.2.11136.23045).
9. Abrol, Y.P. and Adhya, T.K. 2017. Technical summary. *The Indian Nitrogen Assessment 1-5*. <http://dx.doi.org/10.1016/B978-0-12-811836-8.00001-X>.
10. Bijay-Singh. 2016. Site-specific nitrogen management in cereals in India. *Indian Journal of Fertilisers* 12(4), 46- 57.

PIVOTAL ROLE OF AGRICULTURE IN GENERATING NATIONAL INCOME OF INDIA

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ABSTRACT

Agriculture forms the backbone of the Indian economy and despite concerted industrialization in the last five decades, agriculture occupies a place of pride. Being the largest industry in the country, agricultures provide employment to around 65 per cent of the total work force in the country. The significance of agriculture in the national economy can be best explained by considering the of agriculture under different heads. Agriculture is the most important sector of Indian Economy. According to the Economic Survey (2017-2018), Indian agriculture sector accounts for 17-18 percent of India's gross domestic product (GDP) and provides employment to around 50% of the country's workforce. Agriculture sector in India is therefore rightly called as backbone of Indian economy.

INTRODUCTION

Presently, Agricultural sector has great role in supporting and accelerating economic development in the developing countries. Development of agriculture is always related to the rural development since it is an integral part to rural economic development

Agriculture is undergoing a huge transformation. In the past, agriculture was seen as a subsistence activity of farmers involving crop and livestock production. For centuries agriculture was the same as farming, and most people lived on farms or nearby and were largely self-sufficient. This is, however, changing substantially in the recent years. Today, agriculture is rapidly turning into a technology and market oriented "industry" which extends from agricultural production, to sophisticated agriscience, and agribusiness. It now connects strongly to the national and global economy. Many people who work in agriculture actually do not work on farms but are engaged in businesses of seed, fertiliser, agro-chemical, farm machinery, food-processing, marketing and trade. Many are engaged in finance, research, distribution, and marketing activities which provide services to the production agriculturalists. Agriculture has become a big business.

Role of Agriculture in Indian Economy

2. Agriculture and allied sector has a critical role in ensuring food security, reducing poverty and sustaining growth in India.
3. The role of Agriculture in Indian economy will be clearer from the following facts:
4. Share in national income: From the very beginning, agriculture is contributing a major portion to our national income. In 1950-51, agriculture and allied activities contributed about 59 per cent of the total national income. Although the share of agriculture has been declining gradually with the growth of other sectors but the share still remained very high as compared to that of the developed countries of the world.
5. Agriculture plays vital role in generating employment: In India over two-thirds of our working population are engaged directly on agriculture and also similarly depend for their livelihood.
6. Supply of raw material to agro-based industries: Agriculture in India has been the major source of supply of raw materials to various important industries of our country. Cotton and jute textiles, sugar, vanaspati, edible oil plantation industries (viz. tea, coffee, rubber) and agro-based cottage industries are also regularly collecting their raw materials directly from agriculture.
7. Source of food security to the expanding population: Agriculture is the only major source of food supply as it is providing regular supply of food to such a huge size of population of our country. It has been estimated that about 60 percent of household consumption is met by agricultural products.
8. Market for industrial products: Since more than two thirds of the population of developing countries like India lives in rural areas, increases rural purchasing power is a valuable stimulus to industrial development.
9. Importance in international trade: For a number of years the three agriculture based exports of India- cotton, jute and tea accounted for more than 50 percent of export earnings of the country.

General Problems Linked to Indian Agriculture

At the time of Independence India's agriculture was an economic laggard. Its backwardness was reflected in the extremely low per hectare and per worker productivity.

1. Feudal Relation of Production: Before Independence, three types of land tenure system were prevalent in the country- zamindari, mahalwari and ryotwari. Around 57 percent area were under zamindari system, 38 percent in ryotwari and 5 percent in mahalwari. After Independence all these systems were abolished.

2. Usurious Capital and Rural Indebtedness: The small and marginal farmers continue to depend on moneylenders for fulfilling their credit requirements to a large extent and thus become victims of exploitation.

3. Outmoded Farming Techniques: Most of the Indian farmer depend upon outdated farming techniques and this lead to the “subsistence farming”.

4. Fluctuations and instability in Crop Output: The fluctuation in crop output is very much visible in India, as Indian agriculture is very much dependent on monsoon.

5. Labour Market Dualism: Due to the excessive pressure of population on land, wages in agricultural sector tend to be considerably lower as compared to the modern industrial sector.

6. Climate Dependence: Indian agriculture is heavily dependent on monsoon rainfall since only half of the cropped area has irrigation facilities.

OBJECTIVE OF THE STUDY

To analyse the agriculture role in the Indian economy

To present an agro-economic profile of India

RESEARCH METHODOLOGY

Secondary data is also one of the foundations of this study. The researcher has collected secondary data from the following published sources.

1. Annual reports of agriculture
2. Report of private research institutes and government committees.

Importance of Agriculture for Industrial Development

Indian agriculture has been the source of supply of raw materials to our leading industries. Cotton and jute textile industries, sugar, vanaspati and plantations – all these depend on agriculture directly.

There are many other industries which is depend on agriculture in an indirect manner. many of our small-scale and cottage industries like handloom weaving, oil crushing, rice husking etc. depend upon agriculture for their raw materials -together they account for 50 per cent of income generated in the manufacturing sector in India.

Role of Agriculture in the Field of International Trade

Importance of Indian agriculture also arises from the role it plays in India's trade. Agricultural products – tea, sugar, oilseeds, tobacco, spices. Etc. -constituted the main items of exports of India. Broadly speaking, the proportion of agricultural goods which were exported came to 50 per cent of our exports.

Role of Agricultural Sector in Economic Planning: importance of agriculture in the national economy is indicated by many facts. For example, agriculture is main support for India's transport system, since railways and roadways secure bulk of their business from the movement of agricultural goods. Internal trade is mostly in agricultural products. Further, good crop implying large purchasing power with the farmers lead to greater demand for manufactures and therefore, better prices. In other words, prosperity of industries. Likewise, it is the failure in the agricultural front that has led to greater demand for manufactures and, therefore, better prices. In other words, prosperity of the farmers is also the prosperity of industries. Likewise, bad crops lead to a depression in business. Generally, it is the failure in the agricultural front that has lead to failure of economic planning in particular periods. Agricultural growth has direct impact on poverty eradication.

It is clear, therefore, that agriculture is the back-bone of the Indian economy and prosperity of agriculture can also largely stand for the prosperity of the Indian economy.

Agricultural Development Essential for Economic Growth

The significance of agriculture in India arises also from the fact that the development in agriculture is and essential condition for the development of the national economy. Ragnar Nurkse argues that the surplus population in agriculture should be shifted to the newly started industries. Nurkse's thesis is that agricultural productivity will be increase on the one hand and on the other new industrial units would be setup with the use of surplus labour.

The Nurksian thesis, though widely welcomed at one time, has been questioned recently. firstly, industrialisation does not consist only of transference of workers from agricultures to industries. Industrialization requires a particular set of motives and value which an agricultural economy cannot supply a change in agriculture itself is essentials before motivations and values are evolved secondly, the marketed surplus will have to be increased considerably to feed the growing urban population and to provide raw materials to industries. Thirdly, the new industries and the fast-growing service sector however, fast they may develop, will not be able to provide adequate employment for the ever- growing millions in India. There is a limit to the capacity of employment in industries in the short period. Necessarily, therefore, increased employment will have to be found, not in the new industries, but in agriculture or in rural industries. This will, then, necessitate improvement in agriculture.

In other words, general economic development will require rapid agricultural development either to precede or to go hand in hand with it, Indian planners learnt a bitter lesson during the second and third five-year plan periods when failure of the agricultural sector spelt disaster to the entire planning process.

CONCLUSIONS

Presently, Agricultural sector has great role in supporting and accelerating economic development in the developing countries. Development of agriculture is always related to the rural development since it is an integral part to rural economic development. Indian agriculture has been the source of supply of raw materials to our leading industries. Cotton and jute textile industries, sugar, vanaspati and plantations – all these depend on agriculture directly.

REFERENCES

1. Singh and sukhpal (2002): “the rational, practice, and problems of contract framing in cotton crop in the Agricultural developed Indian Punjab”, India. Research Work 1980.
2. Singh and sukhpal (2002): “The rational, practice, and implication of contract framing under the MNCs. In cotton crops in the Indian Punjab”, India.
3. Ruddar Datt and KPM Sundharam (2004) “Indian Economy” S.Chand& Company Ltd. Ram Nagar , New Delhi.
3. Nagraj T, and H.S.S. Khan, N.N.Karnool (1998): “Resource use efficiency in various crop under different cropping systems in Tungabhadra command area” (Karnataka). Agric.Situ. India.
4. Meijerink, G. & P. Roza. (2007): “The role of agriculture in development. Markets, Chains and Sustainable Development Strategy and Policy” Paper, no. 5. Stichting DLO: Wageningen.
5. Mishra S.K. and V.K. Puri (2007): “Indian Economy” 25th edi, Himalaya Publishing House, Mumbai. PP 464.

THE OPPORTUNITIES AND CONSTRAINTS FOR WOMEN IN AGRICULTURE

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ABSTRACT

A male-dominated industry, agriculture views female farmers as "helpers." In addition to having comprehensive understanding of agricultural practices, irrigation, pest control, and soil management, women farmers also possess distinct traditional ecological knowledge. They may encourage sustainable agriculture if given the chance by practicing efficient agriculture and engaging in related activities. Despite their substantial involvement, they face a number of challenges. By addressing the difficulties that women peasants face in agriculture through policy interventions and programme development, we may improve their lives as well as the lives of society as a whole. This article emphasizes limitations, highlights opportunities, and sheds light on the unseen contributions made by women to agriculture. With more women working in agriculture and greater resources, the paper contends, food security and poverty can be resolved.

Keywords: Women, sustainable agriculture, food security, gender equality

INTRODUCTION

In recent years, about 100 million individuals have developed chronic hunger. Thousands of households are now living in poverty and famine as a result of the roughly 80% increase in food prices. Protect ecosystems that provide food to sustain 9 billion people by 2050. Soil, rain, and sunlight are among the priceless natural resources that agriculture uses up. Emissions of greenhouse gases rise due to deforestation. Chemical fertilizers erode the soil and contaminate it.

This calls for significant adjustments to our agricultural planning and operations. Agriculture nowadays looks to be unsustainable. Our agricultural plan disregards issues like ground water depletion, climate change, food security, and nutrition. Consequently, sustainable agriculture is a given. Without appropriately including women in policy responses, we cannot establish sustainable democracies, economies, or solutions to climate change and food shortages (Zainab, 2014). The majority of the time, it is impossible to describe or adequately address the contributions of women to agriculture and food production. Women seldom work independently. To farm, men and women work together. Making arbitrary assumptions about how involved women are in various regions—assumptions that may not be true everywhere—is necessary to quantify women's contributions to food production (Cheryl Doss, 2014). Men and women will both gather the harvests if men clear the land and women plant and weed the crops. Similar situations prevent output from being gendered. Due to the instability in agriculture and greater economic opportunities in urban areas, the majority of men are leaving, leaving rural women to take up farming. In developing countries, women produce 60–80 percent of the food, including rice and maize. They represent 43% of agricultural laborers in underdeveloped countries. (2010). For discussion, this paper explores the role of women in agriculture. Its pillars are capability, equality, and sustainability—both aims and methods.

OBJECTIVES

1. To study the role of women in agriculture
2. To determine the obstacles that women in agriculture confront.
3. Should seek for chances that women may take advantage of to increase their productivity.
4. To determine the difficulties women in agriculture confront.

Women Participation Agriculture

The renowned agricultural scientist M.S. Swami Nathan claims that women were early pioneers who developed agriculture and nurtured crop plants to sate their hunger. While men went hunting, women gathered seeds of local plants and cultivated them. Women have since made contributions to agriculture and associated industries. Numerous studies demonstrate that women have a greater impact on agricultural output than previously believed. (2003). According to the 1991 census, there were 21.5 million female farmers in India, up from 14.8 million in 1981 by 45.23 percent. More women than males work in agriculture, by 36.45%. 60% of agricultural work is done by women, including planting seeds, moving saplings, winnowing, storing food, etc. Women participate in the production, processing, and selling of agricultural (Aggarwal 2003). Women carried out all cutting, picking, washing, drying, storage, and processing tasks in the Bundi area of Rajasthan. Women carried

out 75% of the cleaning, weeding, grading, carrying food to the threshing floor, and winnowing tasks. Female participation in thrashing, seedling nurseries, and thinning ranges from 50 to 75 percent. 25-32.5 percent of sowing, manure application, and watering were done by women. Farmers' wives made up 2% of those who ploughed fields and spread fertilizer (1 percent). There were no women in marketing or plant protection. It is clear from this that women are essential to all aspects of food production, albeit their contributions differ depending on the region and crop. Policies and interventions must be adjusted to women's agricultural time because of their diversity (which varies with the type of the crop and location). In India, the topics of nutrition and gender in agriculture are rarely brought up. The National Family Health Survey from 2005–2006 found that one-third of Indian women and almost 40% of Indian children are underweight. This demonstrates that despite playing a critical part in food production, women are still denied access to appropriate and nourishing meals.

Obstacles that women in agriculture must overcome

❖ Gender Gap

The contributions of women to agriculture are underappreciated. Women cannot make decisions because they are seen as "help." Resources for men and women varies. Women have obstacles in accessing services such as land ownership, funding, the market, technology, seeds, and others. Despite having less resources, female farmers are just as productive as male farmers. The reduction of extreme hunger and poverty in agriculture is facilitated by gender equality. If they had equal access to productive resources, women could increase farm productivity by 20–30%. This might boost agricultural production in underdeveloped countries by 2.5 to 4%, reducing world hunger by 12 to 17%. (2011). Between 1991 and 2001, the number of rural primary employees declined from 183 million to 171 million, with 11.7 million males and 0.5 million women quitting the industry. This caused the share of women in primary agricultural employment to rise from 27% to 29%. Women must work both non-farm occupations in the cities while males do so. They deal with little pay, hard hours, hazardous jobs, and sexual harassment (WTO, 2010).

❖ Aspects of Land Ownership

Women's access to agricultural jobs and resources is severely constrained. Due to their lack of land rights, women work on small landholdings, have limited access to resources, and are less aware of their rights. They are busier and seldom buy equipment, pesticides, or fertilizer. Despite the growing significance of agriculture, rural women cannot benefit from it. When women are barred from land ownership and its wealth, society suffers more. While men utilize benefits for personal goods and needs, women use them for nutrition, child welfare, and family welfare. Female farmers are unable to utilize the land's resources for a living without land rights. Since they are not landowners, they are unable to obtain bank loans. Animals and water resources like tanks are owned by men. Therefore, achieving gender equality in land rights is a vital step toward eradicating poverty. The future of the nation can be improved by more women owning land. According to a study conducted in West Bengal on women's land rights, 39.9% of households had to sell land or take out loans with high interest rates in order to pay dowries. Muslims, a population that did not practise dowry, made up 79% of the households that sold land for dowry. Workers in agriculture and small farmers sold or mortgaged their land to pay dowries (WTO, 2010).

❖ Dependence on Money

Typically, female employees are mistreated and underpaid. Differences in male-female employment and income may result from a variety of factors. Due to their lower levels of education and experience, women are paid less in many nations. They have less negotiation power due to their lack of education and experience, which may lead them to accept low pay and unreliable working conditions. According to several studies, women make less money than men do for the same jobs, levels of education, and work experience (Ahmed and Maitra, 2010; Fontana, 2009). Male incomes are 1.4 times higher than female salaries, according to the NSSO 66th Report. Women don't own cattle or crops, and men make all the money (apart from a small amount from chickens) (National Commission for Women, 2005).

❖ Social Constraints

Women continue to be underrepresented in our nation's social, economic, and political measures. The physical labour that rural mothers perform keeps their daughters out of school. Girls leave school earlier and are more vulnerable under these circumstances. It has an impact on women. Women's negotiating power and position have been reduced by the shift to cash export crops as food producers are replaced by contingent and seasonal labour as well as unpaid family work on farms owned by males (Udry 1996, Williams 2004). Social taboos force female labourers to perform additional tasks besides agricultural work, such as cooking, carrying water, and gathering firewood, which limits their economic possibilities. In many low-paying jobs, women must work

longer hours and travel further in order to hunt for free food, fuel, fodder, and water. Women's physical and emotional health as well as children's health and education are all impacted by the growing load of work.

❖ Lack of Extended Services and Training

Agriculture is affected by droughts, cyclones, floods, and erratic rainfall due to climate change. Women should be educated how to deal with local issues and responsibly manage natural resources in order to accomplish economic progress without harming the environment. Alternative land management methods to shifting agriculture, gene and soil erosion, and soil, economic plant, and farm animal health cannot be fostered without women's full intellectual and physical commitment. (1992) Men's agricultural development initiatives are planned by men. Men's tasks are reduced by mechanisation. Including a lot of well-trained women in agricultural development agency training and extension programmes at all levels, especially at the grassroots level, is one approach to ensure that farm women are treated equitably by change agents. Rural women need to be taught modern agricultural techniques that are tailored to local conditions and sustainably use natural resources if economic progress is to be achieved without damaging the environment. Women are not seen as farmers despite undertaking the majority of farm labour. Agricultural extension and technological information are mostly directed at men despite the fact that women perform more farm labour than men do (Kelkar, 2011).

Sustainable Agriculture and Women

According to the FAO, sustainable agriculture saves resources and is also technically sound, financially feasible, and socially acceptable. Agriculture need to be socially and economically viable. Therefore, sustainable agriculture delivers healthy, safe food, maintains ecosystem services, conserves natural resources, and fosters economic viability. For the first time in its 27-year history, the FAO Annual State of Food and Agriculture Report put women's issues front and centre. The study concludes that increasing women's productivity will advance economic growth and global development while also assisting in the solution to the world's food crisis. The Global Forum on Agricultural Research estimates that increasing the participation of women in agriculture might reduce world hunger by 12–17 percent, or 100–150 million people. Women's involvement in agriculture and connection to the environment can support sustainable agriculture. According to statistics, many young people from rural areas now live and work in cities, leaving the women on the farms. Because of their nature, they consume and save resources. Protecting seeds, employing the right fertilisers and pesticides, and conserving regional agricultural varieties have all been key contributions made by women.

□ Place Seeds and Food Locally.

The genetic diversity and self-renewability of food crops have traditionally been preserved by women. Breeding for masculinity preferred seeds above feminism. Peasant women are aware of the dietary needs of their families and the nutritional content of their crops. They choose nutrient-dense crops above commercially viable ones. The most nutritious foods are "coarse grains" or "marginal crops." Because of this, women in Garhwal and Karnataka continue to plant ragi and mandua despite state policy's emphasis on commercial food grains and cash crops, to which all financial incentives associated with agricultural "development" are tied. Following the Green Revolution, these lady farmers lost control of their seeds to companies who claimed uniformity. Trends in biotechnology support this. Millet varieties were designated as national food security cereals by the revised National Food Security Act of 2013. As a result of dalit peasant women, the Deccan Development Society, and the Millet Network, millets are now a component of India's public food system.

□ Conserve Agro Biodiversity

Agrobiodiversity is valued by female peasants. They understand that the best climate insurance is a biodiverse system. Their food relations and agricultural practises are a reflection of their culinary culture. Pigeon peas and sorghum coexist in the countryside. Agrobiodiversity has been conserved thanks to their long-standing "farm-to-kitchen" policy. The principal stewards of this culinary heritage and the agrobiodiversity culture are women. Men cultivate seeds from a single species, whereas women oversee complex, species-rich agricultural systems. Agriculture ecosystems are stabilised by this. Agriculture research should concentrate on women's production strategies and experience picking crops since the loss in crop diversity makes farms more susceptible to climate change. Compared to Indian farmers who were burdened by debt from their expensive and risky commodity and chemical-based farming systems, peasant women farmers who follow low-cost biodiverse farming principles see fewer farmer suicides. Biodiverse farming is used by over 60,000 Deccan peasant women to sustain their families, cultures, and dignity. Their accomplishments have received international recognition. (2014).

□ Restrict the use of Chemical Pesticides and Fertilizers

Farmers' use of Integrated Insect Management (IPM), which lowers pest populations, pesticide use, and pollution, may be impacted by gender differences. Given their responsibility for raising kids, women are more responsive to information about pesticides and IPM.

□ Women who Keep Livestock

Around 400 million individuals who maintain livestock in poverty, or two-thirds of them, are women (Thornton et al, 2002). Alongside men, women, and children, they tend to the animals. poultry, dairy, and other domestic animals are cared for by women (Okali and Mims 1998; Tangka, Jabbar, and Shapiro, 2000). Men are more likely to build homes, herd animals, and sell goods when women's freedom of movement is restricted. For household use, women handle the marketing and revenue from the sale of eggs, milk, and chicken meat. Perhaps for this reason, small-scale dairy and poultry businesses have received funding from rural women's development programmes. In many countries, women are the main producers of small-scale pigs. Families led by women often own fewer animals because of labour shortages, but they make the same amount of money from their pets as families headed by men.

CHALLENGES

Inequality between the sexes prevails in agriculture. While not farmers, women manage farms. They put forth a lot of effort when they cultivate, sow, weed, harvest, store, etc., but only men make decisions. Education is essential for women working in agriculture. Investments or business plans are necessary for sustainable farming. Farmers with formal education may decide on important innovations in agriculture. Women can work as farmers. Disadvantaged women may be able to adopt sustainable agriculture with the aid of microfinance by overcoming their resource constraints. The resources needed by women to go from a subsistence to a market economy are lacking. Funding distribution must take gender equity into account for food security and sustainable development. Equal access to resources and decision-making opportunities should be granted to all genders. Women make up 43% of agricultural labourers in certain developing nations, yet they have less access to resources like water, fertiliser, and markets than men do. According to experts, providing these fundamental services to women might increase agricultural productivity by 20–25 percent, ensuring food security.

CONCLUSION

Despite their support for agriculture, women's circumstances have remained unchanged. They are still in pain. Unfortunately, just 10% of women farmers in Thailand, India, and Nepal own land. 15% of agricultural extension agents globally are women. Even though they grow up to 90% of the staple crops in Africa and Asia and 50% of the world's food, women face considerable obstacles in accessing funding, equipment, training, and resources. They also own less than 2% of the world's property. Women are falling behind in the production of commercial crops due to a lack of markets and inputs. As farm labourers, women farmers are gradually earning respect, recognition, and encouragement. To address difficulties with food security, infrastructure and education need to be improved. In agriculture, women are essential to ensuring global food security. Women may learn environmentally friendly agricultural techniques that maximise revenue and nutritional value while supporting communal agriculture, economic development, and environmental preservation. Abolish legal discrimination, promote equal access to land, tools, and training, ensure that agricultural policies and programmes take gender differences into account, and ensure that women are treated equally in discussions about sustainable agricultural development are the four policy measures recommended by the FAO report to achieve gender equality in the world's food and agriculture systems. Compared to men, women farmers are more concerned with conservation, but they are less knowledgeable about effective management techniques. Agriculture programmes and policies must take gender equality into account and permit equitable access to resources if they are to promote agriculture growth and guarantee food security. For agriculture to be sustainable, women must take the initiative and actively engage in the industry.

REFERENCES

1. Chayal K., BL Dhaka, and RL Suwalka (2010) Women in agriculture, Humanity & Social Science. J, 5 (1): 68-72,
2. Kanchi, Aruna (2010): Women Workers in Agriculture: Expanding Responsibilities and Shrinking Opportunities, ILO, New Delhi
3. The State of Food and Agriculture 2010-2011.
4. Udry, C. (1996). Gender, agricultural production, and the theory of the household. Journal of Political Economy, Vol.104 (5): 1010-1046.
5. WTO (2010): Agriculture Sector in India, at <http://ncw.nic.in/pdfreports/Impact%20of%20WTO%20Women%20in%20Agriculture.pdf>

WOMEN'S PARTICIPATION IN THE INDIAN AGRICULTURE SECTOR

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ABSTRACT

India is an emerging nation. Since 70% of the population works in agriculture, this industry serves as the primary profession. The impact of increasing integration via agriculture on women is examined in this essay. According to this study, women have a lot of career opportunities in the agricultural industry. Greater family income results from jobs that provide women authority over numerous home resources. Even though there are now more women working than ever before, India still has salary gaps between men and women. Due to these factors plus the fact that women have lower levels of education, they are more likely to continue working in subsistence agriculture. Women's experiences with liberalisation and globalisation are crucial to understand since they make up about half of the population and are also subject to restrictions that limit the benefits of the latter. Once the various effects are known, well-planned governmental interventions may help women benefit from increased agricultural receptivity.

Keywords: Developing, country, occupation, agriculture, women, globalization.

INTRODUCTION

According to Swaminathan, a renowned agricultural scientist, it was women who tamed the first crop plants, launching the art and science of farming. Women started collecting seeds from the local flora and started growing those that were valuable for food, feed, fodder, fibre, and fuel while males went out hunting for food. Women have played and are still playing a significant part in protecting the environment's essential life support systems, including the soil, water, vegetation, and wildlife. By recycling organic waste, they have preserved the soil's fertility and enhanced agricultural security through the preservation of genetic resistance and varietal variety. That women are essential to the growth of agriculture and related industries, such as fisheries, horticulture, livestock production, agro/social forestry, post-harvest activities, and main crop production. Women contribute far more to agricultural productivity than has often been recognised, according to studies on women in agriculture undertaken in India and other emerging and underdeveloped nations. The reality that farm women continue to be preoccupied with their fundamental responsibilities as wives, mothers, and homemakers should not be obscured by the recognition of their critical role in agriculture. Despite being crucial to agricultural output, women still experience significant disadvantages. Due to discriminatory inheritance rules and practises, they are really the biggest group of landless labourers with little real protection in the event of a family's dissolution due to death or divorce. Land reform and settlement programmes typically grant the spouse the sole ownership and, as a result, the security required to get production credits. Given their conflicting obligations within and outside the house, it would not be out of place to remark that rural farm women are increasingly receiving training in the village to suit their convenience while still acknowledging the value of institutional training in its own right.

SIGNIFICANCE

Indian rural women are heavily engaged in agricultural pursuits. However, because to the differences in agro production systems, their level of engagement varies in both type and scope. The way that women participate in agricultural production depends on how many farm households possess land. From supervisors to migrant workers, they play a variety of functions. Women are thought to provide between 55 and 66 percent of the labour overall in farm production, with these numbers being substantially higher in some areas. On a one-hectare farm in the Indian Himalayas, a pair of bullocks toils for 1064 hours, a man for 1212 hours, and a woman for 3485 hours every year.

RESEARCH QUESTION AND METHODOLOGY

1. To learn more about how women are involved in agriculture and related professions.
2. To determine the key barriers to women's advancement in the agricultural industry.
3. To learn about the many strategies for reducing gender disparities and enhancing the position of women in the agricultural industry.

The Position of Women in Agriculture and Related Professions

Many labor-intensive tasks are carried out by rural women, including weeding, hoeing, grass cutting, picking, collecting cotton sticks, and separating seeds from fibre. Additionally, women are obliged to gather wood from fields. This wood serves as a primary source of fuel for cooking. Women find it difficult to get firewood because of rising population pressure, overgrazing, and desertification. Women are responsible for obtaining water from far-off places, just like they are for collecting wood. Because a rural woman is in charge of running the farm, she also takes care of the animals and other related tasks like milking, processing the milk, and making ghee. In rural places, giving an animal as part of a woman's dowry is customary. According to studies, rural women may supplement their income by selling milk and livestock. Animal cleaning, shed maintenance, animal watering, and animal milking are jobs primarily performed by women. Additionally, rural women are in charge of collecting and making dung cakes, a task that helps poor households supplement their income. It is clear that women dominate the activities involved in raising and managing cattle. One of the main drivers of the rural economy is poultry farming. Rural women frequently sell all of their eggs and chicken meat in order to make an ever-increasing amount of money, leaving nothing for personal use. Most women have very bad health as a result of poverty and a lack of the necessary amount of proteins. Malnutrition affects the majority of women. The survey also found that the majority of rural women are illiterate, unskilled, and bound by tradition, which lowers their productivity and counts them as unskilled labour. Women in rural areas lead highly busy lives. Her shifts begin at sunrise and terminate at dusk. The everyday chores start with cleaning the house, getting water, doing the dishes, doing the laundry, cooking for the family, watching the kids, and sewing and customising garments. She does a great job of controlling these things. Strategies and programmes for development usually exclude women farmers. Women's rights are significantly more restricted due to social, cultural, and traditional issues.

Main Obstacles in Women Growth in Agriculture Sector

Few women own agriculturally productive assets like land, livestock, and equipment. Women are not involved in decision-making, either within or outside the house. All manual agricultural labour is done by women, and by performing numerous duties, they are burdened even more. Miss implementing various regulations and laws that benefit women, such as heritage laws.

1. **Gender Discriminations:** The problematic conception of men's and women's labour in rural areas, in particular the inability to emphasise the significance of their various responsibilities, is another challenge. Women often take on three sorts of responsibilities in terms of the paid and unpaid labour they perform, according to analysis of the gender division of labour.
2. **More Work, Less Pay:** According to estimates over the past 5-7 years, employment has decreased anywhere from 20% to as high as 77%. Therefore, there are fewer days available each year for employment in agriculture. Men must consequently relocate in order to find better-paying employment. These gaps are being filled by women. Because they cannot relocate as readily as males, women are obliged to accept employment in agriculture in their home community under extremely unfavourable conditions. The rising production expenses necessary for contemporary agriculture are a problem for the farmer. He discovers that by hiring women who are paid less, he can reduce labour expenditures.
3. **Increased Trafficking of Women.** The growth in female trafficking is one of the lesser-known effects of globalisation and liberalisation. Atrocities including rape, molestation, sexual harassment, and kidnapping will multiply as the number of girls declines. Girls will be hesitant to leave home. At home, women will be chained. Recent trends suggest that India may soon challenge Bangkok for the derogatory moniker of "sex capital of the world."
4. **Impact of Liberalization on Agricultural Women Workers** There is concern that economic liberalisation, which frequently leads to privatisation and market-driven technical progress, may negatively impact rural women's job and income prospects. Following is a summary of how economic liberalisation has affected women and agricultural workers: 1. Indian agricultural labourers have suffered as a result of the fluctuating global pricing of agricultural goods. Agriculture-related exports have decreased. The prices of these commodities have fallen domestically as a result of increased imports of raw cotton and edible oils. 2. It is anticipated that economic liberalisation would lead to a situation in which multinational corporations will dominate India's agricultural industry and small farmers may lose control of it, posing a threat to the livelihoods of millions of agricultural labourers and rural women. 3. Following the WTO, not only have agricultural exports decreased but also the rate of increase in agricultural employment and output. As a result, both farming households and those who are landless, especially female labourers, have experienced a loss of income. 4. Due to a drop in their wage levels and an unclear future, cultivators and agricultural

labourers seem dejected in the wake of economic liberalisation. Agriculture and non-agriculture workers are increasingly separated from one another. 5. The situation of agricultural labourers is deteriorating with time as a result of rising labour force actualization and the incapacity of organised agriculture and non-farm sectors to accommodate the expanding labour force. 6. The reduction in tea, coffee, and rubber export revenues as well as poor domestic pricing have had an impact on women's employment and income in the plantation industry. It is particularly challenging for smaller plantations to sustain labourer employment levels and compensation. 7. The loss of women's control over biodiversity and seeds, which form the basis of the food chain. Peasants have been producing their own seeds for 5,000 years, choosing, storing, and sowing them while allowing nature to take its course in the food chain. Women's efforts in food and grain storage has helped to preserve the feminine essence by preserving seeds. The maintenance of genetic variety and the self-renewability of food crops have been connected to the control of germplasm, the basis of all plant riches, by women and Third World peasants.

5. **Malnutrition:** According to estimates, anaemia affects between 40 and 50 percent of urban women and between 50 and 70 percent of rural women. A sizable portion of both men and women continue to weigh between 5 and 8 kg less than is ideal. The average daily calorie consumption of women is 2100, which indicates that half of the population is consuming a deficit diet of less than 2100 calories. Chronically reduced calorie intake and an increase in job demands undoubtedly have a detrimental impact on women's health and nutritional state.

CONCLUSIONS

The majority of labour in agriculture and its related areas is produced by rural women. Her work encompasses cottage industry, animal production, and agricultural production. from carrying water, fuel, and feed to performing upkeep on homes and families. Despite her extensive engagement, her contribution and dignity have not yet been acknowledged. By every social, economic, and political metric, the standing of women is poor. Women's wage employment is seen as a danger to male ego, and their involvement in several home-based businesses results in underpayment for their labour. Long hours are spent by women performing agricultural tasks, doing washing, cooking, and getting water. In addition to being physically taxing and demanding, these duties deprive females of the chance to study. Sociocultural and economic factors greatly influence the kind and range of women's productivity in the workforce. When compared to males, women do not join the job market on an equal footing. Their options for careers are additionally constrained by social and cultural norms, gender discrimination in the workplace, and a lack of supportive services like child care, transportation, and housing in the formal labour market. Because employers have a preconceived idea that women's major function is as homemakers, women's work power is viewed as lower. Women are disproportionately represented in the secondary sector of the labour market as a result of discrimination against female workers. Their jobs are low-status, informal, and have little chance for advancement. In the urban sector, the majority of women are employed in low-wage positions.

REFERENCES

1. Johl, S. S. (1995). Agricultural Sector and New Economic Policy. *Indian Journal of Agricultural Economics*, 473-487.
2. Dogra, B. (2002). Land Reforms, Productivity and Farm Size. *Economic and Political Weekly*, pp. 532-533.
3. Agarwal, B (1981). *Agricultural Modernization and Third World Women: Pointers from the Literature and an Empirical Analysis*. Geneva: ILO.
4. <http://www.yspuniversity.ac.in/>
5. <http://www.hillagric.ac.in>
6. KhushkAli M. and S. Hisbani (2004) Rural women at work.

A STUDY OF PRADHAN MANTRI MUDRA YOJANA IN PUBLIC AND PRIVATE SECTORS& ITS IMPACT ON AGRICULTURE ECONOMY

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(M. Com, M.Phil., NET, Ph.D.)

ABSTRACT

The Honorable Prime Minister launched the PMMY on April 8, 2015, which aims to give loans of up to ten lakh rupees to non-farm micro, small, and non-corporate firms. The PMMY, which was created to assist small and vulnerable businesses, offers advantages for both business owners and the banking industry. Micro, Small and Medium Enterprise (MSME) are the backbone of the Indian economy. MSME provide job opportunities and contributing to national GDP, among other things. In this paper, we examine the performance of the Micro Unit Development and Refinance Agency (MUDRA) established by the Government of India (GOI) to provide financial support to MSME. In India's economy, micro, small, and Medium-Sized enterprises are extremely important. It not only boosts the GDP but also creates job possibilities for the nation. The largest strategy to aid in the expansion of the Indian economy is to support the country's small business owners. The largest obstacle to the growth of businesses is a lack of financial backing. The Mudra Scheme was created to solve this issue. This plan's main goals are to encourage businesses financially and to finance the unfunded population. MUDRA stands for Micro Units Development & Refinance Agency. It also goes by the name Mudra Loan. All bank branches in India provide loans that one may apply for. The Pradhan Mantri MUDRA Yojana's principal goals are to encourage micro, small, and medium-sized businesses and foster an entrepreneurial spirit among aspiring businesspeople. In order to help micro, small, and medium-sized businesses, MUDRA Bank wants to foster financial inclusion through refinancing and development support (MSME). The Government of India has started a number of financial inclusion initiatives to help and encourage micro, medium, and small-scale entrepreneurship in India. One of these financial features is the Pradhan Mantri MUDRA Yojana (PMMY) plan.

Keywords: Government of India (GOI), MUDRA Loan, Entrepreneurship, Self-employmentpoultry farm, an apiary, a livestock farm, and a dairy farm.

INTRODUCTION

Prime Minister Narendra Modi on April 8, 2015 inaugurated the 'Micro Units Development and Refinance Agency', a currency bank, which has a Rs 20,000 crore capital infusion, with an aim to provide easy credit to the small scale industries in the country. Loans up to Rs 10 lakh will be easily available to small entrepreneurs from this bank. For this, the government has made a total provision of Rs 20,000 crore. Incentives will also be given to other banks in the country to lend to small scale industries through the medium of this bank. Apart from this, the work of regulating these loan schemes will also be in the hands of the Mudra Bank.

Types of Loans in the Mudra Scheme

The Mudra scheme consists of the following three categories:

1. **Shishu:** You can get a loan of Rs 50,000 under the Shishu category.
2. **Kishore:** Loans ranging from Rs 50,000 to Rs 5 lakh are given in the juvenile category
3. **Youth Category:** Under the youth category, you will get loans from Rs 5 lakh to Rs 10 lakh

Objectives

- 1) To understand MUDRA scheme.
- 2) To study the product offerings of MUDRA Scheme.
- 3) The study attempts to analyses the different schemes and its benefits
- 4) The study highlights the salient features of Mudra Yojana.

Pradhan Mantri Mudra Yojana Highlights

- No witness is required under the Mudra Scheme.
- No depth has to be kept under the Mudra scheme.
- Under the Mudra scheme, 10 per cent of your own capital is not required.
- Mudra Scheme will be in government banks only.
- Under the Mudra scheme, the age of the borrower should not be 18 years.

Documents Required for Availing Pradhan Mantri Mudra Yojana Loans:

- Ballot id card, Aadhaar card, etc.
- Visa Bill, Home Purchase Acknowledgements.
- A license and permanent address of the business that the applicant is doing or doing.
- Magill six months bank account statement (available if available)

Activities Covered Under the Scheme

- 1) Scheme was originally for setting up Greenfield Enterprises in trading, manufacturing, and services sector.
- 2) Loans for enterprises in 'Activities allied to agriculture' e.g. pisciculture, beekeeping, poultry, livestock, rearing, grading, sorting, aggregation Agro industries, dairy, fishery, agriclinic and agribusiness centers, food & agro-processing etc.
- 3) Includes services supporting the above activities
- 4) Does not include crop loans, land improvement such as canals, irrigation, wells
- 5) A hand holding ecosystem of different agencies has been evolved for supporting prospective beneficiaries through financial training, skilling, entrepreneurship development, work shed requirement, mentoring, application filling/ DPR preparation etc

Such activities include launching, establishment, or expansion of an agriculture business like a poultry farm, an apiary, a livestock farm, and a dairy farm.

RESEARCH METHODOLOGY

For the purpose of the present study, data has been collected from the secondary sources. The study is based on secondary sources of data. Secondary sources data has been collected through different books, journals, newspapers. Relevant websites have been consulted in order to make the study as effective one. The study attempts to examine the Performance & Evaluation of Pradhan Mantri Mudra Yojana In Indian Economy”

PMMY DURING 2019 -2021**Agency wise Achievement**

The target set by the Government of India under PMMY for the year 2020-2021 was ` 3.50 lakh Crore which was distributed across various lending institutions banks, MFIs and NBFCs based on their outreach and presence in various parts of the country. The category-wise performance against their overall targets for the year 2020-21 is as under:

Institution wise performance In India**Table No.1:** Institution wise performance in India during the year 2019-2021

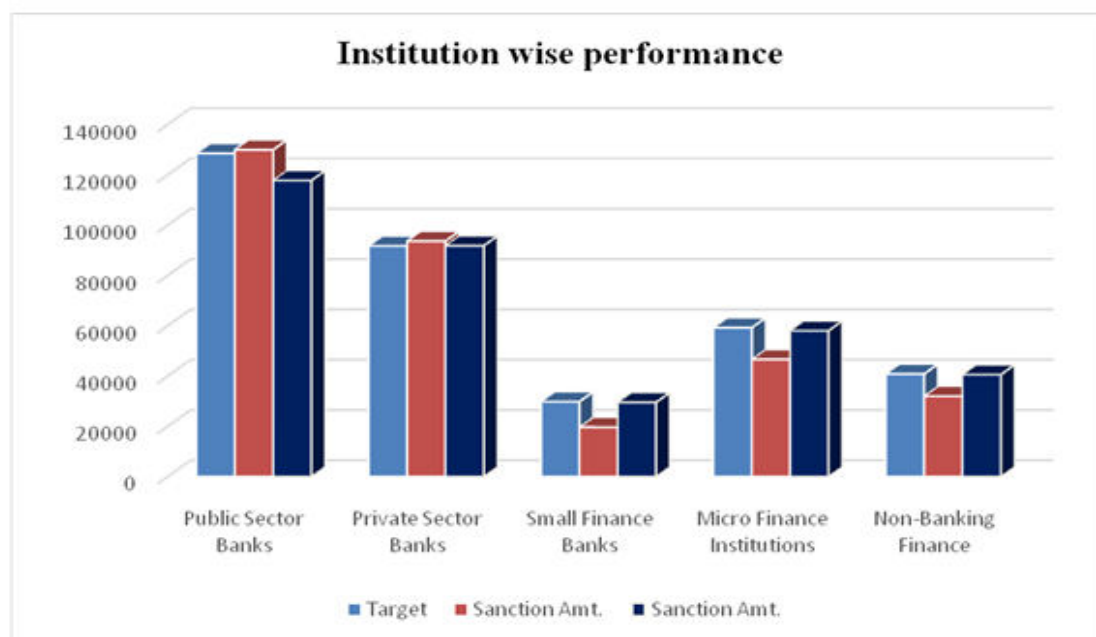
Category	Target (2020-2021)	Sanction Amt. (2020-2021)	Sanction Amt. (2019-2020)	Growth
Public Sector Banks	128500	129915(101%)	117729	10%
Private Sector Banks	91700	93613.20(102%)	91780	2%
Small Finance Banks	29800	19646.68(66%)	29501	(33%)
Micro Finance Institutions	59200	46601.40(79%)	57967	(20%)
Non-Banking Finance	40800	31983.17(78%)	40518	(21%)
Total	350000	321759 (92%)	337495	(5%)

Source: - Report on Mudra Yajna (Six years of Pradhan Mantri Mudra Yajna) 2020-21

The achievement data indicates 5% decrease over the previous year in the overall performance of the programme implemented by all the lending institutions. This is mainly due to the low volume of disbursements done in FY 2020-2021 by the NBFCs & SFBs pertaining to COVID situation in the country. However, there is a growth in respect of disbursements of Public Sector Banks and Private Sector Banks. Among the Public Sector Banks, State Bank of India (SBI), with sanction of ` 37,973.30 crore to 14.85 lakh accounts topped the table. SBI was followed by Canara Bank and Punjab National Bank with a sanction figure of ` 13,210 crore and ` 11,187 crore respectively. The Private Sector Banks recorded slight improvement in performance with a sanction of ` 93,613 crore during the year, registering 2% growth over the previous year. The major contributors in the private sector banks category were Bandhan Bank and IndusInd Bank with ` 32,559 crore and ` 32,335 crore of sanctions respectively. MFIs sanctioned a total Loan amount of ` 46,601.40 crore to 1.40 crore Borrowers. Credit Access Grameen Limited was the leading MFI with a sanction amount of ` 7,906.48 crore in more than 18 lakh

loanaccounts.NBFCs have also emerged as a majorcontributor to the PMMY with a totalsanction of ` 31,983.17 crore In thiscategory, Shri Ram Transport FinanceCompany Limited has been the highestcontributor with a total sanction amount of ` 12,000.01 crore.

Figure No.1



Source: - Report on Mudra Yajna (Six years of Pradhan Mantri Mudra Yajna) 2020-21

Small Finance Banks achieved 66% of their target. During the year, the 9 SFBs sanctioned a total amount of ` 19,646.68 crore to 43.89 lakh loan accounts. Ujjivan Small Finance Bank was on top of the table among SFBs, with a sanction amount of 6,442.73 crore to 14.89 lakh loan accounts.

State wise Performance

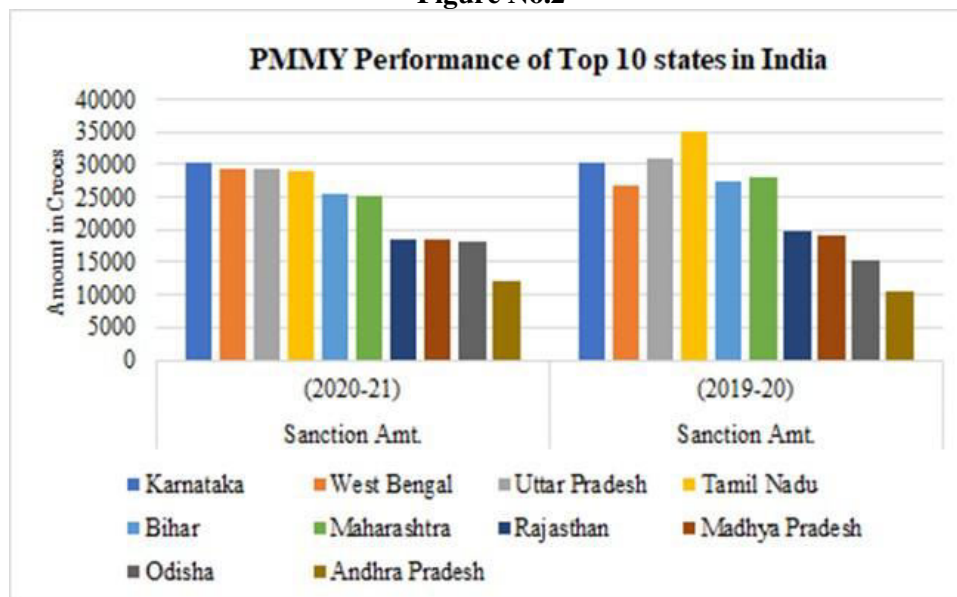
While the Institution wise targets were assigned by the Govt. of India, the same were further sub-allocated state-wise by the respective lending institutions based on their network and potential to lend. The state level performance is being monitored by the respective SLBCs of the states. Of all the states, Karnataka topped with sanction of ` 30,199.18 crore, followed by West Bengal with ` 29,335.98 crore and Uttar Pradesh stood at third position with ` 29,231.25 crore.

Table No. 2: PMMY Performance of Top 10 States in India
In Crores

Sr. No.	Name of the State	Sanction Amt. (2020-21)	Sanction Amt. (2019-20)
1	Karnataka	30199.18	30188
2	West Bengal	29335.98	26790
3	Uttar Pradesh	29231.35	30949
4	Tamil Nadu	28967.97	35017
5	Bihar	25589.31	27442
6	Maharashtra	25208.63	27903
7	Rajasthan	18571.38	19662
8	Madhya Pradesh	18474.24	19060
9	Odisha	18328.63	15419
10	Andhra Pradesh	12028.33	10439.93
Total		232935.00	242869.93

Source: - Report on Mudra Yojna (Six years of Pradhan Mantri Mudra Yojna) 2020-21

Figure No.2



Source: - Report on Mudra Yojna (Six years of Pradhan Mantri Mudra Yojna) 2020-21

FINDINGS & CONCLUSIONS

The MUDRA Yojana's main goal is to "finance the underfunded." This programme has been put in place to aid entrepreneurs. Micro, Small, and Medium-Sized Enterprises will unquestionably benefit from MUDRA Scheme because it requires less paperwork to obtain a loan at a competitive rate. This programme will assist in reaching the small business owners who do not use the conventional banking system. MUDRA will instil confidence in small business owners and encourage young, educated, or skilled individuals to start new businesses and expand existing ones.

REFERENCES

- 1) International Journal Of Multidisciplinary Education Research, "Impact Of Pradhan Mantri Mudra Yojana On Indian Banking Sector" Dr. Sunita Sharma And 2dr. Ruchi Gupta, : Volume:10, Issue:3(2), March:2021.
- 2) International Journal of Science and Research (IJSR), An Overview of Pradhan Mantri Mudra Yojana, Taranjeet Kaur Matharu, Volume 9 Issue 12, December 2020.
- 3) Report on Mudra Yojna (Six years of Pradhan Mantri Mudra Yojna) 2020-21

A CONCEPTUAL REVIEW OF WOMEN'S EMPOWERMENT IN AGRICULTURE AND ITS DIMENSIONS

Dr. Pathan Vasiulla Khan

ABSTRACT

The term "women's empowerment" is wide and has been used to refer to a multitude of concepts. It is a widespread issue that has become worse over the past few decades. Researchers, policymakers, and other stakeholders have paid a lot of attention to the concept of "women's empowerment." It is now widely understood that achieving development goals entails achieving gender equality and empowering women. In this essay, an effort is made to build conceptual clarity around the phrase "women's empowerment" and its aspects as they relate to agriculture. According to the body of research that has been conducted up until this point, it has been shown that the notion of women's empowerment is convoluted and multifaceted. Input in productive decisions and autonomy in production; ownership of assets and access to and decisions on credit; control over use of income; workload and time allocation; and education are some of the several facets of women's empowerment that derive from different definitions. Access to these aspects as well as women's empowerment has been analysed in terms of their potential to contribute to sustainable development in the form of improved livelihoods, which would ultimately result in a reduction in food insecurity.

Keywords: Women Empowerment, Organizations, Self-Determination, Dignity, Social Inclusion.

INTRODUCTION TO WOMEN EMPOWERMENT

A multi-level concept, empowerment includes references to people, groups, and communities. Mutual respect, critical thought, compassion, and group engagement are all aspects of empowerment that help people have more access to and control over these resources. The literature offers numerous definitions of women's empowerment. According to several research, "empowerment" is a phrase that refers to autonomy, independence, asset ownership and control, agency, group action, power and how it is distributed, self-determination, participation, dignity, social inclusion, and choice. Women's empowerment transforms their situation from one of oppression to one of social, political, and economic equality for both the oppressor and the oppressed (Chattopadhyay, 2005). Women's empowerment also takes the shape of gender equality. Giving women equal opportunity to participate in politics, business, education, and the arts entails removing the barriers that stand in their way (Backhams, 2007). According to numerous studies, increasing women's access to land, financial markets, and employment possibilities helps to address the issue of gender equality (Morrison and Biehl, 2007). The results of other studies have also shown a strong correlation between gender equality and economic growth. Low per capita income and gender inequality have been demonstrated to be positively correlated. Additionally, it is asserted that there is a negative correlation between poor government investment in education and gender inequality (Morrison and Biehl, 2007). The idea of women's empowerment, according to Luke (1974), aids scholars, researchers, and decision-makers in examining the underlying social and cultural structures that govern gender relations.

2. EMPOWERMENT OF WOMEN AND AGRICULTURE

Additionally, women contribute significantly to the sustainable growth of the economy through their work in the home and in agriculture, frequently on par with men (Majumdar and Shah, 2017). According to IFAD (2011), one of the most significant aspects of empowerment for rural women is women's empowerment in agriculture. In the development of smallholder agriculture, women play critical roles as entrepreneurs and farmers. They simultaneously oversee the nutrition of the home as mothers (Abebe et al., 2016). The majority of domestic tasks, including cooking, getting water, getting firewood, and caring for children, are carried out by women, who also take an active role in agriculture. (2010) Singh and Arora. Women's economic empowerment directly affects household food security and agricultural output (Sraboni et al., 2014; Harper et al., 2013). A woman will be more productive in agriculture if she is given the freedom to decide what to grow and what fertiliser to use on her plot. Because empowered women are able to look after their own physical and emotional health, they will also be better equipped to safeguard the health and nutrition of their children (Smith et al., 2003). According to experts, if the gender gap in access to opportunities and productive resources is closed and women are given these fundamental services, agriculture productivity might increase by 20–25 percent to achieve food security and may even lower hunger (Srivastava and Srivastava, 2017). Women's levels of empowerment in agriculture have a significant impact on households' susceptibility to food insecurity because they depend heavily on agriculture for a living in rural areas (IFAD, 2011).

3. DIMENSIONS OF WOMEN EMPOWERMENT IN AGRICULTURE

❖ 3.1. Input in Productive Decisions and Autonomy in Production

This aspect relates to choices made on agricultural output. It refers to the ability to make decisions on one's own or with others regarding the production of food and cash crops, livestock, and fisheries (Alkire et al., 2013). In the growth of agriculture and related activities including crop production, livestock rearing, horticultural production, post-harvest activities, agroforestry, fisheries, and so forth, women play a significant and crucial role. The decisions affecting the household and its economics are frequently made by their male counterparts, despite the fact that women work in the fields, houses, outside of farms, and at marketplaces. Women's opinions are not given enough weight when making decisions on the agricultural sector. Compared to men, women are less empowered to take effective decisions. This is one of the reasons for gender inequality (Das, 2015; Jha and Nagar, 2015; Khyade and Khyade, 2016). Farm women's participation in decision-making is a strategy for improving the success of economically and environmentally sustainable agriculture. Age, education, and annual income are still favourably and strongly connected with the engagement of women in farm decision-making despite the fact that men play an active role in decision-making in several areas of agriculture (Unnati et al., 2012).

❖ 3.2. Control Over How Money is Used

This aspect relates to having single or joint control over how income and expenses are used. If a person has input and participates in decisions pertaining to the activity that creates income, they are deemed sufficient on this dimension (Alkire et al., 2013). Regarding the family's income, only the guy makes decisions. A lady cannot even sell her own livestock, as one example. That was approved by her husband, who also sold it (Bagayoko, 2018). Due to the fact that males predominately market farm products, men have entire control over home finances (Patel, 2012). Through their research, Mahmud et al. (2012) have demonstrated that engaging in successful employment and income-generating activities empowers not only the individual but also the entire family.

❖ 3.3. Credit availability and Decision-Making

The most important component is credit. Since they do not own land, women have limited access to finance. Women who do not own land have limited access to credit since lending institutions typically require collateral, such as land ownership. Low agricultural output without financing is caused by limited access to credit. Women find it challenging to buy necessary goods like seeds, tools, and fertiliser. Men and women have significantly different access to banking services. Women frequently lack land to serve as security for bank loans because of low rates of property ownership. Even microcredit programmes are being investigated for using coercive lending practises. The impact of rural women's access to agricultural loans on agricultural productivity has been found to be very beneficial. Through her research, Isa (2012) shown that credit and output have a strong relationship. Additionally, it has been suggested that women who obtained significant amounts of credit also produced more agriculturally.

❖ 3.4. Workload and time Management

The time allocation dimension is concerned with how much time is allotted to domestic tasks and other useful pursuits. It also entails contentment with the amount of free time available (Alkire et al., 2013). Women's time constraints are not just a hardship on themselves; they can also have a detrimental impact on how well children and other family members are cared for (Narayan, 2002). Agricultural labour is physically demanding and underpaid for women. Women are the backbone of India's agricultural and rural economy because they are farmers, agricultural workers, and business owners. Their labour has gone largely unappreciated and has not merely gone unpaid. They carry out the most laborious and backbreaking jobs in agriculture, animal husbandry, and households every day. The welfare of the household is another duty they have. They take care of their kids, feed them, and typically engage in agricultural work as well as household chores.

❖ 3.5. Education

The best way to empower women is via education. Women may actively engage in the development process when they have the information, abilities, and confidence that education provides. Education of women will benefit the economy as a whole. They can take advantage of additional possibilities and grow stronger and more powerful as a result of education. Additionally, it will result in a decrease in poverty and an improvement in economic growth. Indian women who work in agriculture are largely uneducated. Women are prevented from working in highly skilled industries by illiteracy. This causes an average salary gap between men and women. The majority of women in India are vulnerable due to a lack of education and employment mobility.

❖ 3.6. Possession of Property

In spite of the fact that women are granted the same legal rights as males to own property and inherit it, this is not always the case. Equal inheritance rights are granted to ancestral and jointly owned family property under the Hindu Succession Act of 2005. Men hold control over female family members and inherit property and titles in India because of the country's strong patriarchal traditions. Most women do not receive a part of parental property and do not possess any property in their own names due to lax enforcement of the law. Due to the deterioration of laws that are meant to protect them, women continue to have limited access to land and property. Direct property ownership rights in the names of women are uncommon. They have difficulties getting access to land. When it comes to choices involving the land, women have limited influence. Despite having land in their names, women in agriculture confront considerable challenges, particularly inequality in access to and control over essential resources and inputs. Even FAO (2011) asserts that males own more land than women do in regions like Latin America where access to land is more widespread.

4. CONCLUSION

Due to their contributions to the household and other spheres of life, women, who are an essential part of society, have a big impact on the economy's sustainable growth. They still go unnoticed, deal with prejudice, and encounter numerous challenges in every part of life. In order for the family and society as a whole to be empowered, women must be empowered. Due to their increased ability to provide for their family, empowerment would improve livelihoods by eliminating food insecurity. The ability to make decisions and enjoy financial freedom must be granted to women.

REFERENCES

1. Alsop, R., Bèrtèlsèn, M., Holland, J., 2006. Èmpowèrmènt ìn practicè from analysìs to ìmplèmèntation, Washìngton, DC.
2. Bagayoko, M.L., 2018. Malì homè gardèns qualitatìvè gèndèr study. Thè World Vègètablè Cèntèr, Unpublishèd rèport.
3. ÌFAD, 2011. Womèn and rural dèvèlopmènt. Rural Povèrty Rèport, Romè, 378.
4. Patèl, A., 2012. Èmpowèring womèn ìn agrìculturè. Yojana 56, 19–22.
5. Sushama, S., 1998. Womèn and Èmpowèrmènt-Approach and Stratègìès, Dìscovèry Publishìng Housè, Dèlhi.

A ROLE OF AGRICULTURE IMPORT AND EXPORT IN ECONOMIC DEVELOPMENT

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ABSTRACT

This research focuses on role of agriculture in export and import. The agricultural sector is the most important source of livelihood in India. The country is one of the world's largest producers of agricultural and food products. In 2021-22, the growth rate of India's agriculture sector was projected to be 3.9% as compared to 3.6% in the previous year. The country produces many crops and food grains like rice, wheat, pulses, oilseeds, coffee, jute, sugarcane, tea, tobacco, groundnut, dairy products, fruits etc. During 2021-22, India's tea production was 1,344.40 million kg. Coffee production during the same period was 342 million tonnes, a growth of 2.39%. During 2021-22, India's oilseeds production crossed an estimated 37.15 million tonnes, while other products such as rice, wheat, maize, pulses, mustard, and sugarcane reached record-high production. India's top crop-producing states are West Bengal, Uttar Pradesh, Punjab, Gujarat, Haryana, Madhya Pradesh, Assam, Andhra Pradesh, Karnataka, and Chhattisgarh. Most of the wheat produced in the country comes from Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, Rajasthan, Bihar, and Gujarat. Uttar Pradesh is the largest producer of sugarcane in India, contributing about 48%, followed by Maharashtra and Karnataka with 23% and 9% of the total production, respectively.

Keywords: Export, Import and Role of agriculture in economy.

INTRODUCTION

India is an agrarian country. Agriculture plays a vital role in India's economy. Over 58 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP). As per the 2nd advised estimates by the Central Statistics Office (CSO), the share of agriculture and allied sectors is expected to be 17.3 per cent of the Gross Value Added during 2016-17 at 2011-12 prices. Agriculture has got a prime role in Indian economy. Though the share of agriculture in national income has come down, still it has a substantial share in GDP. The contributory share of agriculture in Gross Domestic Product was 55.4 percent in 1950-51, 52 percent in 1960-61 and is reduced to 18.5 percent only at present. The share of the agricultural sector's capital formation in GDP has declined from 2.2 percent in the late-1990s to 1.9 per cent in 2005-06.

India is the largest producer, consumer and exporter of spices and spice products. India's fruit production has grown faster than vegetables, making it the second largest fruit producer in the world. India's horticulture output, is estimated to be 287.3 million tonnes (MT) in 2016-17 after the first advance estimate. It ranks third in farm and agriculture outputs. Agricultural export constitutes 10 per cent of the country's exports and is the fourth-largest exported principal commodity. The agro industry in India is divided into several sub segments such as canned, dairy, processed, frozen food to fisheries, meat, poultry, and food grains. The Department of Agriculture and Cooperation under the Ministry of Agriculture is responsible for the development of the agriculture sector in India. It manages several other bodies, such as the National Dairy Development Board (NDDB), to develop other allied agricultural sectors.

OBJECTIVE OF THE STUDY

The principal objectives of the study are:

1. To study the agriculture import.
2. To know the agriculture export.
3. To understand the role of agriculture import and export in economic development.
4. To study the relation between agriculture import and export.

RESEARCH METHODOLOGY AND SAMPLING

The entire study is depends on the secondary data. The secondary data collected from the sources such as government publication, annual report of agriculture and labour welfare department, Books and Journals relevant to the study.

There is no special sample selected for the research study. Whole agriculture import and export data from 2008-09 to 2017-18 are taken as a research sample for the research.

ROLE OF AGRICULTURE IN INDIAN ECONOMY

Agriculture has a significant role in India economy. It is the means of livelihood for two-thirds of our population and is an important source of raw materials for several industries. Various important industries in India find their raw material from agriculture sector-cotton and jute textile industries, sugar, vanaspati, etc. are directly dependent on agriculture. Handlooms, spinning oil milling, rice thrashing, etc. are various small scale and cottage industries, which are dependent on agriculture sector for their raw material. This highlights the importance role of agriculture in industrial development of the nation.

- **Increase Agricultural Production :** The primary aim for this is to bring more land under cultivation, raise the per hectare yield through intensive application of such agricultural inputs as irrigation, improved seeds, fertilizers, etc. and hence bring about increased agricultural production.
- **Increase Employment Opportunities:** Besides increase in production, the agricultural sector should generate additional employment opportunities and provide scope for increasing the incomes of the poorer sections in the villages.
- **Reduce the Pressure of Population on Land:** Another basic objective of planning in the agricultural sector is to reduce the number of people working on land. The surplus labour on land should be shifted to the secondary and tertiary sectors, preferably in rural and semi-rural areas.
- **Reduce Inequality of Incomes in Rural Areas:** It is desired that the government should make efforts to remove the exploitation by tenants, and also should distribute surplus land among small and marginal farmers in such a way so that there would be some degree of equality and justice in the rural areas.

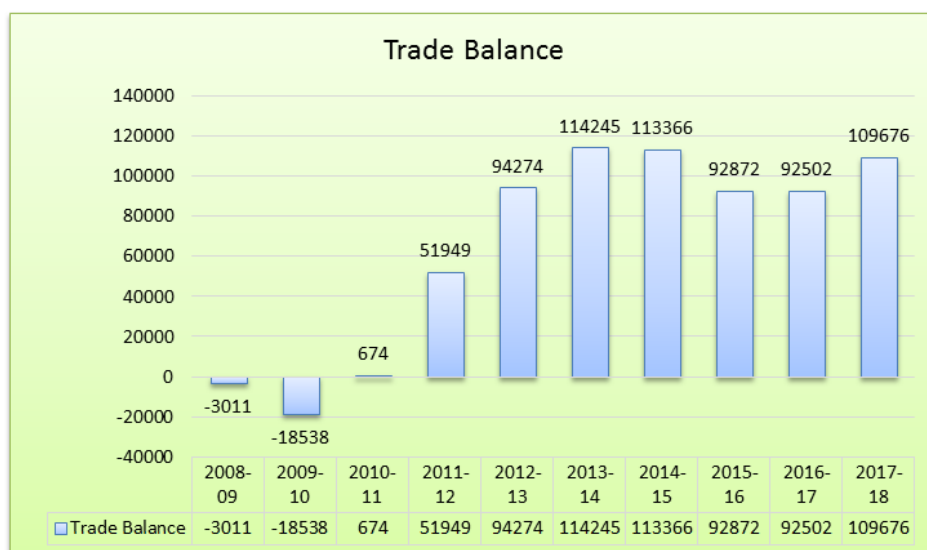
Agriculture Import and Export

It has been theoretically argued that both export and import may play a crucial role in economic development. The theoretical and empirical studies mainly concentrate on either the relationship between export and growth or between import and growth or the association between export, import and economic growth. The export-led growth hypothesis assumes that export advancement is one of the key indicators of growth. It encourages that the overall progress of countries can be achieved not only by mounting the quantity of manpower and investment within the economy, but also by increasing exports. Another relationship of causality from growth to export is called growth-led exports and it tells that there is unidirectional causality from economic growth to exports but not vice versa. There is also a possibility of two way causality link from exports to growth and from growth to exports.

Year wise Agriculture Export and Import

Year	Agriculture Export	Agriculture Import	Trade Balance
2008-09	35473.93	38485.38	-3011
2009-10	35349.89	53888.35	-18538
2010-11	42437.18	41762.70	674
2011-12	83484.33	31534.99	51949
2012-13	118250.96	23977.41	94274
2013-14	136921.21	22676.13	114245
2014-15	131343.00	17976.70	113366
2015-16	107431.89	14559.73	92872
2016-17	108426.73	15924.46	92502
2017-18	119846.65	10170.61	109676

Above table shows the agriculture export and import from the year 2008-09 to 2017-18. The above table shows trade deficit in only in two year i.e. 2008-09 and 2009-10, in the year 2008-09 the agriculture export was `35473.93 and agriculture export was `38485.38 and trade balance was -3011 and in the year 2009-10 the agriculture export was `35349.89 and agriculture export was `53888.35 and trade balance was -18538. From the year 2010-11 agriculture import and export shows positive or in surplus in export and import. In the year 2010-11 the agriculture export was `42437.18 and agriculture export was `42762.70 and trade balance was 674 and increases in the year 2017-18 export up to `119846.65 and import up to `10170.61. From the above table it can be concluded that the agriculture export is more than the agriculture import.

Year wise Agriculture Export and Import

The above graph shows the trade balance of the agriculture trade balance of import and export. It shows negative graph in graph in the year 2008-09 and 2009-10. From the year 2010-11 to 2017-18 it show positive trade balance in the agriculture export and import. From the above it can be concluded that the agriculture produce plays an important role to maintain the trade balance in export and import of the country

CONCLUSION

Agriculture sector plays a vital role in the economic development of the country. It provides livelihood to 65 to 70 per cent of the total population. The sector provides employment to 58.4 per cent of country's workforce and is the single largest private sector occupation. Agriculture occupies a central place in the Indian economy. Its performance sets the pace of growth in the economy as a whole. India's foreign trade is deeply associated with agriculture sector. Agriculture accounts for about 14.7 per cent of the total export earnings. Besides, goods made with the raw material of agriculture sector also contribute about 20 per cent in Indian exports. In other words, agriculture and its related goods contribute about 38 per cent in total exports of country.

REFERENCES

1. Amiti, Mary, and JozefKonings. 2005. "Trade Liberalization, Intermediate Inputs, and Productivity: Evidence from Indonesia," IMF Working Papers 05/146,
2. A. R. Hwang. 1995. Productivity and the Export Market: A Firm-Level Analysis. *Journal of Development Economics* 47, no. 2:313-332.
3. Baldwin, John R., and WulongGu. 2004. Trade Liberalization: Export-Market Participation, Productivity Growth, and Innovation. *Oxford Review of Economic Policy* 20, no. 3:372-392.
4. Annual Report of 2016-17, Ministry of commerce, Government of India.
5. Bernard, A. B., J. Eaton, J. B. Jensen, and S. Kortum. 2003. Plants and productivity in international trade. *American Economic Review* 93, no. 4:1268-1290.
6. Bernard, Andrew B., and J. B. Jensen. 2004. Exporting and Productivity in the USA. *Oxford Review of Economic Policy* 20, no. 3:343-357.

A STUDY OF AGRICULTURE BASED SMALL AND MEDIUM SCALE INDUSTRIES

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ABSTRACT

The Micro, Small and Medium Enterprises is powerful tool for development of a predominantly agricultural country like India. The Micro, Small and Medium Enterprises contribute about 7-8 per cent of India's GDP, 45 per cent of the manufacturing output and 40 per cent of the exports. They are recognized as the engine of growth for the Indian economy. After agriculture, MSME sector employs the largest number of persons. MSMEs are widely dispersed throughout the country and produce a diverse range of products catering to various segments of the market. The geographic spread, diverse product range and potential for innovation and employment generation make them extremely important in the context of economic growth with equity and regional balance. It is clear that to solve the problem of unemployment that development of Small and Medium Enterprises and self employment. The manifest capacity of Micro, Small and Medium Enterprises around the world for driving economic growth and development at regional, national and global levels.

Keyword: Micro, Small and Medium Enterprises, Agriculture Business

INTRODUCTION

In most of the developing countries like India, Micro, Small and medium scale industries constitutes a crucial part of the industrial sector. They play an important role in employment creation, resource utilisation and income generation and helping to promote changes in a gradual and phased manner. They have been given an key place in the framework of Indian development. An effective development policy has to attempt to increase the use of labour, relative to capital to the extent that it is economically efficient. Micro, Small and medium scale industries are generally more labour intensive than larger organizations and also Micro, Small and medium scale industries has now emerged as a dynamic and vibrant sector for the Indian development in recent years. It has attracted so much attention not only from industrial planners and economists but also from sociologists, administrators and politicians.

Definitions of Micro, Small & Medium Enterprises

In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes:

(a) Manufacturing Enterprises: The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries (Development and regulation) Act, 1951) or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The Manufacturing Enterprise are defined in terms of investment in Plant & Machinery.

(b) Service Enterprises: The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment.

The limit for investment in plant and machinery / equipment for manufacturing / service enterprises, as notified, vide S.O. 1642(E) dtd.29-09-2006 are as under:

Enterprises	Manufacturing		Service	
	Turnover	Investment	Turnover	Investment
Micro	5 crore	Less than 25 lack	5 crore	Less than 10 lack
Small	50 crore	More than 25 lack to 5 Crore	50 crore	More than 10 lack to 2 Crore
Medium	250 crore	More than 5 crore to 10 Crore	250 crore	More than 2 crore to 5 Crore

(Source: Ministry of MSME, Government of India)

REVIEW OF LITERATURE

In the following discussion, an attempt has been made to take review of prior studies on the topic.

Deepak Walokar's (2001) a study of 192 women entrepreneurs in Nagpur city in Maharashtra stated that psychological motive is more predominant among entrepreneurs who are educationally more qualified, while the economic motive is predominant among entrepreneurs who are educationally less qualified. This study also revealed that academic qualification, family relationships, monthly income from enterprise, participation in

Entrepreneurship Development Programmes, membership of social/cultural organizations and business background of the entrepreneurs have a strong relationship with entrepreneurial success.

Sadhak (1989) in his study on the role of entrepreneur in backward area found that monetary consideration was the most important motivating factor. Entrepreneurs motivated by income were mainly traders and salaried employees. Independent job was the main inspiration for salaried employees who were not satisfied with the work environment, nature of job, management style, etc. Self-advancement, social recognition, responsibility were other motivating factors.

In another study by Deolankar (1989) on motivational factors found that out of a sample of 264 small-scale entrepreneurs, 98 (37.12 percent) wanted to do something pioneering and innovative. For 74 (28.03 percent) entrepreneurs, the principal motivating factor was the desire to be free and independent. Those who were motivated due to bright demand prospects for the product accounted for 56 (21.21 percent). For 36 (13.64 percent), the main motivating factor to start enterprises was availability of sub-contracting facilities from large units.

Bhatia, B. S. and Shanna, P.K., (1989) surveyed 108 small entrepreneurs in the State of Punjab to find out the influence of various socioeconomic variables on the performance of the enterprises. The study revealed that variables such as specific occupation, family background, technical education, caste, etc. had a positive influence on the performance of the enterprise. Finance was one of the important problems of the entrepreneurs and it was found that a majority of the entrepreneurs have not been benefited much from the support facilities of the State agencies because of their rigid procedures and insistence on adequate security cover for the loan.

OBJECTIVE OF THE STUDY

The principal objectives of the study are:

1. To understand the role of Micro, Small and medium Enterprises in agriculture business.
2. To know the various agricultural business.

Agriculture Business

Agriculture is a very essential and important part of everyone's life. So, it is one of the widely used as a successful business idea. The agriculture business can be divided in the various like Productive Resources include seed, fertilizer, energy, machines, and many more, Agriculture commodities include processed and raw commodities of fiber and food. Important services include insurance, storage, credit, transportation and many more. Following are the top 10 Agriculture business ideas that help you to make money.

1. **Agricultural farm Business:** This business includes producing and exporting crops, vegetables, and fruits. It is done with minimal investment. With proper publicity, you can expand its sales locally and far off cities. It is the most profitable farming in India. Nowadays, the production of black grapes provides high returns to the farmer, which proves it is the most profitable business in India. Apart from this, the export of vegetables is continuously increasing in India. In 3 months, around 23% increase in vegetable export registered in India.
2. **Organic Farming:** Organic farming is a perfect business idea for new generation farmers. These days most people use organic products for better health. It means the demand for organic products is increasing. By the production of organic fruits, vegetables, and flowers, you can earn good returns. If you are thinking of starting an organic farming business. First of all, it's essential to know thoroughly about the use of agricultural products in the business.
3. **Poultry Farming:** Poultry Farming is one of the fastest-growing businesses in the Indian market. In the last three decades, it has transformed from backyard farming to techno-commercial farming. If you want to buy livestock for your poultry farming, for that you have to visit TractorJunction.com.
4. **The Organic Fertilizer:** The organic fertilizer business provides low investment and high production. This business only needs proper knowledge about organic fertilizers. Organic fertilizer has become a domestic business. The business needs a little bit of awareness about organic fertilizer. It is the best agriculture business in India. Before starting this business you have to understand the difference between organic fertilizer and inorganic fertilizer.
5. **Flower Business:** The flower business is one of the largest businesses in India. The business requires all types of flowers, especially unique and hard to grow varieties. Growing, processing, and selling flowers are the best way to make money.

6. **Fertilizer Distribution:** The fertilizer distribution business is one of the most profitable businesses in India. Fertilizers are used to protect crops and improve production. If you want to enhance your business. In that case, you have to search online for ideas related to how to improve farming productivity and many more.
7. **Mushroom Farming:** Mushroom farming can give you profit in less time. Mushrooms require less space and time to grow. This business provides high profit in the least time. We all know that the Government always comes up with new schemes for Indian farmers' betterment. This time the Government announced to provide online training for mushroom farming in many states.
8. **Sunflower Farming:** Sunflower is grown for oilseed and called commercial cash crop. It takes a very short duration to grow. Sunflower farming can perform in diverse agro-climate and soil conditions. It can grow in the rainy season.
9. **Dairy Farming:** Dairy farming is one of the popular farming business ideas in India. With time the demand for milk is rising. It produces manure in huge quantities. This business needs proper knowledge about the profession. Government trying to provide all the help for dairy farming in India. For more visit Tractor Junction Youtube Channel
10. **Hydroponic Retail Store Business:** The hydroponic retail store business is the fastest growing business in recent times. In this business, the plants cultivated without soil
11. **Garlic Farming:** The payoff on growing garlic can be enormous for those who prefer to grow "gourmet" garlic. For example, 3 types of gourmet garlic, also called hard neck garlic. It is Rocambole, Purple stripe and Porcelain, and once you have experienced their preferred flavor, you'll never want to go back to ordinary garlic again. That's why customers are ready to pay high prices – as much as \$10 a pound – to get their favorite varieties.
12. **Lavender Farming:** Lavender farming produces above-average gain for small growers, as it is such a varied crop. The fresh flowers are sold in packages are for the preparation of lavender oil. The flowers are also simple to dry for sales to florists and crafters to make bouquets and floral preparation.
13. **Mushroom Farming:** Mushrooms are a perfect specialty crop for urban farmers, as they are grown indoors and produce a significant return per square foot. The two most extensively grown gourmet mushrooms are oyster and shiitake, which are available fresh or dried in many grocery stores.
14. **Bamboo Farming:** Bamboo is considered a part of the grass family and has long been a landscaping ideal, as landscapers can pick a species of bamboo covering from low Sasa bamboo that is barely a foot tall to large timber bamboo that can reach 75 feet in height. By growing vessel bamboo for landscapers and homeowners, digging is reduced, and the plants have less space.
15. **Willows Farming:** This trouble-free tree is easy to produce and support, and the shoots, also called rods, and catkins enjoy vital requirements. Florists use the stems for arrangements and bouquets, and crafters use the nodes for basketry and other fiber arts, such as garden grilles and natural willow furniture.

CONCLUSION

From the above study we can concluded that agriculture sector provides various agricultural Small and medium scale business. The Indian MSME sector provides maximum opportunities in self-employment and wage-employment. Small and Medium Enterprises is like blood veins in the human body. The development of India is depends upon the growth of small and medium business enterprises. They are widely dispersed across the country and produce a diverse range of products to meet the needs of the local markets, the global market and the national and international value chains. Small and Medium Enterprises sector has emerged as a highly vibrant and dynamic sector of the Indian economy. Small and Medium Enterprises not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional imbalances.

REFERENCES

1. Dr.S.S.Khanka (2010): entrepreneurial development, S. Chand and company Ltd.
2. NCEUS Ce11/4/2010-Pt, Government of India, Ministry of Micro, Small and Medium Enterprises, Udyog Bhavan, New Delhi 110 107. dated: 20th November, 2014.
3. MSME Development Act 2006, Ministry of MSME, Government of India.
4. "Final Results: fourth All India Census of Micro Small and medium enterprises 2006-2007", Ministry of Micro Small and medium enterprises, Government of India.
5. Dr.S.S.Khanka (2010): entrepreneurial development, S. Chand and company Ltd. New Delhi.

A STUDY OF AGRICULTURE DEVELOPMENT SCHEMES AND PROGRAMMES IN INDIA

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ABSTRACT

Indian agriculture is typically identified with the 'Green Revolution' that started in the 1960s enabling the nation to make great strides in domestic food production and significantly contributing to progress in agriculture and allied sectors. It transformed India from a food-deficit nation to a food-surplus, export-oriented country. However, now the country is facing second-generation problems, especially related to sustainability, nutrition, the adoption of new agricultural technologies and, perhaps most importantly, income levels of the population dependent on farming. Agriculture is facing new and unprecedented challenges. The government is continuously engaged in addressing these challenges, and relevant departments are involved in the administration of existing programmes and policies. However, there is a recognised need for more long-term directional reorientation of food, agriculture, and farm policies. The country is known for its diversity of farming practices. The welfare of farmers has always been the top priority of the Government of India. For this, it has implemented different schemes or yojanas to revive the agriculture sector and to improve the economic conditions of farmers. These agricultural schemes are very beneficial for the farmers and they must know about it so as to take its benefit. This paper also discusses about some of the most important programs and government schemes for farmers in India.

Keywords: agricultural development schemes, GDP, welfare of farmers

INTRODUCTION:

Agricultural development is described as the process of formation of conditions for ensuring appropriate accomplishment of agricultural potential. It primarily aims to enhance the growth rate of development in agricultural sector by boosting crop production and productivity that would assist in strengthening the farmers economically and enhancing their status and life-style. Many small farmers in rural areas depend on agricultural sales for their livelihood to provide for their families. Large numbers of poor families rely on agricultural products for daily nourishment. Unfortunately, in many poor regions, soil conditions, seed supply and other factors are not ideal for successful farming, which leads to poverty in the developing world. Agricultural development promotes the proper conditions for farming so that planting, harvesting and processing of crops can be done effectively, which ultimately can reduce poverty and save lives. There are many agricultural challenges that the practice of rural development can overcome. Some of the obstacles facing the agricultural industry include soil that might have been damaged by overuse, in addition to shortages in seeds, fertilizers and other irrigation supplies. A farmer's crops must be protected from disease and

other threats, such as bugs and extreme weather conditions. Without the development of any of these basic farming components, a farmer cannot sell his or her goods to the market.

Transportation is also a key component to agricultural development. Even if a farmer does grow enough agricultural items to sell, if there is no way to transport these products to the market, the farmer cannot sell the crops and make money. In some regions, problems with roads and infrastructure interfere with a farmer's ability to sell his or her goods. Communication is another component to agricultural practices. This is because in order for a farmer to know the type of crop they must yield to generate a profit, they need to know the market prices for the types of crops they are growing. Solving these problems is where agricultural development and government funding comes into play. Agricultural development extends beyond the physical conditions of farming and into research, technology and political policy. For example, until some developing nations adopt aggressive funding programs to improve harvesting conditions, agricultural development is limited. There are endowments and foundations; however that earmark large sums of capital toward improving farming conditions in developing nations.

Advancements in farming technology can result in better yielding crops for small farmers. This is because with the right technological advancements, farmers are able to get more from their land. Proper water purification systems coupled with quality seeds, fertilizers and soil are all necessary for a bumper crop, and all of these components can be enhanced through technological developments. These advancements could have widespread benefits, ranging from higher profits for a farmer to declines in poverty levels and economic growth in surrounding areas.

REVIEW OF LITERATURE

Matsuyama (1992) suggested that if the country has a comparative advantage in agriculture, openness to trade will draw resources away from the modern sector into agriculture, which might be less productive than industry. The importance of the degree of openness of a country was pointed out early on by proponents of agriculture-first approaches to development. Gardner (2005) concluded that agriculture does not seem to be a primary force behind growth in national GDP per capita. S. Fan, et al. (2008) examined that the impact of subsidies and investment of the government on agricultural growth and reduction in poverty. The authors suggested the way to curtail the spending of the government. Availability of subsidies in credit, fertilizers and irrigation are sensitive for small farmers in adopting the new technologies.

OBJECTIVES OF THE STUDY

The present study has conducted on the following objectives.

1. To study the present agricultural development schemes in India.
2. To evaluate the agricultural development schemes and beneficiary status in India.

RESEARCH METHODOLOGY

The present study is based on these secondary sources of data has collected from various books and research journals and government agencies. The study was confined from only existence agriculture development schemes and programmes in the country as well as Maharashtra state.

Discussion on Agriculture Development Schemes /Programmes,

The main objective of present study is to create awareness about various schemes in the agricultural sector. Through this study, the performance level of these agricultural schemes and programs was analyzed which would be helpful in achieving financial inclusion. So it is necessary to know about various schemes and their creation to connect the beneficiaries. Agriculture is the basic source of food supply, production, processing, conservation and distribution. Agricultural products contribute to the Gross Domestic Product (G.D.P.) and generate employment in rural areas. They change the lives of farmers in modern society. Government of India has introduced Minimum Support Price (MPS), MIF, PMKSY, PMFBY, e-NAM, PM-KISAN, PMJDY, PM-KUSUM, PKVY, NAMS and ACABC

Scheme. Innovative programs like Kisan Suvidha mobile app and Krishiudan double the Farmers' Income (DFI). These help in transformation of the village economy, irrigation, crop insurance and income stabilization. They also ensure financial assistance to beneficiaries, credit flow and direct benefit transfer of grants and funds. Adoption of modern technology, farm based activities, poultry, dairy, forestry, beekeeping and support of SHGs which will directly impact productivity, profitability, financial inclusion and welfare of 21st century farmers and development of country's economy.

Pradhan Mantri Fasal Bima Yojana (PMFBY)

Pradhan Mantri Fasal Bima Yojana is an actuarial premium based scheme where farmer has to pay maximum premium of 2 percent for Kharif, 1.5 percent for Rabi food & oilseed crops and 5 percent for annual commercial or horticultural crops and the remaining part of the actuarial or bidded premium is equally shared by the Central & State Government. An important purpose of the scheme is to facilitate quick claims settlement. The claims should be settled within 2 months of harvest subject to timely provision of both yield data & share of premium subsidy by State Government.

Kisan Credit Card (KCC) Scheme

Kisan Credit Card scheme is yet another important Government scheme that provides farmers with timely access to credit. Kisan Credit Card scheme was introduced in 1998 to provide short-term formal credit to the farmers. KCC scheme was launched to ensure that the credit requirements for cultivators in the agriculture, fisheries & animal husbandry sector were being met. Under this scheme, farmers are given short-term loan to purchase equipment & for their other expenses as well. There are many banks that offer KCC including SBI, HDFC, ICICI, Axis.

Pashu Kisan Credit Card Scheme

For the growth and development of animal husbandry sector in India, the Government has launched 'Pashu Kisan Credit Card' for livestock farmers. Haryana is the first state in the country to provide Pashu Kisan Credit Card to the farmers. Under this scheme, farmers are given loan to buy cow, buffalo, goat etc.

Paramparagat Krishi Vikas Yojana (PKVY)

Paramparagat Krishi Vikas Yojana is implemented with the aim to promote organic cultivation in India. To improve soil health as well as organic matter content and to boost the net income of the farmer so as to realize

premium prices. Under Paramparagat Krishi Vikas Yojana, an area of 5 lakh acre is targeted to be covered through 10,000 clusters of 50 acres each, from 2015-16 to 2017-18.

Pradhan Mantri Krishi Sinchai Yojana (PMKSY)

Micro Irrigation Fund with a corpus of Rs. 5000 crore was operationalized in NABARD from 2019-

20. Ministry of Agriculture and Farmers Welfare (MoA & FW), Government of India is the Nodal Ministry. The objective of the fund is to facilitate State Govts. efforts in mobilizing additional resources for expanding coverage under micro irrigation and incentivizing its adoption beyond provisions of PMKSY-PDMC. The corpus was to be utilized during 2018-19 and 2019-20. However, continuation of implementation of MIF was further extended for 2020-21. Pradhan Mantri Krishi Sinchai Yojana was launched on 1 July 2015 with the motto 'Har Khet Ko Paani' to provide end-to-end solutions in irrigation supply chain, viz. water sources, distribution network & farm level applications. PMKSY focuses on creating sources for assured irrigation, also creating protective irrigation by harnessing rain water at micro level through 'Jal Sanchay' & 'Jal Sinchan'.

National Agriculture Market (e-NAM)

National Agriculture Market gives an e-marketing platform at the national level and support creation of infrastructure to enable e-marketing. This new market process is revolutionizing agriculture markets by guaranteeing better price discovery. It also brings in transparency & competition to enable cultivators to get improved remuneration for their produce moving towards 'One Nation One Market'. It envisages initiation of e-marketing platform at national level and to support creation of infrastructure to enable e-marketing in 585 regulated markets across the country by March 2018. This innovative market process is revolutionizing agri markets by ensuring better price discovery. A target of integrating 400 markets to e-NAM had been set for March, 2017 against which 455 markets in 13 States have been on boarded as on 30.6.2017. As on 2.7.2017, 47.95 lakh farmers and 91,500 traders have registered on e-NAM portal.

Soil Health Card Scheme

Soil health card scheme was launched in the year 2015 in order to help the State Governments to issue Soil Health Cards to farmers of India. The Soil Health Cards give information to farmers on nutrient status of their soil along with recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility.

National Mission for Sustainable Agriculture (NMSA)

National Mission for Sustainable Agriculture is one of the eight Missions under the National Action Plan on Climate Change (NAPCC). It is aimed at promoting Sustainable Agriculture via climate change adaptation measures, boosting agriculture productivity especially in Rainfed areas focusing on integrated farming, soil health management & synergizing resource conservation.

Agri Clinic and Agribusiness Centers Scheme (ACABC Scheme)

The ACABC scheme is being implemented by Ministry of Agriculture and Farmers' Welfare, Government of India, with NABARD acting as subsidy channelising agency. Agri-Clinics are envisaged to provide expert advice and services to farmers on various aspects to enhance productivity of crops/animals and increase the incomes of farmers. Agri-Clinics provide support in the following areas:

- Soil health
- Cropping practices
- Plant protection
- Crop insurance Clinical services for animals, feed and fodder management
- Post-harvest technology
- Clinical services for animals, feed and fodder management
- Prices of various crops in the market, etc.

Agri-Business Centres are commercial units of agri-ventures established by trained agriculture professionals. These ventures may include maintenance and custom hiring of farm equipment, sale of inputs and other services in agriculture and allied areas, including post-harvest management and market linkages for income generation and entrepreneurship development. The scheme covers full financial support for training and handholding, provision of loan and credit-linked back-end composite subsidy.

Neem Coated Urea (NCU)

Scheme being promoted to regulate use of urea, enhance availability of nitrogen to the crop and reduce cost of fertilizer application. NCU slows down the release of fertilizer and makes it available to the crop in an effective manner. The entire quantity of domestically manufactured and imported urea is now neem coated. The reports from field are positive. The expected saving is 10% of urea consumption, thereby resulting in reduced cost of cultivation and improved soil health management.

Table 1: Various schemes/programmes and total beneficiaries/benefits

Various Schemes and Programmes	Inception Year	Total Beneficiaries/Benefits
E-NAM	2015	836 lakhs
National Mission for Sustainable Agriculture (NMSA)	2010	344 lakhs
Pradhan Mantri Krishi Sinchai Yojana (PMKSY)	2015	379.58 hector
Paramparagat Krishi Vikas Yojana (PKVY)	2015	690 clusters
Pradhan Mantri Fasal Bima Yojana (PMFBY)	2016	223.6 lakhs
Kisan Credit Card Loan Scheme	1998	1.28 crore
Micro Irrigation Fund (MIF)	2019	10 million hectares
PM-KISAN Scheme	2019	846.48 lakhs

Sources: Data Compiled by Researcher from Ministry of Agriculture and Farmers Welfare Government of India

As per the above table it reveals that the inception date of various agricultural schemes and also it provides information about total number of beneficiaries who are benefited from these schemes till its inception. According to this research, under E-NAM scheme Rs. 836 lakhs of monetary benefits have been given to the farmers and under micro irrigation scheme, 10 million hectares of land were covered but still it has not reached its target. Similarly, various benefits like Rs. 223.6 lacs and Rs. 846.48 lacs were substantiated by Indian government to productive sector under Pradhan Mantri Fasal Bima Yojana and PM Kisan scheme for the purpose of uplifting their productivity and welfare of the farmers that will directly impact on the financial inclusion of the country.

CONCLUSION

With the above discussion it was concluded that the effectiveness of various agricultural programs and also identifies the benefits and beneficiaries of these schemes. Under this study, various financial services, subsidies, funds released, online platform for agricultural products, funds for micro-irrigation, and soon benefits provided by the government of India were studied.

REFERENCES

1. Economic Survey of Maharashtra 2018-19, Directorate of Economics and Statistics, Planning Department, Government of Maharashtra, Mumbai
2. Department of Agriculture, Cooperation & Farmers' Welfare Ministry of Agriculture & Farmers' Welfare Government of India report 2018
3. Anwer, E. (2019). Agriculture and Economic Development in India. India: New Century Publications. Pp 1-238
4. Supporting Indian Farms the Smart Way. (2018). India: Academic Foundation.
5. Agricultural Policies in India. (2018). France: OECD Publishing.
6. Shrimali, R. (2021). Contract Farming, Capital and State: Corporatisation of Indian Agriculture. Singapore: Springer Nature Singapore.
7. Padmavathi, K. (2021). Rural Development: Programmes and Schemes in India. India: Authorspress.

A STUDY OF IMPACT OF CENTRAL BANK DIGITAL CURRENCY (CBDC) ON ACCOUNTING TRANSACTIONS

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INTRODUCTION

The Reserve Bank of India (RBI) has issued a concept note on Central Bank Digital Currency (CBDC) i.e., **₹ (Digital Rupee)**. Digital currency is a form of currency that is available only in digital or electronic form. It is also called digital money, electronic money, electronic currency, or cyber cash. All cryptocurrencies are digital currencies, but not all digital currencies are cryptocurrencies. Digital currencies are currencies that are only accessible with computers or mobile phones because they only exist in electronic form. Typical digital currencies do not require intermediaries and are often the cheapest method for trading currencies. Some of the advantages of digital currencies are that they enable seamless transfer of value and can make transaction costs cheaper.

Central Bank Digital Currency (CBDC) and Business Accounting Transactions

In the era of new currency transactions in the form of ₹ (Digital Rupee) it will affect future accounting transaction recording in books of account. New type of journal entries can be inserted in accountancy.

FEATURES OF CBDC

The features of CBDC include:

- CBDC is sovereign currency issued by Central Banks in alignment with their monetary policy
- It appears as a liability on the central bank's balance sheet
- Must be accepted as a medium of payment, legal tender, and a safe store of value by all citizens, enterprises, and government agencies.
- Freely convertible against commercial bank money and cash
- Fungible legal tender for which holders need not have a bank account
- Expected to lower the cost of issuance of money and transactions
- Reduction in cost associated with physical cash management
- To further the cause of digitisation to achieve a less cash economy.
- Supporting competition, efficiency and innovation in payments
- To explore the use of CBDC for improvement in cross-border transactions
- Support financial inclusion

Cryptocurrency Vs CBDC

Cryptocurrencies are independent digital currencies that run on the principle of decentralisation and without predetermined value or backing. Bitcoin (BTC) and Ethereum (ETH) are examples of such cryptocurrencies. Transactions are recorded in a centralised ledger and central banks retain full control over its supply. CBDC has the same value as that of the country's physical fiat currency (notes or coins). Cryptocurrency, on the other hand, is a digital money created to function as a means of exchange.

Types of CBDC

Based on the usage and the functions performed by the CBDC and considering the different levels of accessibility, CBDC can be demarcated into two broad types viz. general purpose (retail) (CBDC-R) and wholesale (CBDC-W).

CBDC-R is potentially available for use by all private sector, non-financial consumers and businesses. In contrast, wholesale CBDCs are designed for restricted access by financial institutions. CBDC-W could be used for improving the efficiency of interbank payments or securities settlement. Further, CBDC-W has the potential to transform the settlement systems for financial transactions undertaken by banks in the G-Sec Segment, Inter-bank market and capital market more efficient and secure in terms of operational costs, use of collateral and liquidity management. Further, this would also provide coincident benefits such as avoidance of settlement guarantee infrastructure or the need for collateral to mitigate settlement risk.

Some examples are as follows-

Transaction no 1: Goods purchased worth Rs 10,000. Amount paid by cash Rs 2000, bank transfer Rs 3000 and e₹ (Digital Rupee) 6200 (GST CGST 6% SGST6%)

Transaction no 2: Salary paid e₹ (Digital Rupee) 5000

Transaction no 3: Purchase Machinery for Rs 20,000 Amount paid by UPI Rs 12,000 and balance by e₹ (Digital Rupee) Rs 10,400(GST CGST 6% SGST6%)

Transaction no 4: Transfer money to CBDC e₹ (Digital Rupee) 5000 from Bank account

Transaction No 5: Sale goods Rs 10,000 amount Received CBDC e₹ (Digital Rupee) (CGST 6% and SGST 6%)

Date	Particulars	L/F	Amount	Amount
1	Purchase A/c Dr Input CGST A/c Dr Input SGST A/c Dr To Cash A/c To Bank A/c To e₹ (CBDC) (Digital Rupee) A/c (Being Goods purchased and amount paid)		10,000 600 600	2,000 3,000 6,200
2	Salary A/c Dr To e₹ (CBDC) (Digital Rupee) A/c (Being Salary Paid)		5,000	5,000
3	Machinery A/c Dr Input CGST A/c Dr Input SGST A/c Dr To Bank A/c To e₹(CBDC) (Digital Rupee) A/c (Being Goods purchased and amount paid)		20,000 1,200 1,200	12,000 10,400
4	e₹ (CBDC)(Digital Rupee) A/c Dr To Bank A/c (Being Transfer money to CHDC e₹ (Digital Rupee))		5,000	5,000
5	e₹ (CBDC)(Digital Rupee) A/c Dr To Sales A/c To Output CGST A/c To Output SGST A/c (Being Goods Sold)		11,200	10,000 600 600
	Total		53800	53800

CONCLUSION

New era of accounting transactions of digital e₹ (CBDC) inserted in to business transactions. It will help to increase digital economy. Such accounting transactions are based on coded money tokens. It will help to increase legal economy. It will help for automation accounting and auditing system in India.

REFERENCES

1. RBI Reports
2. Union finance budget 2022 report
3. <http://sbi.com>,

A STUDY OF NEW TECHNOLOGY ADOPTION IN AGRICULTURAL DEVELOPMENT OF INDIA**Dr. Bhausaheb Nanasaheb Shinde¹ and Dr. Rajesh Bhausaheb Lahane²**¹Assistant Professor ²Professor and HOD, Department of Commerce and Management, Deogiri College, Aurangabad**ABSTRACT**

*As agriculture sector is vital aspect of countries GDP as well as livelihood of nation's people, it is needed to take some action to increase the income of agriculture sector. The development of agriculture sector depends on the use of advanced technologies which available in the market. The new technologies assist in more reliable to monitor and manage of natural resources concern with agriculture sector. The aim of present research work is to study the technological advancement and its uses for development of agriculture sector and to know the role of technology in agricultural development. The secondary data were used to attain the goal of study. **Keywords:** Agriculture, Technology, Farmers, Production, E-Commerce.*

INTRODUCTION

Atmanirbhar Bharat Abhiyaan (ABA) is the vision of India. In ABA focus is given on development of agriculture sector. In agriculture, Atmanirbhar Bharat Abhiyaan aims to strengthen Infrastructure, Logistics, and Capacity Building etc. Agriculture contributes near about 20% in GDP of India. It is key sector because more than 50% of total population of India depends on Agriculture Sector. Increasing the income of agriculture sector is challenging task. Government employing many schemes to increase the income of agriculture sector of India, such as Agriculture Infrastructure fund, The national Beekeeping and Honey mission, interest subvention scheme, agriculture credit, Kisan credit card and so on. Heavy increase in population of India creates the demand to development of farmer and agriculture sector. To uplift the farmers the traditional way of farming cannot helpful. Farmers should adopt new inventions and new technology in agriculture sector to boost agriculture development. There are some measures that will help to agriculture development of India say, Irrigation augmentation and management, enhancement of soil quality, use of new technologies etc. Following table provides the data regarding sector wise GDP of India which indicates the importance of agriculture sector in countries economy.

Table No. 01 Sector wise GDP of India

Sector	% in GDP
Mining and Quarrying	1.63
Manufacturing	14.43
Electricity, Gas, water supply and other utility services	2.7
Construction	7.16
Total Industry contribution	25.92
Agriculture, Forestry & Fishing	20.19
Public, Administration, defense and other services	15.42
Financial, real estate and prof. services	22.05
Trade, hotels, transport, communication and services related to broadcasting	16.42
Total service industry contribution	59.89

(Source: <https://statisticstimes.com/economy/country/india-gdp-sectorwise.php>)

The above table no. 01 indicates the contribution of various sectors in GDP of India. It was found that the highest contribution in GDP were given by service industry (59.89%), followed by industry contribution were accounted 25.92% and Agriculture, forestry and fishing contributed 20.19% in the total GDP of nation. It was noted that the contribution of agriculture sector in GDP were notable but not enough.

Importance of New Technology in Agriculture Sector

In India due to lack of uniformity in cultivation process, water irrigation, uses of fertilizers and pesticides affects the income of farmers. If farmers use new technologies uniformly it will assist in higher crop productivity, increase workers safety, reduced impact on natural resources etc.

The new technologies assist in more reliable to monitor and manage of natural resources, such as air and water quality. Some technologies are useful in control over plant and animal production, processing, distribution, and storage, which results in: Greater efficiencies and lower prices, Safer growing conditions and safer foods, reduced environmental and ecological impact and so on.

OBJECTIVES OF THE STUDY

This Research Study has Following Broad Objectives.

- 1) To study the technological advancement and its uses for development of agriculture sector.
- 2) To know the role of technology in agricultural development.

Data Collection

This study basically depends on secondary data collected from various sources such as books, newspapers, research journals, and various related websites.

Indian Agriculture and Modern Techniques:

Technology in agriculture affects many areas of agriculture, such as fertilizers, pesticides, seed technology, etc. The Biotech and genetic engineering assist in pest resistance and increased crop production. Automation in farming helps in efficient farming, harvesting, and a decrease in manpower. Improved Irrigation methods, transportation facilities and processing machines have reduced wastage, etc. Following are some modern techniques which are used in Indian agriculture.

Genetic Modification

Modern agriculture has crop and livestock breeding methods that most farmers are looking for. Use of hybrid seeds increases the production of crop. This is where two or more species of plants are used to produce a higher quality offspring. Genetic engineering is another specialization, where molecular building blocks are developed.

Intensive Agriculture

Proper soil aeration to improve air circulation in the soil is important. Therefore, for a greater yield of farm produce, it is necessary to do excessive tilling of the land. To increase the yield regular and deep cultivation is needed.

Monoculture: It is a type of farming where one single form of the crop is grown in a field of land. It makes land-farming simple. Since the crop to be planted is of the same type, the land is tilled in the same way. This makes land-farming and management very simple.

Synthetic Fertilizers: It is type of agriculture input that is made from normally occurring materials. Utilizing fertilizers to increase the fertility of the land one plans to farm is a big deal. The repeated uses of land led to a plateau in the fertility of the land. Since tilling the land is an old fashioned technique because there was not enough land to go around, using fertilizers has helped.

Irrigation technologies: It includes devices which used for irrigation purpose. Sufficient water supply is one of the most important factors in determining the survival of plants. Insufficient rainfall has a tendency to be insufficient for crop production. So, top techniques are being deployed on the ground to address this problem.

Chemical Pest Control:

Pests should range from bugs that eat young vegetation and their leaves to rodents like moles and squirrels, or animals that are wild or domesticated. When used correctly, pesticides yield results. This reduces the invasion of vegetation by pests for the purpose of producing healthy, productive plants.

Farmers don't have to spray water, fertilizer and pesticides in uniform quantities over entire fields anymore. Instead, they can use minimal amounts needed for very specific areas or even treat individual plants differently.

Drones

Drone technology helps farming by providing real time information. It is very useful in increasing agriculture yields. Drones are the important tools which we can use in agriculture. Equipped with technology-based sensors, drones can be used in precision agriculture – monitoring crop health, weed and pests detection, crop scouting, analysis of soil health, irrigation management and livestock management among others.

Data Sciences

Farmers in India have to think about agriculture as a business, thereby applying data sciences for precision agriculture. A farmer makes hundreds of decisions between planting and harvesting with each decision impacting yields and profitability. In fact, farmers are effectively in the database business without enough data to make decisions. If farmers are equipped with tech tools or apps which provide them with customized and personalized data, dramatic changes can be seen in yields and profitability of the agriculture.

E-Commerce Input Markets

Scattered input markets with high dependency on dealers or middlemen are among the dominant causes of increased costs of production. Indian farmers have no negotiating power on the buying side, making them more

vulnerable. A single platform which gives farmers an access to a wide range of products of various brands with a clarity brought in by technology can be a milestone in addressing India's Agri woes.

Artificial Intelligence (AI)

AI is going to be the next big thing in agriculture. Right from sowing the seeds to pests and irrigation management, AI will enable farmers in getting the best results for their hard work. Cognitive IoT technologies build a ground for drawing inferences after collecting large amounts of structured and unstructured data, providing organizations with better insights and suggestions to take action for improving crop yields. This will also contribute in determining the best practices be it choices of seeds, fertilizers or pesticides or the technique deployed at a particular stage of farming.

Agriculture Sensors

Communications technology has evolved rapidly in India and made smart farming a possibility. Sensors are now being used in agriculture to provide data to farmers to monitor and optimize crops given the environmental conditions and challenges. These sensors are based on wireless connectivity and find application in many areas such as determining soil composition and moisture content, nutrient detection, location for precision, airflow, etc. Sensors help farmers save on pesticides, labor, and result in efficient fertilizer application. They allow farmers to maximize yields using minimal natural resources.

Benefits of Technology Adoption in Agriculture

1. Helps in higher production of crop.
2. Optimum use of water, pesticides, and fertilizers helps to cut the cost of production in agriculture.
3. Helps in reducing food prices.
4. Helps to decrease rivers and groundwater pollution.
5. Increase worker safety.
6. Efficiencies are up and prices are down.
7. Growing safer crops that produce healthier food.
8. Reducing our environmental and ecological footprint.

Challenges before Farmers

- 1) To raise capital for using updated technologies.
- 2) Unavailability of skill worker in the field of agriculture.
- 3) Climate changes affect the production of crops.
- 4) Heavy prices of fertilizers and pesticides resulted in increase the cost of production.
- 5) To identify quality seeds and their availability at proper time.
- 6) Transportation facilities.
- 7) Unavailability of storage facilities.

CONCLUSION

The use of technological advancement in agriculture sector is need of hour. There are varieties of technology based tools available in the market which we can use in agriculture. The use of technology definitely increase the crop yield in agriculture sector it will assist in growth of GDP and thereby economy of the nation. Although, technology can helps to increase crop yield of the farmers, the heavy requirement of funds to purchase such technology is big challenge for farmers. The use of technology in farming increases the cost of production as well as yield of crop of the agriculture sector. It is needed to control the cost of production and get the advantages of new technological advancement in the field of agriculture.

REFERENCES

- 1) Dinesh Kumar and Y. S. Shivay (2008), "Definitional Glossary of Agricultural Terms", Vol. I, I. K. International Publishing House Pvt. Ltd. New Delhi.
- 2) S. R. Reddy (2016), "Farming system and Sustainable Agriculture", Kalyani Publisher, New Delhi.
- 3) Shakti Ranjan Panigraphy, Sanjiv Kumar, Ritambhara Singh (2019), "Objective Agri-Business Management", Himalaya Publishing House Pvt. Ltd. Lucknow.

-
- 4) <https://www.nifa.usda.gov/topics/agriculture-technology>
 - 5) <https://www.smsfoundation.org/role-of-modern-technology-in-agriculture/>
 - 6) <https://khetibuddy.com/new-technology-in-agriculture/>
 - 7) <https://www.smsfoundation.org/understand-challenges-and-5-ways-to-boost-agricultural-development-in-india/#agricultural-sector-in-india>
 - 8) <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1741942>
 - 9) <https://geopard.tech/blog/what-are-the-types-of-sensors-used-in-agriculture/>
 - 10) <https://www.holtags.com/types-of-farm-equipment-and-their-uses>
 - 11) <https://www.agrivi.com/blog/proper-farm-management-with-proper-irrigation-method/>
 - 12) <https://statisticstimes.com/economy/country/india-gdp-0GVA%20of%20Rs.,and%20allied%20sector%20share%2020.19%25>
 - 13) Agricoop.nic.in/Documents/annual-report-2021-22.

A STUDY OF PROCEDURAL PROBLEMS FACED TO FARMERS WHILE GETTING LOAN

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India's about 68 per cent population living in rural area and many among them are farmers engaged in agriculture activities. Because of low productivity of agriculture production, fluctuation in agriculture products, income of Indian farmers is irregular and they earn very low. Therefore they required loan for many reasons like productive as well as unproductive purposes. But getting loan is not easy task for them, they faced different kind of procedural problems while getting loan. The present paper is an overview to know what kind of procedural problems faced to farmers and there severity. For that 406 farmers selected by applying proportionate stratified sampling method from 11 blocks of Satara district. Data were collected through structured questionnaire. The present study revealed that getting loan is not easy task for many farmers, they faced numerous procedural problems while getting loan and such problems are inconvenient terms and conditions of getting loan, collateral demand by banks, high transaction cost for getting loan, inconvenient loan repayment policy of banks, ineffective grievance handling mechanism of banks etc. Getting insufficient amount of loan from bank is major difficulty faced to many farmers.

Keywords: Farmer, loan, problem, bank, agriculture.

INTRODUCTION

Rural sector is an important segment of Indian economy. It influences the pace of development in the rest of the economy. India is a country of about 1.30 billion people. About 68 per cent of India's population lives in rural areas where the main occupation is agriculture. Rural people who are engaged in agriculture activity like growing crop and engaged in allied agriculture activities such as dairy farming, poultry farming, are called as farmers. Income of Indian farmers is irregular and they earn very low from their agriculture activities because Indian agriculture is depends on monsoon, traditional methods of farming, less facilities of irrigations etc. Therefore for better management and development of agriculture require easy access finance. Farmers required productive as well unproductive credit. Getting loan is a lengthy process especially for those like farmers who have not fixed source of income and not having collateral security as required to banks. Farmers are facing different kind of procedural problems while getting loan. Such problems are varied farmers to farmers. But some common problems faced to farmers are insufficient amount of loan, high rate of interest, delay in getting loan, demand of collateral security, high transaction cost of getting loan etc. Present research paper is an attempt to overview of procedural problems faced to farmers while getting loan with special reference of Satara district.

REVIEW OF LITERATURE

Noonari (2015) in the present study investigate economic analysis of poultry farm production, with a view to assess financial gain from poultry production. Singh, Kaur and Kingra (2009) in this article researchers expressed that institutional agricultural credit has been increased in recent years in Punjab but it does not fulfill the productive needs of farmers. Subramanian and Shivananjappa (2017) in this article analyze the impact of agricultural finance on the farmers and also examine the to what extent agricultural finance obtained by the farmers and its repayment position. Uma Devi (2012) in the present study analyzed the impact of cooperative loans on agriculture in East Godavari district of Andhra Pradesh. Yegoh (2013) in his article expressed that many financial institutions advancing agricultural credit to male farmers more than female farmers. It explained that age of farmers, gender of farmers (male or female), education level, family size, household size, applied loan amount and repayment period are the factors which highly influencing access to agricultural credit. Earlier studies focused on analysis of poultry farm production and financial gain, impact of agriculture finance, impact of cooperative loans on agriculture etc. but fails to explain procedural problems faced to farmers while getting loan. Therefore, in the present study researcher has analyzed actual procedural problems faced in the process of getting loan to farmers in the Satara district.

Need of Loan/Finance to Farmers

Farmers required productive credit for short term, medium term and long term purpose. Short term credit required for purchase of seeds, manures, fertilizers, feed for livestock. They also required short term credit for paying wages for agriculture labour, paying pump charges and electricity bill etc. Need of medium term credit

arises for purchase of small agriculture implements, cattle, repair of well, farm house and other farm equipment. Farmers needed long term credit for purchase of farm machineries, land improvement, digging of well and development irrigation facilities. Farmers and rural artisans also required consumption credit for family expenditure such as education of their children, marriage of daughter, celebrating religious and social functions, medical and even funeral purpose. They also required credit for pay old debts.

Procedural Problems Faced to Farmers while Getting Finance

1. Absence of Flexible financial products and Services is one of the major problems faced to farmers. The farmers seek different and flexible financial products/loan for various propose like to purchase of seeds, fertilizers, purchase of farm equipment and cattle etc. But most of financial institutions do not offer such products as per requirement of such borrowers.
2. High transaction cost to accesses finance is also one of the procedural problem faced to farmers. They have to incur expenses on transportation and documents for getting loan.
3. Demanding of collateral from financial institutions is one of the major problems facing to farmers. Many farmers do not have fixed collateral or less holding of land which they can offer while demanding loan and this is the main reason why banks refuse to sanction the loan.
4. In many cases farmers not get sufficient or demanded amount of loan from financial institutions, the reason behind it are insufficient income, unavailability of guarantor and insufficient collateral security etc.
5. The role of staff of financial institutions is very important in whole process of getting finance/loan. But in many cases borrowers experienced non cooperation by such staff.

OBJECTIVES OF THE STUDY

1. To study procedural problems faced to farmers while getting loan/finance.
2. To analyze the severity of procedural problems of getting finance among farmers.

Hypothesis: For the present study researcher has formulated following hypothesis:

H₀: The farmers are suffering from procedural problems while getting loan/finance.

RESEARCH METHODOLOGY

Proportionate stratified sampling method is used for selection of sample of farmers. There are 11 taluka's in satara district. The finite population of farmers as per socio economic survey 2018-19 is 521786. Therefore by applying (Yamane, 1976) formula 399.6935 sample size calculated. But by applying proportionate stratified sampling method 406 farmers are selected from 11 blocks of Satara district. To know the procedural problems faced to farmers while getting loan/farmers, schedule (questionnaire) was distributed to farmers in 11 blocks of Satara district. The data were processed and analyzed by using different techniques and software like MS-Excel, SPSS. Researcher has been used various statistical tools such as 5-Point Likert Scale, Mean, Standard Deviation (S.D), Percentage, Variance etc. to present collected data.

Difficulties Faced to Farmers while Getting Loan

Getting loan is not an easy task especially for those who earn irregular and low income. Farmers are one of these categories who not earn regular income and their income is also very low. Therefore they are facing different kind of procedural problems while getting loan. Table no. 1 presents problems faced to farmers while getting loan. Majority farmers are agree with below mentioned procedural problems of getting loan.

Table No. 1 Procedural Problems Faced to Farmers while Getting Loan

A Most Favorable Attitude	A Neutral Attitude	A Most Unfavorable Attitude
406 x 5 = 2030	406 x 3 = 1218	406 x 1 = 406

CD- Completely Disagree, **D-** Disagree, **N-** Neutral, **A-** Agree, **CA-** Completely Agree

Sr. No.	Attributes	CD	D	N	A	CA	Total	P.V.	Mean	V
		1	2	3	4	5				
1.	Terms and conditions for getting loan are inconvenient.	08	142	81	820	475	1526	75.17	3.76	1.12
2.	Bank provides loan in time.	64	404	18	424	140	1050	51.72	2.59	1.50
3.	Interest rate on loan is reasonable.	67	420	24	404	100	1015	50.00	2.50	1.38

4.	Bank Demands for collaterals.	07	116	60	928	445	1556	76.65	3.83	0.97
5.	Necessity of guarantor for sanctioning the loan.	06	106	78	828	570	1588	78.23	3.91	1.00
6.	High transaction cost for getting loan (documents etc.).	08	144	63	824	495	1534	75.57	3.78	1.14
7.	Bank sanctions sufficient amount of loan.	74	482	24	288	55	923	45.47	2.27	1.08
8.	Bank staff cooperates throughout the process of getting loan.	60	352	69	492	120	1093	53.84	2.69	1.47
9.	Working hours of bank are convenient.	09	304	57	772	165	1307	64.38	3.22	1.22
10.	Grievance handling mechanism of banks is effective.	64	320	153	432	115	1084	53.40	2.67	1.41
11.	Loan repayment policy of bank is easy and convenient	61	358	111	444	90	1064	52.41	2.62	1.35

(Source: Field Survey)

Table no. 1 shows procedural problems faced to farmers while getting loan. Analysis of problems faced to farmers while getting loan is done on likerts five scale which shows total score, percentile value, mean and variance of each statement. The score of a statement would be in between 406 to 2030. If total score value regarding any statement comes exact 1218 it shows an undecided attitude of respondents towards that statement. If total score value comes below 1218 (but up to 406) it means respondent have unfavourable attitude. Total score value above 1218 (but up to 2030) presents favourable attitude of respondent. Further, mean above 3 indicates respondents are agree with this statement and mean below 3 indicates respondents are disagree with this statement

- 1) The total score value for the first statement- 'Terms and conditions for getting loan are inconvenient' is 1526 with percentile value 75.17 and mean 3.76 showing favourable response of the farmers. The response of farmers to this statement shows inconsistency and greater variability because the variance for this statement is 1.12.
- 2) Regarding second difficulty faced for getting loan, which is 'Bank provides loan in time' above table shows unfavourable response of farmers. The score value is 1050 with percentile value 51.72 and mean 2.59 shows that majority farmers are facing this difficulty. The variance of this statement is 1.50 shows that there is inconsistency and variety in given response.
- 3) Above table shows unfavourable response of sample farmers for the statement 'Interest rate on loan is reasonable'. The total score value for this statement is 1015, percentile value is 50.00 and mean 2.50 indicates that majority farmers are facing this problem. There is more variety and inconsistency in the given response because variance of this statement is 1.38.
- 4) As per above table score value and percentile value for the statement 'Bank Demands for collaterals' is 1556 and 76.65 respectively and mean of this statement is 3.83. All these figures indicate favourable response of farmers for this statement. There are less variations and inconsistency in the responses of farmers towards this statement because its variance is 0.97.
- 5) The total score value for the statement - 'Necessity of guarantor for sanctioning the loan' is 1588 with percentile value is 78.23 and the mean is 3.91. All these figures represent favourable response of respondents. The variance of this statement is 1.00 and it's indicating less consistency as well as un-uniformity in given response of farmers.
- 6) The 6th statement which is 'High transaction cost for getting loan (documents etc.)', for this statement Farmers has given favourable response. The total score value of this statement is 1534 with percentile value 75.57 and mean 3.78 indicates the same. There is more inconsistency and variety in the given statement because variance of this statement is 1.14.

- 7) As regards next statement, which is - 'Bank sanctions sufficient amount of loan/ demanded amount of loan', farmers has given unfavourable response. The score value is 923 with percentile value 45.47 and mean 2.27 of this statement shows farmers are disagreed that they gets sufficient amount of loan. 1.08 variance of this statement indicates less consistency as well as uniformity in given response.
- 8) 'Bank staff cooperates throughout the process of getting loan'. For this statement respondent has given unfavourable response. The total score of this statement is 1093 and percentile value is 53.84. The mean value of this statement is 2.69 indicates the unfavourable attitude of borrowers. Variance 1.47 represents inconsistency and variety in the given response of farmers.
- 9) Above table shows favourable attitude of farmers regarding 'Working hours of bank are convenient' statement. Because total score of this statement is 1307, percentile value 64.38 and mean is 3.22. All these figures indicate that farmers have given favourable response to this statement. Variance of said statement is 1.22 showing inconsistency and variety in given response by farmers in the district.
- 10) Regarding the next statement which is, 'Grievance handling mechanism of banks is effective' respondents has given unfavourable response because total score value for this statement is 1084 with percentile value 53.40 and mean is 2.67. The response given by respondents to this statement is inconsistent and varied because variance of this statement is 1.41.
- 11) Considering 11th statement 'Loan repayment policy of bank is easy and convenient' for this statement above table shows that respondents have given unfavourable response. The total score value of this statement is 1064; with percentile value 52.41 and mean is 2.62. Variance of this statement is 1.35 shows inconsistency and variety in given response.

Ranking to Difficulty Faced While Getting Loan by Farmers: While getting loan farmers have faced different kind of procedural problems. Such problems are delay in getting loan, insufficient loan amount, high rate of interest, high transaction cost and inadequate cooperation by bank staff.

Table No. 2 Ranking to Difficulty Faced while getting loan by Farmers

Difficulties	1	2	3	4	5	No Difficulty	Average	Total	Rank
Delay in getting loan	116 (28.60)	148 (36.50)	30 (07.40)	29 (07.10)	30 (07.40)	53 (13.10)	148 (36.50)	406 (100)	2
Getting insufficient loan amount	147 (36.20)	64 (15.80)	98 (24.10)	29 (07.10)	15 (03.70)	53 (13.10)	147 (36.20)	406 (100)	1
High rate of interest	22 (05.40)	78 (19.20)	172 (42.40)	45 (11.10)	36 (08.90)	53 (13.10)	172 (42.40)	406 (100)	3
High transaction cost	41 (10.10)	30 (07.40)	22 (05.40)	57 (14.00)	203 (50.00)	53 (13.10)	203 (50.00)	406 (100)	5
Inadequate cooperation by bank staff	28 (06.90)	32 (07.90)	32 (07.90)	192 (47.30)	69 (17.00)	53 (13.10)	192 (47.30)	406 (100)	4

(Source: Field Survey)

Table no. 2 depicts ranking given by farmers to five problems as per ascending order. It means they assigned rank one to that statement for which they feel more difficulty while getting loan and they assigned rank five to that statement for which they feel less difficulty while getting loan.

Regarding above mentioned first difficulty i.e. 'Delay in getting loan', 116 farmers (28.60 %) have given first rank, majority 148 (36.50 %) farmers have given second rank, 30 (7.40 %) farmers have assigned rank three, 29 (7.10 %) farmers have given rank four and 30 (7.40 %) farmers has given rank five.

Considering second difficulty which is 'Getting insufficient loan amount', highest 147 farmers (36.20 %) assigned rank one, 64 (15.80 %) farmers have given rank two, 98 (24.10 %) farmers has given rank three, 29 (07.10 %) farmers have given rank four and 15 (3.70 %) farmers has given rank five.

It shows that for the difficulty 'High rate of interest', 22 (5.40 %) farmers assigned rank 1, 78 (19.20 %) farmers assigned rank 2, majority 172 (42.40 %) farmers assigned rank 3, 45 (11.10 %) farmers assigned rank 4 and 36 (08.90 %) farmers assigned lowest rank i.e. rank 5 to this difficulty.

As regards fourth difficulty of getting loan- 'High transaction cost', 41 (10.10 %) respondents assigned rank one, 30 (07.40 %) respondents assigned rank two, 22 (05.40 %) respondents assigned rank three, 57 (14.00 %) respondents assigned rank four and highest of the sample size i.e. 203 (50.00 %) respondents assigned rank five.

Considering final i.e. fifth difficulty which is 'Inadequate cooperation by bank staff', 28 (06.90 %) borrowers has given rank one, 32 (07.90 %) borrowers has given rank two, 32 (07.90 %) borrowers has given rank three, highest 192 farmers (47.30 %) borrowers given rank four and 69 (17.00 %) borrowers has given rank five.

It is explained that, considering ranking of five difficulties faced by farmers, 147 farmers (36.20 %) assigned rank 1 to Getting insufficient loan amount, 148 (36.50 %) farmers assigned rank 2 to Delay in getting loan, 3rd rank has been given by 172 (42.40 %) respondents to high rate of interest, then after 192 farmers (47.30 %) assigned rank 4 to Inadequate cooperation by bank staff, and 203 farmers (50.00 %) assigned rank 5 to High transaction cost.

Hypothesis Testing: The researcher has formulated null hypothesis is as under and used one sample t test for testing hypothesis.

H₀: The Farmers does not suffer from procedural problems.

H_a: The Farmers are suffering from procedural problems.

Table No. 2 One-Sample t Test – Procedural Problems Faced to Farmers

Table No. 2 One Sample t-Test: Procedural Problems Faced to Farmers							
	Test Value = 3						Result
	Table Value (‘t’ Value)	df	Sig. (2-tailed) (‘p’ Value)	Mean Difference	95 % Confidence Interval of the Difference		
					Lower	Upper	
Problems Faced to Farmers	7.940	405	.000	.16219	.1220	.2023	Reject H ₀

(Sources: Compiled by Researcher)

The researcher has used one sample t test for testing this hypothesis. The analysis of various statements regarding procedure problems faced by farmers has been made by using Five Likert Scales. In this case test value 3 shows the neutral responses of farmers towards procedural problems. So score above 3 shows farmers have faced the procedural problems. The ‘p’ values for problem faced by farmers is 0.000, which is less than the significant value i.e. 0.05 (‘p’ value < 0.05). So we reject the null hypothesis and alternative hypothesis is accepted. It concludes that the farmers are suffering from procedural problems while getting finance.

FINDINGS

1. The overall analysis of procedural problems faced to farmers disclosed that majority farmers had faced differed kind of procedural problems while getting loan. Farmers feel that terms and conditions for getting loan are inconvenient, they also experienced that bank demands for collaterals, further for getting loan they have to incur high transaction and also necessity of guarantor.
2. It is observed that majority farmers are suffered with following difficulties/they given unfavourable response while getting loan because mean of following statement is below 3, Bank provides loan in time, Interest rate on loan is reasonable, Bank sanctions sufficient amount of loan/ demanded amount of loan, Bank staff cooperates throughout the process of getting loan, Grievance handling mechanism of banks is effective, Loan repayment policy of bank is easy and convenient.
3. Regarding ‘Working hours of bank are convenient’ statement mean is 3.22 which shows that farmers are agree with this statement and it depicts that majority farmers have not issue regarding working hours of banks.
4. Among five difficulties faced while getting loan, getting insufficient amount of loan is major difficulty faced to farmers. It means that they don’t get demanded amount of loan from banks.

SUGGESTIONS

1. It is suggested that bank should sanction loan in time, bank officers should prepare a specific time schedule for disbursement of loan. The time span needed for disbursement of loan may differ depending on the type of loan taken by the farmers.
2. Banks should sanction sufficient amount of loan to borrowers. Loan should be sanction against all sources of income and not insist for any specific source of income.

3. Banks should sanction loan with low rate of interest and if possible for crop loan should be provided with no interest.
4. Banks should prepare and maintain computerized data of documents of borrowers/farmers required for sanction of loan. It will minimize cost required for getting loan for borrowers and they need not produce such documents again and again.
5. Banks should appoint special staff for solving loan related problems of borrowers and they will report to their higher authority.
6. Banks should sanction loan with flexible security. Flexible security means the security which the borrower is capable of providing. The bank should not insist on a particular type of security which may be a security in terms of land or property that can be mortgaged or specific type of guarantor, etc. It will help in easy access of loan to many borrowers.

CONCLUSION

Getting loan is not easy task to many farmers in India. Among many reasons why financial institutions does not sanction sufficient amount of loan or decline the loan proposal of farmers are low and irregular income of farmers, lack of collateral security etc. The present study is an attempt to understand the nature of problems faced to farmers while getting loan in rural area of Satara district. The study reveals that many farmers have facing difficulties while getting loan. The common difficulty faced to majority sample farmers while getting loan is that they don't get sufficient amount of loan from financial institutions. Getting insufficient amount have adversely effects like the purpose for which loan is taken will not fulfilled, farmers can use insufficient loan amount for personal use etc. Therefore it is suggested that bank should sanction sufficient amount of loan against all sources of income or security and banks should not insist for any specific source of income or security. Getting delay in loan and high rate of interest are also major problems for many farmers, if financial institutions positively work on these difficulties of farmers and get efforts in easy way to disbursement of loan to farmers it will helps to increases income as well as repayment capacity of farmers.

REFERENCES

1. Noonari Sanaullah (2015). 'Economic analysis of poultry production in Tando Allahyar District Sindh Pakistan', Journal of economic and sustainable development, Volume 6 No. 3 (2015) pp. 118-130, pdf accessed by <http://www.researchgate.net>>publication
2. Singh S., Kaur M. and Kingra H.S. (2009). 'Inadequacies of Institutional Agricultural Credit System in Punjab State', Agricultural Economics Research Review Vol. 22 July-December 2009 pp. 309-318, pdf accessed by <http://ageconsearch.umn.edu>>bistream>15
3. Subramanian, R. and Shivananjappa Sunil (2017). 'Investigation on the Problems Faced by the Farmers in Obtaining and Repayment of Agricultural Credit in Karaikal District, India', Int.J.Curr.Microbiol.App.Sci. Vol. 6(11), pp. 3966-3971, doc. accessed by <https://doi.org/10.20546/ijcmas.2017.611.463>
4. Uma Devi R. (2012). 'Impact of co-operative loan on agricultural sector: A case study of E. G. district of Andhra Pradesh', Researchers World journal of arts, science and commerce, Vol. 3, Issue 4(2) October 2012, pp. 74-84, pdf accessed by <http://pdfs.semanticsholar.org>
5. Yegoh Kenneth Kimeli Kosgey (2013). 'Agricultural Credit Access by Grain Growers In Uasin-Gishu County, Kenya', IOSR Journal of Economics and Finance (IOSR-JEF) Volume 2, Issue 3 (2013), pp. 36-52, pdf accessed by www.iosrjournals.org>vol2-issue3

A STUDY OF THE TAXATION IN AGRICULTURAL INCOME

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ABSTRACT

Taxation in the agriculture income is exempt from taxation as the central income is that under the Constitution, the Central Government has no power to levy a tax on agricultural income. Agricultural income may arise in any of the following three-way rent derived from land situated in India and used for agricultural purposes. If, such income is not aforesaid then such income is taxable in the hands of the assesses.

Keyword: Taxation, Assessee, Land, India, Agricultural Income, People.

INTRODUCTION

Agricultural income is not subject to direct tax or income tax. The Income-tax Act, 1961, has, specifically provided that such income exempted but it may be indirectly taxed. Agricultural income (Section 10(1)) provides that agricultural income is not to be included in the total income of the assesses. As the Constitution, the Central Government has no power to levy a tax on agricultural income. Hence, it is not taxable if the income from the agricultural income.

Definition of agricultural income Section 2 (1A) defines as : Agricultural income may arise in any one of the following three ways :

- i) It may be rent or revenue derived from land situated in India and used for agricultural purposes.
- ii) It may be income derived from such land

Agriculture or

The performance of a process ordinarily employed by a cultivator or receiver of rent in kind to render the produce fit to be taken to the market or the sale, by a cultivator or receiver of rent in kind, of such agricultural produce raised or received by him, in respect of which no process has been performed other than a process of the nature.

- iii) Agricultural income may be derived from any farm building required for agricultural operation.

- iv) Any income deemed to be agricultural income if it is derived from saplings or seedlings grown in a nursery.

This is called the partial integration of agricultural and non-agricultural income due to aforesaid definition. Further, if the agricultural land is used for film shooting or other purpose and income derived from it is taxable.

OBJECTIVES OF THE STUDY

- 1. To study agricultural income is exempted from the income tax Act 1961.
- 2. To Study how agricultural income benefits to the farmer.
- 3. To study of how agricultural income partial integration.
- 4. To study the problems of the agricultural taxation.

Primary Data

The data and Information for the study is collected through two main sources. Primary data would be original data from which the researcher will directly collect data that have not been previously collected. Primary data will be first-hand information collected through the way of various methods such as canvassing.

Secondary Data

Secondary data like published Annual Reports and statistical tables relating to agricultural taxation for analysing the data, the technique of ratio analysis, simple mathematical tools like average, percentage etc. and M.Phil., Ph.D. thesis different, circulars, reference books, Different policies of Private and Government organization pertaining analysis of result, publication, journals, newspapers, Internet, websites etc. will be thoroughly studied in the said research.

LIMITATION OF THE STUDY

The papers have the limitations like, time constraint, data collection, cases, and period and so on.

SIGNIFICANT OF THE STUDY**(I) Agricultural Income is exempted from the Income Tax Act 1961.**

As the Income Tax Act, 1961, U/S 2(1A) As define income from agricultural income only exempted from the taxation. Otherwise, it is taxable or partial taxable. Where income it partially agricultural income and partially income chargeable to income-tax as business income, the market value of any agricultural produced which has been raised by the assesses or received by hi as rent in kind and which has been utilised as raw material in such business or the sale receipts of which are included in the accounts of the business shall be deducted. No further deduction shall be made in respect of any expenditure incurred by the assesses as a cultivator or receive of rent in kind.

Tea Development Account/Coffee Development Account/Rubber Development Account (Section 33AB)

This section provided for a deduction the computation of the taxable profits in the case of an assesses carrying on business of growing and manufacturing tea or coffee or rubber in India.

Income from Growing and Manufacturing or Rubber

If income derived from the sale of centrifuged latex or cenex or latex based crepes or brown crepes or technical block rubbers manufactured or processed from field latex or coagulum obtained from rubber plants grown by the seller in India. Then such income is taxable 35% as under the head "Profits and gains from or business or profession", and the balance income 65% as the agricultural income.

Income from Growing and Manufacturing of Coffee

In the case the income derived from growing and manufacturing and sale of coffee grown and cured by the seller India, then 25% profits on sale is taxable as business income under the head "Profits and gains from or business or profession", and the balance income 75% as the agricultural income.

Income from Growing and Manufacturing of Tea

Where the assesses himself grows tea leaves and manufacturing tea in India. In such cases 40% profits on sale is taxable as business income under the head "Profits and gains from or business or profession", and the balance income 60% as the agricultural income.

(Ii) Income from Farm Building

If the assess derived income form farm building situated as per the local limited specified by the Government , then it is used for putting agricultural product for further process. If income received rent or revenue and then it is treated as agricultural income.

(Iii) Compensation Received From Compulsory Acquisition Agricultural Land (U/S 10(37)).

If compensation has received by the assesses from the compulsory acquisition land vide under section of the RFCTLARR Act shall also not be taxable under the provisions of Income Tax Act, 1961. Moreover, even enhanced compensation award on an appeal the court of law then it is not taxable as capital gain any like short capital gain or long capital gain.

(iv) Interest received on compensation/enhanced compensation deemed to be income in the year receipt and taxable under the "Income from Other Sources" Section 56 (2) (viii)

The interest received by an assessed-on compensation or on enhanced compensation shall be deemed to be his income of the previous year in which it is received and its taxable.

CONCLUSION

Income is derived from the agricultural land situated in India and it is used for the produced from agriculture or rent or associated income only exempted. However, if incomes extent vary its partial exempt and other balance income from profit and gain from business income. If the income not an agricultural income, then its taxable.

REFERENCES

1. Direct Tax Laws & International Taxation by ICAI
2. Direct Tax Complier by CA Bhanwar Borana.
3. Director Tax Laws by T.N.Manoharan
4. Students Guide to Income Tax by Dr. Singhania
5. <https://www.bankbazaar.com/tax/tax-on-agricultural-income.html#:~:text=Agricultural%20income%20is%20not%20taxable,5%2C000%20per%20year>

-
6. <https://www.coverfox.com/personal-finance/tax/agricultural-income/>
 7. <https://taxguru.in/income-tax/income-tax-compensation-compulsory-land-acquisition-govt.html>.
 8. <https://incometaxindia.gov.in/Tutorials/11.Tax%20free%20incomes%20final.pdf>

A STUDY OF WOMEN EMPOWERMENT THROUGH MAHILA BACHAT GATIN MAHARASHTRA

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ABSTRACT

The Women Empowerment and Mahila Bachat Gat play dominant role in society presently. The concept of self-help group is comprehensive but saving is said that women have become a factor. Women have the biggest share in making elderly self-help groups. Because of many small big groups in every district of Maharashtra are working today. Through which the Indian grassroots community of the grassroots is moving towards self-reliance, self-confident, and a woman standing on their feet. Women are playing a key role in the economic development of the country. We can testify to this through group of groups. Everyone needs financial empowerment. But every woman does not have to take a specific time to prove herself to be at home and abroad. Then it can be done by cooperating by overcoming their problems. It is possible through all women's groups.

Keywords: Self Help Groups (SHGs), Women Empowerment, Institution, Mahila Bachat Gat

1. INTRODUCTION

Women empowerment is a multi dimensional social process that helps people gain control over their own lives. There is one policy for women namely National Policy for the Empowering of women 2001. The objectives of the national policy for women empowerment include equal access to participation and decision making of women in social, economic and political life of the nation. The women from rural background are also playing an important role to elevate Indian woman on the global stage. The concept of Self Help Group (SHG) is associated with the group of women having rural background and sharing similar financial conditions. SHG has strengthened the rural women financially and now they have dared to commence small scaled industries to improve their skills like leaderships, self-confidence, decision making. Since 1999, a large number of rural people especially women have been mobilized into Self Help Groups. Such groups helped the rural women to build the social capital for themselves. Initially SHG has been formed to mobilize the regular saving for lending money to the members of group for the short term purposes but subsequently the fund was used for investment to gain more profit for the group members. The functioning of SHG is very simple. It developed the link with area bank, starting with deposit and giving credit to its members. Subsequently SHG's became regular borrower of bank, but it worked as an intermediaries on the behalf of its members.

2. OBJECTIVES OF THE STUDY

1. To study of women empowerment through Mahila Bachat Gat
2. To know the advantages and benefits of Mahila Bachat Gat in the process of empowerment of women

3. METHODOLOGY

The present study is based on secondary sources of data and a descriptive nature which describes. Secondary data has collected from research journals, published data, books, magazines, research studies and other relevant documents, various reports and websites etc.

4. STATEMENT OF THE PROBLEM

Women have been oppressed culturally, socially, economically and politically. They are exploited at home, in the families, in the society and in the country. In the Multi ethnic and multi cultural society that exist in India, such exploitation takes in various forms. The core of the problem is that they shoulder a number of responsibilities, but they are not given adequate participatory or decision making power in the family or elsewhere. Women can gain such power, if their economic status, cultural and social status improves. Such type of overall improvement can be taken care by SHGs. Involvement in Mahila Bachat Gathas enabled women to gain greater control over resources like material possession, intellectual resources like knowledge, information, ideas and decision making in home, community, society and nation.

5. LITERATURE REVIEW

1. Dipak K. and Et. Al (2021) observed that regular interaction among the women in SHG meetings has developed a sense of group solidarity and identity and thereby a raised social status. However, the SHGs did not appear to be a potential mechanism for generating political empowerment among the women concerned, since most of them were not interested in receiving political information.

2. **Pallavi(2020)** noticed that Micro Finance is the best tool for empowering women and which can be synergetic if exercised through Self Help Groups and also resulted in eradication of poverty and family problems which in turn to achievement of Millennium Development Goals (MDGs).
3. **Hema Mehta (2017)** reviewed that the idea of SHG is a superior system for simple accessibility of micro credit to women and helps them to elevate their social and monetary status. In the wake of empowering propensity for investment funds among women, aggregate credits for particular monetary reasons for existing are given. A large portion of the poor women utilize this cash at to begin with, for local needs, to bolster their families.
4. **Kappa Kondal (2014)** found that in the study justify the greater role played by the SHGs in increasing empowerment of women, by making them financially strong, as well as it helped them to save amount of money and invest it further development. It was also found that the SHGs created confidence for social, economic self-reliance among the members in two villages. It develops the awareness programmes and schemes, loan policies etc.
5. **Singh (2012)** stated that the country needs to mobilize and utilize all the resources including human resources. The participation of women in economic activities is necessary not only from a human resource point of view but also is essential even from the objective of raising the status of women in the society. The economic status of the women is now accepted as an indicator of a society's stage of development and therefore it becomes imperative for the government to frame policies for development of entrepreneurship among women. The long-term objectives of the development programmes for women should aim to raise their economic and social status in order to bring them into the mainstream of national life and development.

6. SIGNIFICANT OF STUDY

Self help group of women is not a government scheme for paper. So she is a dormant revolutionary movement of women empowerment. Village savings group is a great opportunity to make women economically viable. Employment and self-esteem are both good things from the savings group. In 1992, the movement of the savings group came in real speed. Nobel Laureate and Bangladesh's founder of Savings Group Movement was Dr. Mahmoud Yunus. He has achieved pre-revolutionary success in Bangladesh using the implemented savings group. Women's confidence has increased through the savings groups. With the inspiration from this success, the smallest industries started to be encouraged in India through savings groups. Many women in the state have been given financial independence and self-help groups. The Mahila Bachat Gat movement is also a solution to financial problems. However, through these savings groups, many types of social work are done at village level. Therefore, the role of Mahila Bachat Gat is important because of economic and social development perspective. The Indian Women Savings Group Movement has long been more than twenty-five years old. The expected results of these savings groups are currently visible. Due to women savings groups, the flow of credit, savings, opportunities for self-employment received by women, improvement in the lives of their families and their families, positive changes in women and rural areas, and increased participation of women in social work, etc. will lead to rural development and women empowerment.

7. Mahila Bachat Gat (SHGs) and Women Empowerment

The empowerment of women through Mahila Bachat Gat (SHGs) would lead to benefits not only to the individual woman and women groups but also for the families and community as a whole through collective action for development. These groups have a common perception of need and impulse towards collective action empowering women not just for meeting their economic needs but also through more holistic social development.

According to a NABARD (National Bank for Agriculture and Rural Development) report, Maharashtra initiated self-help groups in 1999. In the decades since then, thousands of rural women have been informally associated with this type of economic activity, meant to create economic independence, enable self-employed and informally employed women with cash flow, and further economic and social independence. The state government runs two programmes to support SHGs – the Mahila Arthik Vikas Mahamandal, a scheme run by the women and child development department, and the Umed Abhiyan under the Maharashtra Department of Rural Development's State Rural Livelihood Mission. Both work for the empowerment of women. The Mahila Arthik Vikas Mahamandal aims to connect SHGs with capacity building, providing training in financial transactions and enterprise development, while Umed Abhiyan works on poverty elimination through social mobilisation, institution building, financial inclusion and a portfolio of sustainable livelihoods. Umed Abhiyan started in 2013 under the Maharashtra State Rural Livelihoods Mission (MSRLM) and is meant to specifically focus and work on poverty reduction using self-help group channels.

According to an advertisement published by the Maharashtra government, Umed Abhiyan covers 34 districts with 38,931 villages, and since its inception, it has reached 54.8 lakh families. Under this project, banks have loaned Rs 8,788 crore to SHGs through Umed Abhiyan and the government has granted Rs 786.81 crores in funds.

The initiative is being run by the government to raise the social and economic level of women. This is a primary process, and this group is formed by explaining each other together. These groups are also called saving groups. Such groups have been formed in every taluka and district in India. There is no discrimination in this group between men and women. Groups such as at least 2 members and maximum of 20 members are formed. In this, each member of each group collects a certain amount of money in the fixed time period. This period is once a week or once a month. This amount gets credited to the savings group members as a loan. Members are expected to return the loan to the savings group by the installment. Since the self-help group is based on democracy, each member has the same right. It is the group that determines how to repay the member's debt and repay it. No need to register as a self-help group. According to the NABARD government system, only the account of savings group members can be withdrawn in the bank. Since 1998, financial budget has been made in the central budget and the state government's budget. The State and Central Government have drawn up various schemes for these registered groups. E.g. The Maharashtra government has waived stamp duty for women savings groups while taking loans from the bank. This makes it easy and easy to loan.

The Government is implementing Deendayal Antyodaya Yojana – National Rural Livelihoods Mission across the country in a mission mode with the objective of organizing the rural poor women into Self Help Groups (SHGs) and continuously nurturing and supporting them till they attain appreciable increase in incomes over a period of time and improve their quality of life and come out of abject poverty. The programme is being implemented in all the States in the country and Union Territories, except Delhi and

Chandigarh. As on 30th June, 2022, about 8.39 crore rural poor women have been mobilized into more than 76.94 lakh SHGs. In Punjab over 3.4 lakh rural poor women have been mobilized into over 33,500 SHGs.

Mahila Bachat Gat is not a government scheme or project. This is an important way to unite women and to give them developmental education. The advantages of this Mahila Bachat Gat are as

1. Co-ordinates and habit of saving and frugal.
2. Mahila Bachat Gat does not have to borrow a lender to cover emergency needs during difficult times.
3. Immediate and easy credit is available. Therefore, members have a habit of saving and bank transactions.
4. Financial Assistance is available in very low interest rates compared to a loan. Therefore, each member's financial problems are solved.
5. Creates mutual cooperation and trust among the members.
6. Subsidies are provided by internal lending to low interest rates.
7. Women started to move out of the house, so they got the opportunity to learn new things.
8. Women become self-reliant.
9. Information about financial transactions such as saving women, borrowing and repaying the loan. So their confidence grows.
10. Information about the various welfare schemes of the government.

8. CONCLUSION

From above discussion it is concluded that increased the abilities in women and improved their socio economic condition. SHG has helped the women to cope up with the problem of unemployment. Thus SHG in India represents an innovative approach towards the development of the SHG members. With the help of SHG keen interest in eliminating poverty by bringing up self employment opportunities to the poor women. The SHG movement has absorbed all these programmes positively and benefited to the SHG women members. Thus, the hypothesis for the research study is proved or addressed. The SHG have been successful in empowering rural women through various activities. Further, women are still lagging behind in terms of educational opportunities, inheritance or property right and economic opportunities. Under patriarchy and social norms women are seen to be inferior to men in public and private sphere. Women work especially domestic works

are often unrecognized and undervalued. Therefore, women are not seen as decision makers in all spheres social, economic, political etc.

9. REFERENCES

1. Dipak K. Midya, Ananya Hota And Ashim Das (2021) Empowerment of Women through Self Help Group: SHG participants' perception about enhancement of their capacity Journal of the Indian Anthropological Society (ISSN 0019-4387) Society Pg.109-126
2. E.J. Helge (2013) "Women Empowerment Movements", Pratibimb: Mahila Samasyancha Atmashodh, Chief Editor, Dr. Nilkanth Bhusari, Atharva Publication, Jalgaon, 03.01.2013, National Seminar, Proceeding ISBN 978-963-81171-99-8.
3. Hema Mehta (2017) Study On Empowerment Of Women Through Self-Help Groups In Less Developed Part Of Jogeshwari-East (Mumbai Suburb), Episteme, Volume 5, Issue 4.
4. Jain R, Kushawaha R, Srivastava A, (July 2003), "Social Economic Impact through Self- Help Groups", Yojana Vol-47, No-07.
5. Kappa Kondal (2014). Women Empowerment through Self Help Groups in Andhra Pradesh, India, International Research Journal of Social Sciences, Vol. 3(1), 13-16.
6. Mulani M.U, (2008), "Women's Self-Help Groups", Diamond Publication, Pune.
7. Pallavi S. Kusugal (2020) Women Empowerment through Self-Help Groups: An Empirical Study in Haveri District of Karnataka, Emyreal publishing House, page(s) 93-98.
8. Shylendra H.S, (January 2008), "Role of Self-help Groups", Yojana Vol-52.
9. Singh Ranbir, (2012). Women Entrepreneurship Issues, Challenges and Empowerment through Self Help Groups: An Overview of Himachal Pradesh, International Journal of Democratic and Development Studies, VOL. 1, NO. 1, Pp-45-68.
10. Sonawane Ashalata Deoram (2011): "Economic Empowerment of women in Maharashtra through Self Help Group (A case study in Nasik District)", Pune University, Pune, Sept. 2011. Ph.D. Thesis.

A STUDY ON CUSTOMER'S PERCEPTION ON E-BANKING SERVICES OF NATIONALISED BANKS IN BEED DISTRICT

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India**ABSTRACT**

Internet banking is the provision of information or services by a bank to its customers via computer, television, telephone or cell phone. It has become a strategic resource for achieving efficiency, control of operations, productivity and profitability. This changed the traditional way of banking. This research article looks at the customers of Nationalized Bank of India in Beed. The survey concluded that internet banking services lead customers to a greater number of banking services.

Keywords: Internet Banking, e-bank, 24x7 banking, electronic banking.

INTRODUCTION

Electronic Banking (Internet Banking or Internet Banking) refers to the delivery of banking services and products to clients directly through electronic and communication networks. The term electronic banking can be described in many ways. In its simplest form, it means providing information or services to bank customers via computer, television, telephone or mobile phone. It has become a strategic resource for efficiency, performance control, productivity and profitability. This has changed the traditional method of banking transactions. The client does not visit the banking office by e-banking to complete the banking transaction. For example, customers use automated booths (ATMs) instead of cashiers and electronic cash instead of banking transactions. It allows customers to submit applications for various services, query accounts and make suggestions. The bank electronically transfers money into its accounts, pays the bill and performs other banking transactions online. It relies heavily on Information and Communication Technology (ICT) to deliver within 24 hours and deliver financial services quickly.

The Importance of Internet Banking

E-banking is now a global phenomenon. It is an important and important tool for growth, growth, development and contributing to increased competition. Strong financial performance is important in every country and can have a huge impact on helping to raise money through qualified financial services. This has greatly impacted the banking industry. Banks need to develop strategic solutions on how to implement new technologies and improve the quality of online services for their customers. In the absence of face-to-face interactions, banks need to improve the quality of online services to customers in order to achieve and maintain competitive advantage and customer relationships.

Description of the Problem

E-Bank is the fastest growing company worldwide. It is considered to be the most relevant and specialized banking system on both sides, banks and consumers. At the same time, many things in this series can be fraud, fraud and abuse. This situation puts e-banking at risk.

Objectives

1. To study the customer information at Bank of India in Beed district, Maharashtra
2. Determine the customer satisfaction level of the Bank of India in the study area.

Methodology

It is a small project implemented on a limited basis in the Beed district of Maharashtra. Indian

Bank customers were contacted by the bank and they were sent with questions. 200 users were selected at once and their responses were analyzed. In contrast, the chi-square test was used in this study.

Demography Profile

The sample of users with the following attributes:

Gender: [Male - 115, Female - 85]. Age: [Users under 20 years old, 20-30 - 77 users, 30-40 - 46 users, 40-50 - 21 users and 50 - 16 users].

Table-1: Awareness on the E-Banking

S. No.	Source of Awareness	No. of Respondents	Percentage
1.	Banks	26	13
2.	Self-knowledge	154	77
3.	Advertisements	18	9
4.	Friends	42	21
	Total	200	100

Source: primary data

Regarding customers' perceptions of e-banking facilities, this suggests that the majority of consumers (77%) have a source of self-knowledge and that consumers have knowledge through their formal education and self-esteem. 21% of customers have been informed by their friends.

Table-2: Factors of Attractive

S.No.	Attractive Factors	No. of Respondents	Percentage
1.	Convenience	86	43
2.	Time saving	26	13
3.	Speed of transactions	16	8
4.	24 hour service	60	30
5.	Less expensive	5	2.5
6.	Safety	7	3.5
	Total	200	100

Source: Primary data

The above table It is clear that convenience is an attractive factor for the majority of customers (43%). At the same time, 24-hour service is another important factor (30% customer support).

Time-saving is mentioned as an attractive factor for 13% of customers. Transaction speed, security and low cost are other factors.

Testing Hypotheses

Testing - 1 Consumer age and overall satisfaction with e-banking services

The null hypothesis (Ho): There is no significant relationship between the customer's age and overall satisfaction with e-banking services.

Table-3 Age and Overall Satisfaction Cross Tabulation

Respondents	Age and Overall Satisfaction Cross Tabulation					
	Satisfactory Level on towards Internet Banking Services					Total
Opinion about Age	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	
Below-20	9	13	10	6	2	40
20-30	35	21	15	5	1	77
30-40	9	16	10	8	3	46
40-50	4	8	5	2	2	21
Above-50	6	4	4	2	0	16
Total	63	62	44	23	8	200

Chi-square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.738	16	.282
Likelihood Ratio	19.418	16	.248
Linear-by-Linear Association	.319	1	.572
No. of Valid Cases	200		

Degrees of freedom = 16 chi square value = 18.738 table value = 19.418

At the 5% significance level.

Since the calculated value is less than the table value, the null hypothesis is accepted.

Therefore, there is no significant relationship between age and overall satisfaction with e-banking services

Test-2 Customer gender and overall satisfaction with e-banking services

The null hypothesis (H₀)

There is no significant difference between the gender of customers and overall satisfaction with e-banking services

Table-4: Gender and Overall Satisfaction

Gender of the Customers	Overall Satisfaction on E-Banking Services					Total
	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	
Male	38	33	11	21	12	115
Female	30	26	13	8	8	85
Total	68	59	24	29	20	200

Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.160	4	.385
Likelihood Ratio	4.271	4	.371
Linear-by-Linear Association	.806	1	.369
N of Valid Cases	200		

Degrees of freedom = 16, at the 5% significance level.

This means that the calculated value is less than the table value, so the null hypothesis (H₀) is accepted.

There is no significant difference between the gender of customers and overall satisfaction with e-banking services.

FINDINGS

1. Regarding customers' perception of e-banking facilities, this indicates that the majority of consumers (77%) have a source of self-knowledge and that consumers have knowledge through their formal education and self-service.
2. Flexibility is an attractive item (43%) that has more customers.
3. There is no significant relationship between age and overall satisfaction with e-banking services.
4. There is no significant difference between the gender of customers and overall satisfaction with e-banking services.

CONCLUSION

So, the current paper concludes that e-banking will benefit consumers in a big way. At the same time, it gives them maximum flexibility so that they can make banking transactions at any time. Customers will benefit from convenience, 24-hour service and transaction speed.

REFERENCES

1. Alegeband, Parissa (2006), "The adoption of Internet banking in advanced consumer segments in a developing country" International Journal of Bank Marketing, 22(3), 212- 232.
2. El-Sherbini, A. M., & Ross, C. P., & Mohammed, M. & Wugayan, A. 28-35.
3. Erickson, K., Kerem, M., Nilsson, D... (2005), "Consumer acceptance of Internet banking in Estonia" International Journal of Bank Marketing, 23 (2), 200-216.

A STUDY ON MSME- AN PROMISING PILLAR OF INDIAN ECONOMY (WITH REFERENCE TO RURAL INDIA)

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ABSTRACT

The MSME Sector plays a crucial role in the nation's financial development and is a key conduit for establishing low-cost employment opportunities. The State Government has successfully simplified the SSI enlistment process and reduced the number of archives as needed in order to advance the programme quickly. The plan for SSI units has been modified by the State Government and now includes an increase in the venture roof from 50,000 to 2 lakh rupees for the Small Sector. There were 1,35,350 perpetually enrolled SSI units in the State as of March 2000. The formation limit for these units was Rs. 7,50,744 lakhs, and the absolute interest was Rs. 10,73,943 lakhs.. There are exactly 1011954 persons using these units at any given time. The service has a number of initiatives to support independent businesses with big ideas. If anyone is interested in starting a business, they can get information about their plans from the National Institute for Entrepreneurship and Independent Venture Development (NIESBUD), National Institute for Micro, Little and Medium Enterprises (NI-MSME), Indian Institute of Entrepreneurship (IIE), or the Development Chief (DC-MSME). In light of the aforementioned information, this study aimed to understand the situation of the MSME mechanical sector at the leading edge and how it affected the neighborhood's economic and environmental growth..

Keywords: EconomicDevelopment, SSIUnits Entrepreneurship, MSME.

I. INTRODUCTION

The majority of nations in the globe have economic development as their top priority. Almost without exception, this truth is accepted. Because of India's economy's explosive growth, planners and policymakers are now seriously concerned about the industrialization of the country. Because it allows them to address issues like general poverty, unemployment, backwardness, low production, low productivity, and low standard of life, among others, industrialization is crucial to the development of emerging nations. For industrialized nations, it is equally crucial to prevent cyclical swings because it not only enables them to sustain their current growth but also to enjoy even greater standards of living..Therefore, a key goal of planning in India has been the country's rapid industrial growth. India's post-independence development plans placed a strong emphasis on industrialization as a crucial tool for long-term progress. Industrial development is thought to be essential for achieving high rates of economic growth, meeting the basic needs of the population, fostering economic diversification, and bringing about institutional and social reforms [1]

Micro, Smalland Medium Enterprises Sector in India

The MSME industry is important to the Indian economy. The sector, which acts as a catalyst for the nation's socioeconomic transition, is essential to achieving the national goals of increasing employment, lowering poverty, and preventing rural-to-urban migration. These businesses encourage the adoption of indigenous technologies while also contributing to the development of a vibrant entrepreneurial eco-system. Over the past few years, the sector has grown steadily, but it has done so in a limited context that frequently leads to inefficient resource use. One of the main obstacles preventing MSMEs from expanding and developing is their lack of access to financial resources, which leaves them particularly vulnerable during recessions..

The term MSME is often used to describe small and medium enterprises in the private sector. Regulators and financial institutions around the world define sectors in a financial context using parameters such as employee numbers, annual revenues, fixed asset values, and loan size proxies. For example, companies in Mexico with less than her 500 employees (OECD) are considered his MSMEs. According to the World Bank definition, a company is classified as an MSME if it meets 2 out of 3 criteria: number of employees, size of assets or annual turnover. The Government of India's Small and Medium Enterprise Development Act (MSMED Act), 2006 provides a definition of the MSME sector. This classification expands on the previous Small Industry (SSI) definition and uses investment metrics to define MSMEs, as investments in factories and machinery can be measured and verified..

Financial Institutions and Definitions of Msme

A company's financial appetite and financial performance may only be inferred to a limited extent from investments in equipment and machinery, despite the fact that they are visible and quantifiable. As a result, many financial institutions prefer to use yearly sales/revenue (turnover) as a major indicator for product development and risk management, as well as to segment and target MSMEs, as shown in the chart below..

Table-1- Composite Criteria: Investment in Plant & Machinery/equipment and Annual Turnover

Classification	Micro	Small	Medium
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover ; not more than Rs. 5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover ; not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover ; not more than Rs. 250 crore

Source: MSMEDAct

The micro, small, and medium-sized enterprises (MSME) sector of the Indian economy is very large, with the most businesses and employees, and it is highly dynamic, with many businesses entering and leaving the market each year. By 2001, this sector of the Indian economy had employed 24.932 million people in 10.521 enterprises, of which 5.808 were rural and the remaining urban, mostly in non-metropolitan towns and semi-urban areas. The manufacturing sector accounted for close to 40% of the total MSME enterprise output in 2001-02, while the repairing and maintenance sector enterprises made up another 16% [2].

Since India's independence, Micro, Small, and Medium-Sized Enterprises (MSMEs) have undergone significant development. The MSME sector has evolved in scale and in the breadth of business activities throughout the years from being known to simply as the Small Scale Industries (SSI) sector in the 1960s and 1970s. MSMEs are widespread in India today across industries (manufacturing, trade, and services), contributing significantly to the remarkable economic progress of the nation. MSMEs have excelled at using domestic resources to produce high-quality goods and services over time, but they have also established themselves throughout India's core industries and in significant export markets. MSMEs have influenced a variety of topics, from industrial advancement to entrepreneurship and from job creation to economic empowerment. The fact that almost 50.0% of MSMEs in India are held by underprivileged groups emphasises the sector's inclusivity. Due to its low capital structure and strong labour absorption power, the industry has made a significant contribution to the industrialization of rural areas as well. The total transformation of India's economy from an agrarian one to an industrialised one continues to be largely fueled by the MSME sector. Governments all around India have since given MSMEs a variety of incentives. Other private and nonprofit groups have also helped MSMEs stay competitive in an increasingly globalised economic environment. MSMEs will need access to loans in the upcoming decade, and this trend is expected to continue..

Role of MSME in Development of Rural Sector

The growth of small and medium manufacturing businesses is largely responsible for the development of the rural sector. Rural residents face a number of difficulties, including unemployment, low income, a low standard of living, inadequate educational opportunities, and a lack of markets for their products. The potential of the society to generate income declines because it has a variety of resources as raw materials but lacks the capital to transform them into finished items.

Young people with education and talent moved to another district since there were no work opportunities there, despite the fact that they had plenty of raw materials, water resources, talent, and knowledge. However, the MSME face numerous difficulties that make them ineffective and inefficient. Some MSMEs also bemoan the lengthy banking processes and challenges in obtaining bank loans. Other people also complained about the high interest rates charged by the banks. Most MSMEs also lack formal training in their business lines. High information asymmetry caused by MSMEs' lack of accounting records and inadequate financial statements, which makes it difficult for creditors and investors to access the credit worthiness of potential MSME proposals, is foremost among these issues, along with vulnerability to market fluctuations and high fold-up rates. Additionally, it is the cause of the ill units and MSME manufacturing sustainability problems. Additionally, as a result, there can be a significant funding blockage in the different fixed (capital) assets. These issues still exist in the MSME manufacturing sector, particularly rural MSMEs. It is important to consider the function of DIC in the development of MSMEs as well as resource availability in the light of the central government's "Make in India" push constraints our MSMEs are facing for the decades."

Inputs to these segments appear to show: low or declining use of machine tools and other industrial machinery; steep rise in energy consumption, especially of petroleum products; rise in other inputs from industry; and stagnation or moderate rise or in some cases even decline of inputs from agriculture, according to data from the economy's Input-Output tables, although somewhat dated and at factor costs. Rising energy costs coupled with a drop in the use of machine tools point to a slowdown in these industries' overall technological advancements. It is extremely concerning that decreased input utilisation, as evidenced by the lower value of factor inputs from

agriculture, may signify a general decline in the materials-flow network between MSME and farm..This might also point to decreased relative prices, a sign of slower technological advancements in the agricultural and related industries. The agricultural input could then be obtained through non-price transactions from local unorganised markets or from networks of wholesalers and large dealers who supply input. Parallel to this, the proportional increase in prices of a variety of industrial inputs and feedstocks reflects both growing industrialization (in contrast to inputs from the agrarian system) and relative technological stagnation in comparison to major enterprises..

II. METHODOLOGY

The research methodology and particular steps taken to carry out the current investigation are presented in this section. This covers details on the research design, sample selection, creation of the research instrument, mode of data collection, and techniques for data analysis. One of the rural districts was chosen as the study region for the current study.

Population and Size of Sample

The total set of units, on which the study is focused, is represented by the population or universe. Accordingly, depending on the goal and scope of the study, the population can be made up of all the units in the nation, those in a specific geographic area, or members of a particular ethnic or socioeconomic group. A population could also be made up of non-human entities like farms, homes, or commercial buildings. Thus, the entire universe of MSMEs was taken into consideration. 175 MSMEs in total were chosen for the current study's data generation..

Sampling Technique, Data Collection and Reliability

In the current study, Clustered Random Sampling approach was used. Randomly chosen MSME units were taken from each cluster.

A questionnaire was created as an instrument for data gathering. From the chosen sample, data were gathered regarding this designed instrument.

The instrument's test-retest reliability was discovered to be 0.85, which is sufficient for the reliability required for data collecting..

Statistical Tools

The following statistical tools were employed for analysis and inference..

- Measure of association: Correlation Coefficient
- Test of significance using Chi-Square
- Oneway ANOVA

III. DATA ANALYSIS

Table – 2 Type of Industry

Type of Industry	Frequency	Percentage
Medium	2	1.1
Small	112	64.0
Micro/Cottage	61	34.9
Total	175	100
Chi sq	Df	Sig.
38.426	2	<0.001

Table– 3 Workers Employed in Industries

Workers	Frequency	Percentage
Less than 25	163	93.1
More than 25	12	6.9
Total	175	100
Chi. Square Value	Df	Sig.
130.291	1	<0.000

Table– 4 Training to Employees for Improving Productivity

Training to Employees	Frequency	Percentage
Strongly Agree	98	56.0
Agree	65	37.1
Disagree	12	6.9

Total	175	100
Chisq	Df	Sig.
103.149	2	<0.001

Table– 5QualityControlas anImportantPartofIndustry

QualityControl	Frequency	Percentage
StronglyAgree	85	48.6
Agree	78	44.6
Disagree	12	6.9
Total	175	100
Chisq	Df	Sig.
69.411	2	<0.001

Table–6ProblemsFacedbyIndustry

ProblemsFaced	Frequency	Percentage
Finances	70	40.0
Labor	36	20.6
Marketing	24	13.7
Technical	57	32.6

Table– 7HigherLaborCostas aProblem

LaborCost	Frequency	Percentage
StronglyAgree	85	48.6
Agree	78	44.6
Disagree	12	6.9
Total	175	100
Chisq	Df	Sig.
69.411	2	<0.001

Table – 8FinancialAssistance

Govt.ProvidesFinancialAssistance	Frequency	Percentage
Yes	117	66.9
No	46	26.3
Somewhat	12	6.9
Total	175	100
Chisq	Df	Sig.
41.434	2	<0.001

Table–9GovernmentPolicies

Govt.PoliciesareFavorabletoInd.	Frequency	Percentage
Yes	127	72.6
No	12	6.9
Somewhat	12	6.9
Can'tSay	24	13.7
Total	175	100
Chisq	Df	Sig.

IV. CONCLUSIONS

- The majority of MSME industries employed no more than 25 people.
- Regular training for workers in MSME firms contributes to increased industry productivity.
- An key component of the MSME sector is quality control.
- Finance-related issues, labor-related issues, marketing and technological issues were all present in MSME industries.
- The issue facing the majority of MSME industries is rising labour costs.
- The development of MSME industries is supported by current government initiatives.
- MSME industries receive financial aid from the government.

REFERENCES

- Alamelu, K., & Baskaran, R. (2011). MSMEs: The Key to Entrepreneurship Development in India. *Bonfring International Journal of Industrial Engineering and Management Science*, 11-13.
- Chandraiah, M., & Vani, R. (2014). The Prospects and Problems of MSMEs sector in India an Analytical study. *International Journal of Business and Management Invention*, 3(8), 27-40.
- Garg, I., & Walia, S. (2012). Micro, Small and Medium Enterprises (MSMEs) in Post Reform India: Status & Performance. *International Journal of Latest Trends in Engineering and Technology*, 1(3), 134-141.
- Kannan, A. S., & Sudalaimuthu, S. (2014). Indian MSMEs: Initiatives and Financing Trends. *International Journal of Management*, 5(10), 58-70.
- Mishra, S. (2012). Small Scale Industries: Striving and Thriving in the Era of Globalization. *International Journal of Enterprise Computing and Business Systems*, 2(2).
- Naser, A. V. (2013). A critical evaluation of the Contributions made by the Micro, Small and medium Enterprises in Indian Economy. *International Journal of Marketing, Financial Services and Management Research*, 2(7).
- Singh, S., & Singh, D. (2014). Problems and Prospects of Small and Medium Enterprises in India. *International Journal for Multi Disciplinary Engineering and Business Management*, 2(1), 18-23.
- Vasu, M. S., & Jayachandra, K. (2014). Growth & Development of MSMEs in India: Prospects & Problems. *Indian Journal of Applied Research*, 4(5), 125-127.
- http://msme.gov.in/WriteReadData/ebook/MSME_at_a_GLANCE_2016_Final.pdf

A STUDY ON ROLE OF MSME AND FINANCIAL MANAGEMENT FOR ECONOMIC DEVELOPMENT IN INDIA

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ABSTRACT

The Micro, Small and Medium Enterprises (MSME) sector has emerged as a dynamic sector of the Indian economy and an essential driver of the economic process. It considerably helps in developing. The MSME Sector undertakes a crucial part in the financial development of the country and is an important network for setting out nominal expense work open doors. The provision has various plans to help the business visionary and self-governing companies. If anybody is wanting to set up a business, one may contact the National Institute for Entrepreneurship and independent venture advancement (NIESBUD), the National Institute for Micro, little and medium endeavors (NI-MSME), the Indian Institute of Entrepreneurship (IIE) or the Development chief (DC-MSME) for insight regarding their projects. In the situation of the above data, this examination endeavored to know the cutting-edge state of MSME mechanical area and its effect on financial just as friendly improvement of the district.

Keywords: Economic Development, Financial Management, Entrepreneurship, MSME, Regional Development

INTRODUCTION

“Economic development is the original objective of the bulk of world nations. This fact is accepted almost without any disputation. As a significance of fast growth in the Indian economy, industrial development has developed stuff of serious concern for the planners and policymakers. Industrialization plays a vital role in the development of developing countries because it can resolve their problems of general unemployment, poverty, backwardness, low productivity, low production and low standard of living, etc. It is similarly important for developed countries as it aids them not only to maintain their existing growth but also to enjoy still higher standards of living to avoid repeated fluctuations. Therefore, rapid industrial growth has been a major unbiased of planning in India. India’s post-independence development plans stressed industrialization as a very important instrument for sustained growth. Industrial growth is considered necessary to achieve a high rate of economic growth, to provide for the elementary needs of the population, to lead to an increasingly expanded economy and to give rise to social psychology and institutional changes.

Role of MSMEs in the Indian Economy

The MSME sector has been confirmed to be a highly energetic factor in the forecasting of the Indian economy. Since MSMEs produce and manufacture a variation of products for both international and domestic markets as well, they have assisted promote the growth and development of various product segments and industries.

MSMEs have played a vital role in providing employment chances in underprivileged areas. They have assisted in the industrialization of such areas with a low capital cost compared to the larger industries in cities. MSMEs have also subsidized and played an essential role in the country’s growth in different areas like the necessity of flexibility in operations, low investment, low rate of imports and a high contribution to domestic production.

1. Financial Management of MSME

The Medium, Small and Micro Enterprises (MSMEs) are the backbone of India’s economy. The country’s negative growth of 7.3% for FY 2020-21 means this spine is severely injured and needs to straighten and re-engage its energies towards smarter and economical ways of undertaking business processes. Here is where the function of technology comes into play.

With the pandemic, a large number of MSMEs in India are fighting for survival and their credit requirements are intensified from a year ago. In addition, MSMEs now have to adopt digitization. Although this can be considered as the silver lining to the cloud of despair brought by covid-19 made lockdowns and restrictions, unfortunately, MSMEs are rapt with the lack of technological knowledge and awareness. In the present scenario, there is no rejecting that MSMEs facing liquidity crisis along with other major matters need whatever help they can get.

2. Brief History of MSME Sector in India

The data gathered from annual report of Government of India for Micro, small & Medium Enterprises for the year 2015-16 reveals that in this section, the total number of enterprises are 361.76 lakhs. Out of which 15.64 lakhs are in registered sector where as 198.74 lakhs are in unregistered sector. In registered sector about 45 % are located in rural areas and 60% of the unregistered sector units are rural units. That means that maximum

contribution towards no. of units in MSM category is from rural areas as it is about 55.34% of the total units. Therefore, entrepreneurs from rural India are taking more initiatives as compared to urban people to start these micro, small & medium enterprises and hence Govt. should think & create some different policies to attract these entrepreneurs for opening up the new ventures. If we go deep into the data then it is visible that even women entrepreneurs are now coming up to participate in the establishment of these small-scale industries. In this category the women entrepreneurs constitute about 26.61% of the total no. of units.

3. Overview of MSME Sector

Micro, Small and Medium Enterprises (MSMEs) are amongst the powerful sources of employment generation, economic development and doing innovation. With a massive network of about sixty-three million three hundred eighty thousand originalities, about forty-five per cent input in manufacturing output, more than forty per cent of exports, over twenty-eight per cent of the Gross Domestic Product and creating employment for about one hundred eleven million people, the MSME sector is the growth engine of the national economy. Employment in MSME sector positions next to agricultural sector in terms of volume. Different kinds of products and services are formed by MSMEs with adoption of latest technology so the market size of business units also contrasts from handmade products to hi-tech products.

The MSME sector consisting of 36 million units, as of today, provides employment to over 80 million persons. The Sector through more than 6,000 products contributes about 8% to GDP besides 45% to the total manufacturing output and 40% to the exports from the country. The MSME sector has the latent to spread industrial growth across the country and can be a major companion in the process of inclusive growth.

Classification of MSMEs	
Manufacturing and Service Sector	
Types of Enterprises	Limit of Investment in Plant & Machinery or Equipment's and Limit of Turnover
Micro Enterprises	Investment < 1 Crore and Turnover < 5 Crore
Small Enterprises	Investment < 10 Crore and Turnover < 50 Crore
Medium Enterprises	Investment < 50 Crore and Turnover < 250 Crore
<i>Source:</i> https://msme.gov.in/sites/default/files/MSME_gazette_of_india_0.pdf	

4. Characteristics of MSMEs

- MSMEs are known to provide reasonable assistance for improved access to the domestic as well as export markets for businesses
- MSMEs support product development, design innovation, intervention, and packaging elements of a business
- MSMEs support the upgrading of technology, infrastructure, and the modernization of this sector as a whole
- MSMEs provide employment opportunities and loans
- MSMEs provide credit limits or funding support to various banks in the country

5. Major contribution of MSMEs is as follows

- It provides opportunities at a comparatively lower cost;
- It helps in the industrialization of rural and backward areas;
- Reduce Regional imbalances through the optimum utilization of their resources;
- More equitable distribution of national income and wealth;
- A Major partner in the process of inclusive growth.

6. Objectives of the Study

- To know about the current scenario of the MSME sector of India and the functioning of the ministry of MSME.
- To understand the role of the MSME sector in the economic growth of India.
- To study the importance of the MSME sector and the development of Financial Management.

- To analyse the contribution of the MSME sector to Indian economy.
- To understand the importance of MSMEs, SMEs and Allied Agri Sector in the rural and urban area

7. Micro, Small and Medium Enterprises Sector in India

“The MSME segment plays an important role in the Indian economy. A catalyst for the socio-economic transformation of the country, the sector is critical in meeting the national objectives of generating employment, reducing poverty, and discouraging rural-urban migration. These initiatives help to build a flourishing entrepreneurial ecosystem, in addition to promoting the use of indigenous technologies. The segment has exhibited consistent growth over the last few years, but it has done so in a forced environment often resulting in inefficient resource utilization. Of the many challenges impeding the growth and development of MSMEs, inadequate access to financial resources is one of the key bottlenecks that make these enterprises vulnerable, particularly in periods of economic downturn.”

8. Role of MSME in Development of Rural Sector

The development of the rural sector is mostly depending on the development of small and medium manufacturing enterprises, peoples facing various challenges like unemployment, low income, poor standard of living, no proper education skilfulness, no industry for the goods. They have various resources as a raw material but no capital to convert in to finished goods and that's why societies income generation capacity decreases. Educated and skilful youth migrated to another district because of no job facilities are available though they have large quantity of raw material, water resources, skill and education etc. “The MSME are, however, bedevilled with several challenges that reduce them ineffective and inefficient. Some MSMEs also complain about the awkward banking process and difficulties in accessing bank loans. Others also complained about the high interest rates charged by the banks. Most MSMEs also absence formal training in their business lines.

9. Functioning of MSME Sector in India

The Ministry of MSME runs numerous schemes pointed at financial assistance, Technology assistance and upgradation, infrastructure development, skill development and training, enhancing attractiveness and Market assistance of MSMEs. Many statutory and non-statutory bodies work under the aegis of the Ministry of MSME as mentioned below

Khadi and Village Industries Commission (KVIC)

Khadi and Village Industries Commission (KVIC) is a statutory society under the aegis of the Ministry of MSME with the character of promoting the production and auction of Khadi. With a huge network of 2632 institutions and over 4.95 Lakh people, KVIC also supports 80 percent of women artisans. The economic objective of KVIC includes producing saleable articles while the social objective adds employing in rural areas. The wider objective of the organization is creating self-reliance amongst people and building up a strong rural community spirit.

The National Small Industries Corporation Limited (NSIC)

Under the ministry of MSME, National Small Industries Under the ministry of MSME, The National Small Industries Corporation Ltd. (NSIC) is an ISO 9001-2015 certified Government of India Enterprise and works for the expansion of micro, small and medium units in the country. NSIC is a profit-making dividend paid company and works on the mission to sponsor and support MSME by providing joined support services encompassing, Marketing, Finance, Technology and other Services.

10. REVIEW OF LITERATURE

(Hakinson et al, 1997; Woldie et.al, 2008) There aren't numerous studies on the factors that influence financial performance only on SMEs. Even if these companies have certain issues, however financial factors influence does not differ much from those observed among large companies.

Chung & Chuang (2010) also reveals efficiency in capital structure management, working capital management, financial reporting and analysis; capital budgeting and accounting information system has a positive impact on profitability of business organizations.

Recent literature examines the profitability of companies in different countries and sectors of the economy through indicators such as return on total assets (ROA) (Deloof, 2003), financial return (Padachi, 2006), invested capital (ROIC), return on assets (ROA) (Narware, 2010). In these cases, the elements considered in the analysis of profitability, independent variables, are financial indicators expressing working capital. The profitability at the micro level was also studied based on indicators such as turnover, working capital, etc.

Paramasivan, et al. (2009) The effect of financial management practice on profitability was found to be positive. The researcher argued that financial management helps to improve the profitability position of business

organizations with the help of strong financial control devices such as budgetary control, ratio analysis and CVP analysis.

11. Growth Pattern of MSMEs in India

India is one of the uppermost increasing economies in the world. In the last ten years, the MSME sector has shown remarkable progress in terms of various parameters like production, number of units, employment and exports. This area has vast potential to subsidize more in the Indian economy provided to get the right set of support systems.

12. Contribution of MSMEs in Indian Economy

According to the report of the expert committee on Micro, Small and Medium Enterprises (MSME) published by the Reserve of India (RBI) on 25th June 2019, MSMEs are widening their domain across sectors of the economy, producing a varied range of products and services to meet demands of domestic as well as international markets. There are more than sixty thousand products, ranging from traditional items to items having advanced technology, which are being industrialized by the MSMEs in India.

13. Role of MSMEs in India's Rural Economic Development

The scope of rural industries is considered a question of properly utilizing unexploited natural and human resources and tapping vast material existing in the countryside. The features of rural industrialization are a low investment of capital, labor intensity and use of simple technology by employing local human and material resources. Thus, a judicious mix of local manpower with local resource is necessary to bring about viable development in these areas.

The estimated contribution of MSME sector (including service segment) to GDP during 2010-11, 2011-12 & 2012-13 are 36.69 per cent, 37.97 per cent and 37.54 per cent respectively. Based on the exportation data maintained by Director General of Commercial Intelligence & Statistics, Ministry of Commerce about the share of MSMEs in India's total export, for the year 2012-13, 2013-14 and 2014-15, has been estimated as 43.00 per cent, 42.38 per cent and 44.70 per cent respectively. According to the assessments of the Ministry of MSME, Government of India, the sector generates around 100 million jobs through over 46 million units situated throughout the country and contributes to 45% of India's total industrial employment, 45% of India's total exports and 95% of all industrial units of the country and more than 6000 types of products are manufactured in these industries (As per msme.gov.in). MSMEs contribute around 6.11% of the manufacturing GDP and 24.63% of the GDP from service activities. MSME sector has consistently growing at the average rate of 10% annually. The contribution of this sector to the country's Gross Domestic Product is about 8%. A study done by the Confederation of Indian Industries (CII) on the Indian MSMEs ministry reveals that the MSME's contribution will be around 50% in the India's GDP by 2025. Many units of MSMEs are located in rural areas, which are checking the migration from rural areas to urban areas. MSMEs are transforming into a new business environment characterized by the emergence of national and global supply chains where they share a symbiotic relationship with hefty corporations.

14. FACTORS WHICH LED TO GROWTH OF MSMEs

Campaigns

Like Skill India, Startup India, Digital India and Make in India aim to provide MSME players with a level playing field and a definitive push toward enhanced productivity.

Digitization

Increasing internet penetration, customer's familiarization with digital payments fueled by B2C e-commerce players facilitate MSME sector growth.

Tie-ups with new-age non-banking finance (Fin. Tech) companies allowed access to timely **collateral-free finance to MSMEs**.

Changing Employment Patterns

The younger age group shifting from agriculture towards entrepreneurial activities creating job scenarios for others.

15. Advantages of MSMEs

Inclusive Growth

MSMEs promote inclusive growth by providing employment opportunities in rural areas, especially to people belonging to weaker sections of society.

Financial Inclusion

Small industries and retail businesses in tier-II and tier-III cities create chances for people to use banking services and products.

Promote Innovation

It provides a chance for budding entrepreneurs to build original products boosting business competition and fueling growth.

Boosting Economic Growth and Development

MSMEs are boosting economic growth and development at regional, national and global levels. With its dexterity and dynamism, the sector has shown venerable innovativeness and malleability to survive economic shocks, even of the gravest nature.

Maximum Opportunities for both Self-employment and Wage-employment

Indian MSME sector offers maximum chances for both self-employment and wage-employment outside the agricultural sector and subsidizes in constructing an inclusive and sustainable society in numerous ways through the making of non-farm livelihood at meager cost, gender and social balance, balanced regional development, environmentally sustainable development, etc. As MSMEs are usually labor-intensive, they can create more jobs. Further, Because of the on-going implications of climate change, the MSME sector must be prepared to absorb millions who may be rendered unemployed in the agriculture sector. Many more pleasing opportunities can be recruited by Indian MSMEs in the foundry industry, chemicals, leather, textiles, electronics industry, agro and food processing, transport, pharmaceuticals and tourism industries, etc. The globalization of industries has slowly drawn SMEs into global value cables through diverse types of cross-border activities.

Reduction of Poverty and Unemployment

Most of the MSMEs are labour intensive and create large-scale employment opportunities for rural people. MSMEs provide a solution to the growing problem of large-scale unemployment and underemployment in rural India. Through rural entrepreneurship development program, unemployed people can opt for self-employment. In this respect, several programs like National Rural Employment Programme (NREP), Integrated Rural Development Programme (IRDP), etc. are in operation in India to help potential entrepreneurs.

Check on Migration of Rural Population

The rural population moves towards urban for various reasons like income generation, searching for good job, utilizing various facilities, etc. MSMEs will bring in or grow infrastructural facilities like roads, power, bridges, etc. It decreases the gaps and disparities in income between rural and urban areas. Rural MSMEs can avoid the relocation of people from rural to urban areas in hunt of jobs.

Formation of Capital

MSMEs by placing lucrative business proposals attract investment to ensure private contribution to the industrialization process. The otherwise idle savings are pointed for investment in business ventures which in turn provides a return. Again, the savings are invested giving a multiplier effect to the process of capital formation.

Balanced Regional Development

MSMEs in rural areas control the concentration of industry in urban areas by setting up small scale units in remote areas, successful entrepreneurship development program can help in achieving balanced regional development.

Awaken the Rural Youth

MSMEs in rural areas encourage young and promising entrepreneurs to develop and carry out entrepreneurial activities in the rural sector.

Improvement in Per Capita Income

MSMEs generate more output, employment and wealth by exploiting new opportunities, thereby helping to improve the per capita income of rural people.

Earnings of Foreign Exchange

MSMEs plays significant role in increasing the foreign exchange earnings of the country through export of their produce.

16. NEW INITIATIVES**Udyog Aadhaar Memorandum (UAM)**

As part of Ease of Doing Business, the Ministry notified and launched UAM on 18th September 2015 to enable entrepreneurs to register themselves by filing an online simple one page form on self-certification basis. No fees and supporting documents are required for the online filing of UAM. Since its implementation in September 2015, more than 5 lakh entrepreneurs have registered themselves till 31 March 2016.

Regional Conclaves

Hon'ble Union Minister Shri Kalraj Mishra held two regional conclaves, one each at Chandigarh (for Northern States) and Dimapur (for North-Eastern States). Conclave at Dimapur has resulted into a special scheme for development of MSMEs in North Eastern States. Conclave at Chandigarh was followed by detailed meetings regarding Public Procurement and with the various regional associations. Three other meetings are planned at Ranchi, Bhopal & Bangalore in near future.

Framework for Revival and Rehabilitation of MSMEs

Ministry of Micro, Small and Medium Enterprises, Government of India, vide their Gazette Notification dated May 29, 2015, notified a 'Framework for Revival and Rehabilitation of Micro, Small and Medium Enterprises'. Reserve Bank of India, has also issued guidelines to the Banks on 17.3.2016. Under these guidelines Banks have been asked to create a structure by 30th June 2016, for finalising a corrective action plan for the revival & rehabilitation of MSMEs.

A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE)

The Ministry introduced a new scheme, namely, ASPIRE in March 2015. A livelihood business incubator was set up in Deoria, Uttar Pradesh under this scheme on 15.4.2015. A second Centre was inaugurated at Rajkot, Gujarat. Subsequently, 21 Livelihood Business Incubators and 2 Technology Business Incubators have been approved.

Technology Centre Systems Programme

The Ministry has decided to set up 15 new Technology Centres with assistance from World Bank. The Loan agreement between the Government of India and the World Bank has been signed on 10.11.2014 and the loan has become effective w.e.f 19.12.2015. Locations have been identified in 10 States and a total of 160 acres of land has been taken possession at 10 places. Foundation stones at Bhiwadi (Rajasthan), Baddi (Himachal Pradesh) and Imphal (Manipur) have already been laid.

Partnership with Industry

DC, MSME signed an MOU with Samsung Electronics to set up 10 MSME Samsung Technology Schools for skilling youth in repair and maintenance of Samsung products. These schools have since been established and are providing training. NSIC has also set up training centers in conjunction with Escorts, Carl Zeiss, Schneider and ABB for providing technology upgradation training to youth for operating their products and services.

My MSME

To facilitate the enterprises to take benefit of various schemes by the office of Development Commissioner (MSME), his office has launched a web-based application module, namely, My MSME. This has also been converted into a mobile app. Entrepreneurs will be able to make their applications and track it on their mobile itself. This is in traditionalism with the wish of the Hon'ble Prime Minister who wants the management not only to be in digital mode but also mobile friendly.

Market Promotion and Development Assistance (MPDA)

The Market Promotion and Development Assistance Scheme (MPDA) has been thrown as a unified scheme by inclusion different schemes applied by the Khadi sector including for publicity, marketing, market promotion and marketing development assistance. Further, grant / subsidy will also be available for construction of Khadi plazas. The scheme will ensure increased earnings to artisans.

MSME Policy

Ministry of MSME has decided to have a comprehensive policy for the micro, small and medium enterprise sector. A One-man Committee has been constituted with Shri Prabhat Kumar, former Governor, Jharkhand. The Committee will submit its report shortly. The idea is to integrate various policies pertaining to the sector and come out with one comprehensive policy.

17. Benefits / Advantages of MSME Registration in India**Bank Loans (Collateral Free)**

The Government of India has thru collateral-free credit available to all small and micro-business sectors. This resourcefulness guarantees capitals to micro and small sector originalities. Under this scheme, both old as well as the enterprises can claim the profits. A trust named The Credit Guarantee Trust Fund Scheme was introduced by the Government of India, SIDBI (Small Industries Development Bank Of India) and the Ministry of Micro, Small and Medium Enterprises to make sure this scheme is implemented (Credit Guarantee Scheme) for all Micro and Small Enterprises.

Subsidy on Patent Registration

Under the current rules, MSMEs registered with the MSME ministry stand to benefit from a 50% grant on their obvious registration fees. This reassures small businesses and firms to keep inventing and working on new schemes and technologies. The subsidy can be availed by applying to the respective ministries.

Overdraft Interest Rate Exemption

Businesses and enterprises listed as MSMEs can gain a benefit of 1% on the Over Draft in a scheme that differs from bank to bank. This supports to make small businesses secure during unfavourable markets.

Industrial Promotion Subsidy Eligibility

Businesses that have been registered as MSMEs are qualified for subsidies for Industrial Raise as provided by the Government.

Protection against Payments (Delayed Payments)

MSMEs continually face the risk of delayed payments which in turn interrupts their entire business. To protect listed companies, the Supreme Court has assigned that any buyer of goods or services from listed MSMEs is required to make the payment on or before the decided date of payment or within 15 days from the day they recognized the goods or services. If the buyer postponements the payment for more than 45 days after accepting the goods or services then the buyer has to pay interest on the amount that was agreed to be paid. The interest rate is three times the rate that is informed by the Reserve Bank of India.

Fewer Electricity Bills

All companies that have the MSME Registration Certificate are entitled to concerns on their electric bill. This enables businesses to boost production and take in more orders without worrying about capital expenditure on costs like electricity and maintenance. micro, small and medium enterprises can avail of the concession by providing an application to the department of electricity along with the certificate of registration.

ISO Certification Charges Reimbursement

Any registered micro, small and medium enterprise can claim reimbursement of the expenses that were made to obtain an ISO certification. This motivates entrepreneurs to get their respective businesses ISO certified which helps them to do business abroad in terms of high-quality exports.

18. Atmanirbhar Bharat And Assistance To MSME

The Central Government has announced a package of ₹ 20 lakh crore under Aatmanirbhar Bharat Abhiyan (ABA) for implementing reforms across various sections including Micro, Small & Medium Enterprises (MSMEs), industries, labourers, middle class, and others. This package was equal to 10% of India's Gross Domestic Product (GDP), and it was announced in five tranches. The first tranche of the ABA covers the support of ₹ 3.7 lakh crore and various reforms for the MSMEs.

CONCLUSION

It is very clear from the analysis that the Micro, Small and Medium Enterprise (MSME) sector has emerged as a very important segment that is contributing significantly to employment generation, innovation, exports, and inclusive growth of the economy. The reason is that the MSME sector can make cost-effective products and the government is also providing full support to boost this sector. Currently, MSME's share of the national GDP is about 29% and is projected to touch 50% by 2024. With its inherent strengths, powerful infrastructure and strong positioning at national and international levels. The conducive business environment with ample growth opportunities, good infrastructural facilities, better road connectivity, the largest coastline, supportive government initiatives and increasing ease of doing business ranking makes Gujarat a promising state in the country to ensure the development of MSME sector in line with the economic development policies of the central government. It can be said that the MSME sector needs more attention than any other large industrial unit and it would certainly help India to become an economic powerful nation among all countries of the world.

REFERENCES

- Dangayach, G.S. and Deshmukh, S.G. (2005). Advanced manufacturing technology implementation: Evidence from Indian small and medium enterprises (SMEs), *Journal of Manufacturing Technology Management*, 16(5), pp.483-496.
- Moore, S.B. and Manring, S.L. (2009). Strategy development in small and medium sized enterprises for sustainability and increased value creation, *Journal of Cleaner Production*, 17(2), pp. 276-282.
- Chand, K. K. (2019). Agripreneurship: a tool for the economic development of India in the new millennium. *International Journal on Recent Trends in Business and Tourism (IJRTBT)*, 3(4), 19-25. Google Scholar, CrossRef/DOI
- https://msme.gov.in/sites/default/files/MSME_gazette_of_india_0.pdf
- Van Horne, J. C., (1986), *Fundamental of Financial Management*, Prentice Hall International.
- Hankinson, A., (1979), Investment appraisal in the small firms, *Management Accounting (CIMA)*, 57(10), p. 37 – 8.
- Vuong, Q. H., (1998), SMEs to play a large role in private sector, *Vietnam Investment Review*.
- IBEF. (2013). MSMEs and the growing role of Industrial Clusters. Retrieved from [https:// www. ibef.org/ download/MSME-040213.pdf](https://www.ibef.org/download/MSME-040213.pdf)
- E-Commerce fueling optimism among SMEs in BRICS countries. (2017, January 12). Retrieved August 31, 2017, from <http://www.wusme.org/sme-news/e-commerce-fueling-optimism-among-smes-in-brics-countries/>
- Hankinson, A., (1979), Investment appraisal in the small firms, *Management Accounting (CIMA)*, 57(10), p. 37 – 8.
- Bhatia, B.S. and G.S. Batra, (2003). *Entrepreneurship and Small Business Management*, Deep and Deep Publications, New Delhi.

A STUDY ON WOMEN ENTREPRENEURSHIP AND INNOVATION IN INDIA

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ABSTRACT

Female entrepreneurship is on the rise, which is good for women's social and economic wellbeing. Women are empowered by entrepreneurship. Female business owners contribute to the GNP, innovation, and the creation of jobs. Equality between men and women benefits the economy. Innovation fosters business growth. Indian women stand out for their accomplishments in spite of social limitations. Indian women's lifestyle evolved as a result of changing aspirations for a better life and an increase in the status of educated women. This study looks at the inventiveness and entrepreneurship of Indian women. India's Gujarat state is utilised as an example in the study.

Keywords: Innovation; Entrepreneurship; Economy.

I. INTRODUCTION

According to Lazear (2005), entrepreneurs are those who "put people together in particular ways and combine them with physical capital and ideas to create a new product or produce an existing one." Entrepreneurship is defined as "the process of assembling human, physical, and information resources efficiently." Entrepreneurship is a factor of production connected to innovation and taking risks, with compensations linked to uncertainty and earnings, according to Montanye (2006). Entrepreneurship has the potential to empower women and advance society. It is a significant economic force. Women entrepreneurs overcome organisational and business challenges while creating jobs for themselves and others. Women's emergence as entrepreneurs is a significant step toward female independence and ensures their status in society, according to Rao et al. (n.d.). As people's knowledge of economic position has increased, women's hidden entrepreneurial potential has changed. U. Premalatha Society is built by women. Women are a powerful force in business, and women-owned businesses are essential to the expansion of the economy. A woman entrepreneur establishes a business and runs it independently and sensibly, taking calculated risks and attacking issues head-on with a will to succeed. Women entrepreneurs come up with a business idea, launch it, plan and combine various areas of production, run the company, take calculated risks, and manage economic uncertainties. Although entrepreneurship is taking off, it still has a long way to go before it becomes a dominant force in business. A woman entrepreneur is described as "a confident, innovative, and creative woman capable of achieving self-economic independence individually or in collaboration, generating employment opportunities for others through initiating, establishing, and running the enterprise while maintaining pace with her personal, family, and social life" by Ganesamurthy, V. S. (2007). According to The Economist, educating more women in underdeveloped nations will increase economic growth." According to The Female Poverty Trap, "Women Entrepreneurs" involves empowering women by providing them with the information and freedom to choose (2001). Women are empowered by employment and education. According to Lazear (2005), entrepreneurs are those who "put people together in particular ways and combine them with physical capital and ideas to create a new product or produce an existing one." Entrepreneurship is defined as "the process of assembling human, physical, and information resources efficiently." Entrepreneurship is a factor of production connected to innovation and taking risks, with compensations linked to uncertainty and earnings, according to Montanye (2006). Entrepreneurship has the potential to empower women and advance society. It is a significant economic force. Women entrepreneurs overcome organisational and business challenges while creating jobs for themselves and others. Women's emergence as entrepreneurs is a significant step toward female independence and ensures their status in society, according to Rao et al. (n.d.). As people's knowledge of economic position has increased, women's hidden entrepreneurial potential has changed. U. Premalatha Society is built by women. Women are a powerful force in business, and women-owned businesses are essential to the expansion of the economy. A woman entrepreneur establishes a business and runs it independently and sensibly, taking calculated risks and attacking issues head-on with a will to succeed. Women entrepreneurs come up with a business idea, launch it, plan and combine various areas of production, run the company, take calculated risks, and manage economic uncertainties. Although entrepreneurship is taking off, it still has a long way to go before it becomes a dominant force in business. A woman entrepreneur is described as "a confident, innovative, and creative woman capable of achieving self-economic independence individually or in collaboration, generating employment opportunities for others through initiating, establishing, and running the enterprise while maintaining pace with her personal, family, and social life" by Ganesamurthy, V. S. (2007). According to The Economist, educating more women in underdeveloped nations can increase economic growth "according to The Female Poverty Trap, entails

empowering women by giving them the knowledge and options to make decisions (2001). Women are empowered by employment and education.

II. OBJECTIVES OF THE STUDY

This article's main goal was to examine studies on women entrepreneurs and innovation in India and to comprehend how innovation in business promotes success and expansion. Several instances from the Indian city of Surat, Gujarat, have been used to illustrate how creativity in entrepreneurship contributes to the success of an enterprise. Secondary data are the foundation of the entire research project that led to the report. Relevant books, journals, magazines, the internet, and newspapers have all been used to assemble secondary data.

III. LITERATURE REVIEW

- ❖ **Das (2000):** The study was "Women Entrepreneurs of SMEs in two states of India, viz, Tamilnadu and Kerala" The early issues that female entrepreneurs face are remarkably comparable to those that women in western nations experience. However, there was less work-family conflict for Indian women business owners, and they were also found to have different motivations for founding and running successful enterprises than their counterparts in western nations.
- ❖ **Erik Stam (2008):** The study was "Entrepreneurship and Innovation Policy" The nature of entrepreneurship and its relationship to innovation are discussed in the paper. Additionally, it provides a summary of theoretical and empirical research on the connection between entrepreneurship, innovation, and economic expansion. The examination of innovation and entrepreneurship in the Netherlands from a global and historical perspective is the next section of the essay.
- ❖ **Jalbert (2000):** The study was "To Explore the Role of Women Entrepreneurs in a Global Economy" According to the report, women company owners significantly contribute to the strength of the global economy, national competitiveness, and local commerce by delivering a variety of goods to the world market.
- ❖ **Kumari, S. (2012):** The study was "Challenges and Opportunities for Women Entrepreneurship in India Under Globalisation", The microfinance initiatives aimed towards With macroeconomic and social policy recommendations that seriously disadvantage women, reduce the availability of complementary services in the public sector, and eliminate any existing safety nets for the extremely poor, women are frequently promoted as a component of packages to absorb the shock of structural adjustment programmes and globalisation.
- ❖ **Rao et al. (2010):** The study was "Women Entrepreneurship in India (A Case Study in Andhra Pradesh)" The study of female entrepreneurs in rural areas also reveals that training and knowledge of many agencies have helped women entrepreneurs boost their confidence.

IV. WOMEN ENTREPRENEURSHIP IN INDIA

A woman entrepreneur, as defined by Ganesamurthy, V. S. (2007), is a business that is owned and operated by women, with at least 51% of the capital and 51% of the jobs being created by women. Empowering women is a tried-and-true economic and social development strategy. This has caused minor changes in the ways that women are supported from welfare to development. Women's business ownership has great potential. Many gender issues can be resolved by inspiring, educating, and assisting women in starting and running businesses. Globalization has promoted female entrepreneurship, according to Jahanshahi (2010). high-performing female-owned businesses

V. WOMEN ENTREPRENEURSHIP AND INNOVATION

Entrepreneurs, according to Schumpeter, are those who create novel combinations (i.e., innovations). The four roles that Schumpeter distinguishes in innovation are inventor, entrepreneur, capitalist, and investor. Every economy is expanding. Women's potential as entrepreneurs has been altered by society's knowledge of their place in society and economic status. A "woman entrepreneur" chooses a challenging career in order to fulfil her needs and achieve independence. Women business owners who give back to their families and society are motivated to accomplish good. Women are more aware of their characteristics, rights, and employment circumstances thanks to the media. Able (2010) Implementing a new or considerably enhanced product, procedure, marketing strategy, or organisational method into business operations, workplace structure, or external relations is known as innovation. Toronto (2008) Small and medium-sized firms contributed to economic growth, higher productivity, and employment even in times of economic crisis and recession (SMEs). The supervisor in charge of daily corporate management (and carries innovation project risk). According to Shahid Yusuf (cited in Paul Romer, 2007), innovators will dominate society in the twenty-first century. Meta-

ideas support innovation in the business sector, et al (2009) Innovation brings useful new concepts, products, services, and practises (though a number of unsuccessful innovations can be found throughout history). Invention is inspired by the bravery and drive to change the world. Commercialization is necessary for innovation. The impact of innovation on human history (consider the development of electricity, steam engines, motor vehicles, etc.). The government and academia support entrepreneurship because it represents creativity and a thriving economy. The majority of research on female entrepreneurs focuses on what drives them to start their own businesses because they are "a key engine for innovation and employment development" (OECD, 1997). In his 2008 book "Women and Employment," N. S. Nagar argues that nations that do not fully employ the female population misallocate human resources and jeopardise their ability to compete. Women entrepreneurs are growing more quickly than economies in many countries. If their potential is fully realised, which calls for the removal of barriers and constraints, their contribution might be significantly greater. India is a developing nation, and economists are aware of the potential of women. Gujarat supports female entrepreneurs and innovation. Gujarati women have achieved success through perseverance, devotion, and creativity. The prototypical example of a small group of women (seven) coming together to create a sustainable existence with their one skill, cooking, is LijjatPapad. It's one of the most entrepreneurial businesses for establishing and upholding customer productivity, expectations, and trust. Innovation can help turn hobbies into full-time companies.

Example 1: Phoenix Soft Toys Creation

A young businessperson from Chorwad, Saurashtra, India, who began making toys as a hobby before switching to puppetry is discussed by Bulsara et al. (2009). Her company focused on educating people, promoting the arts, and giving back to society. She employed other women and transformed her passion into a full-time career. According to the theory, shifts in demand conditions (such as commercial, technological, demographic, political, institutional, and cultural developments) provide opportunities that are not always visible to everyone but are found and taken advantage of by some people. Their prior experiences and standing in social networks produce this advantage. And last, in order to improve economies and societies, women's entrepreneurship needs to be encouraged. Ironically, typical evaluations of corporate success and economic growth ignore the transformative influence of change-producing firms. According to Lerner's research from 2002, "innovations" are more prevalent in growth-oriented businesses, suggesting that owner motivation and aim play a part. The woman's development and success were driven by her intentions and motivation.

Example 2: Rink's Creation

In this case, a determined woman overcame familial and cultural barriers to accomplish her goals. Male and female entrepreneurs have different challenges. Five conventional and orthodox Gujarati siblings make up Rinku Lakdawala's family (four sisters and one brother). From a humble background, Rinke believed she should constantly upskill, educate, and rejuvenate herself. In her husband's garage, she designs dresses. She emphasised the development of technology and sophisticated industrial processes. Every year, it is necessary to update equipment and structures to maintain a nearly ideal manufacturing setup. This is essential for design and development. She expanded into machine embroidery after investing in two automatic embroidery machines. There are seven embroidery machines in this unit. ruthless commerce. She faces unique difficulties because she is a woman. The productivity and quality of the fashion business are increased by ongoing investments in labour and technology. Innovation, creativity, and product design are necessary for success. None of this would be successful without market segmentation and a concentration on lucrative niches. In Surat, Gujarat, Rinku is one of the most prosperous women business owners. She overcome obstacles and embraced cutting-edge ideas. She was named the 2012 "Bhaskar Women of the Year." She also received the 2012 L. P. Savani Women Entrepreneur Award, which recognises outstanding performance and hard work. Rinku stands for successful businesses with female decision-makers. She stands for female businesswomen who have investigated alternative economic avenues. In every competition, including business, she has faced out against men and prevailed. These women are bold, convincing, and risk-takers. They were able to prevail in this challenging competition because to their diligent work and determination. She demonstrated that women can succeed in business and industry on par with men.

Example 3: Designz Boutique

Women entrepreneurs contribute to the GNP, develop, and generate jobs just as much as men do. Women are more inclined to put money back into their families, communities, and education. Bhavna Kikla started her business as a hobby, but it eventually provided her family with social and financial assistance. Women favour working for themselves over paid or unpaid family work. She was raised in Surat and was exposed to fashion at a young age. For reasons other than herself and her family, she yearned to discover this magnificent new world. Entrepreneurial opportunities may not be obvious to everyone, but this example contends that anyone with the

aptitude and resources to explore can find them. Opportunities are unstructured, and their benefits and drawbacks depend on one's background, training, and upbringing. In 2001, Bhavya began her entrepreneurial endeavour as a hobby after growing more self-assured. After experiencing financial setbacks, her husband and in-laws joined her business. Bhavna grew her company in Surat with the help of her family, new concepts, and creativity.

Example 4: Ravi Fashion's

In this case, a woman created a niche market for her goods and established a model for prosperous businesses, her youthful enthusiasm inspiring others to follow. Asha Nakrani completed her education and received a three-year diploma in fashion design from NIFD (National Institute of Fashion Design). She was a gifted, sincere, and eager student who used her knowledge to develop her skills and creativity. A clear vision and successful business plans are necessary when starting a business. Asha considered these issues before starting her business. Her keen perception enables her to identify growth opportunities and build fruitful business relationships. Strong and self-driven, Asha seized every chance to advance her career. Her father assisted her in 2011–12 in setting up sewing machines in Udhna and embroidery machines in Kapodara (Surat) (Surat). She runs the embroidery business she co-founded with a relative by herself. She also co-owns a sewing business with another person. She views him as committed and driven. As the demand on the stitching units increases, she becomes a working partner. For four years, she has operated a business out of New Bombay Textile Market, one of Surat's main textile markets. A successful fashion entrepreneur needs creativity to see chances in chaos and ambiguity as well as passion and enthusiasm for her work to spur her on to constantly enhance her products. To tackle challenges and issues, she needs tenacity and perseverance. Ashley's profession has benefited from her familiarity with embroidery and fashion trends.

VI. CONCLUSION AND DISCUSSION

Today, the number of women entrepreneurs is steadily increasing. Equal opportunity has been promised to Indian women in all spheres, and laws guaranteeing equal access to political participation, education, and employment have been implemented. Sadly, the only people who gain from government-sponsored development initiatives are metropolitan middle-class women. The proportion of women in India is close to 45%. Programs to promote women's entrepreneurial knowledge, orientation, and skills are necessary. The contribution of female entrepreneurs to economic growth is being acknowledged and supported more and more. The resurgence of entrepreneurship is urgent, with a focus on educating the female strata of society, spreading awareness and consciousness among women to outshine in the enterprise field, and making them aware of their strengths and significant position in society, as well as the significant contribution they can make to their industry and the overall economy. Women's businesses must be shaped with entrepreneurial skills and attributes to meet market trends and challenges around the world, and they must be capable of sustaining and striving for excellence. The largest obstacle to the advancement of our nation is our traditional and rigid thought process, which may be overcome if every citizen appreciates the significant position women occupy in society and recognises their essential role in contemporary industry.

REFERENCES

1. Kumarī, S. (2012). Challenges and Opportunities for Women Entrepreneurship in India under Globalisation. *IOSR Journal of Business and Management*, 5(2), 29-35.
2. Surti, K. & Sarupriya, D. (1983). Psychological Factors Affecting Women Entrepreneurs: Some Findings. *Indian Journal of Social Work*. 44 (3), 287-295.
3. Tambunan, T. (2009). Women entrepreneurship in Asian Developing Countries: Their Development and Main Constraints. *Journal of Development and Agricultural Economics*, 1(2), 27-40.
4. Vishwanathan, R. (2001). Opportunities and Challenges for Women in Business. *India Together*. page 1-6.

AGRICULTURAL TECHNOLOGY IN INDIA: A CRITICAL ANALYSIS

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ABSTRACT

To enhance crop yield, India must optimise its agricultural practises. Agricultural practises must be improved if the economy is to grow and a fast expanding population is to be fed. India faces significant challenges in increasing agriculture output due to location and weather. Indian agriculture is impacted by shifting weather conditions, diverse geographic regions, traditional farming methods, and economic and political conditions. Another major issue is the lack of information about agricultural yield. These difficulties can be overcome using modern agriculture technologies. Information on agricultural yields, influencing factors, and crop yield estimates are provided by smart farming, digital agriculture, and big data analytics. Accurate crop yield forecasts assist farmers in creating a suitable cultivation plan, setting up a system to monitor crop health, managing agricultural production effectively, and minimising financial losses. Agriculture is a lucrative industry.

Keywords: Farming, Agriculture, fertiliser, marketing etc.

INTRODUCTION

Agriculture is essential for both survival and food security. For humanity to survive, agriculture is essential. The majority of vegetarians in India depend on agricultural products to survive. The economy of this agricultural nation is reliant on the output of yearly crops. Over 60% of the population works in agriculture, while the remaining 40% is dependent on it. Agricultural practises include the use of equipment, fertiliser, marketing, sales, and more. Key food crops can be grown with a balanced animal population thanks to agriculture. Farmers in India also cultivate coconut, coffee, tea, cotton, rubber, jute, onions, potatoes, sugarcane, oil seeds, mangoes, oranges, and red chilies. 70% of rural households are dependent on agriculture. India's GDP is 18% derived from agriculture, which also employs 60–70% of the workforce. Internationally, India's agricultural products come in second. The socio-economic structure and economics of the nation are influenced by a variety of agricultural crops. A number of factors influence agricultural success rates, including soil fertility, weather, water level with rainfall measurements economic and political circumstances. Based on customary methods and historical data, the majority of Indian villages in the past have predicted crop production; but, if climatic conditions alter as a result of global weather forecasting, this may not be useful. A more scientific strategy using "agro-based big data analytics" is required for this problem. Big data analytics examines the factors that affect crop productivity as well as the effects of politics, economics, and society on agricultural practises. Crop yields can be increased by using appropriate agricultural practises to expand the amount of arable area suitable for a crop's growth, decrease crop damage, and lower operating expenses. Physical crop inspection, manual weeding, and contamination removal are inefficient and have a negative impact on crop yield. Scientifically, sensor-mounted techniques are more effective at determining crop requirements. In order to create the ideal environment for improved crop yields and to establish crop yield marketing strategies, big data analytics is used to analyse the elements that affect agricultural yields.

2. TECHNOLOGY IN AGRICULTURE

1. Digital Agriculture

To increase food production, digital agriculture combines innovative and cutting-edge technology into one system. In comparison to traditional and sensor-based alternatives, digital agriculture can help farmers better comprehend their agricultural activities in real time. By supplying farmers with the scientific knowledge they need to implement smart agricultural practises, digital agriculture increases crop yields.



Figure 1. The concept of digital agriculture

Farmers can exchange ideas using the user interface of digital agriculture. This provides them with the business knowledge and technological advancements they need to succeed in farming. Farmers may upgrade their knowledge and abilities and maintain their farming practises with the aid of digital agriculture. It enables you to weigh prior information in order to comprehend various situations and challenges and come to wise conclusions. Low-cost, reliable automated solutions are needed to combine composite agricultural practises with rigorous crop productivity requirements. By reducing crop-damaging contaminants, agricultural safety in the current environment can be improved. Crop yields are boosted by field equipment, irrigation systems, automated greenhouses, automated livestock, and automated fruit production.

2. Smart Farming

ICT is a key component of smart farming's cyber-physical agriculture management. ICT is used in agriculture through smart farming, sparking the "third green revolution." India's agriculture needs to permanently switch from traditional to smart farming practises in order to be successful and sustainable. The term "smart farming," also known as "Internet of Agriculture Technology" (IoAT), refers to the use of information and communication technologies (ICT) to understand farming practises and assist farmers in maintaining ideal conditions with the least amount of effort and maximum benefit. This enables farmers to operate more proficiently, with greater productivity, at lower costs, and with greater financial success. Intelligent agriculture models are simple for farmers to understand and adapt to.

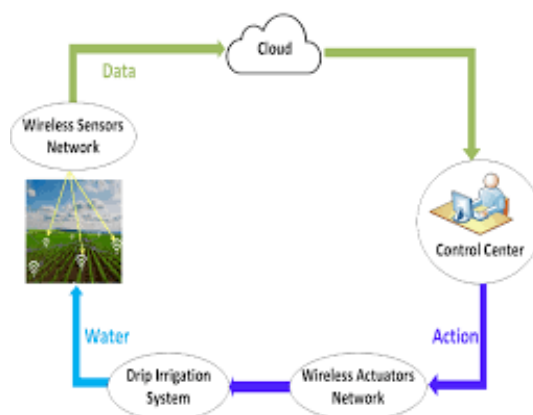


Figure 2. A cyber-physical system (CPS) based management cycle is at the heart of the smart farming concept.

A recent study predicts that by 2050, there will be more than 10 billion people on the planet. Governments find it challenging to feed these enormous populations because of the limited amount of arable land and traditional farming practises. IoT automates irrigation systems to reduce water waste while using sensors to continuously monitor factors such as temperature, humidity, light intensity, and soil moisture content. The IoAT example has a number of benefits, including sensor-based field monitoring, effective resource mapping, remote crop monitoring, climate monitoring and forecasting, and controlled fertiliser and pesticide application.

3. Data Mining and Analytics

Data mining technology underpins an agriculture DSS. The goal of data mining is to take raw data and change it into a usable form for more complex applications using specialised software. Farmers may plant a higher-yielding crop variety thanks to data mining, which also aids research on soil fertility. The classification of the soil forecasts engineering characteristics, ranks fertilisers, and alternative uses. Lab testing and statistical

processes require resources such as time and money. Large and complicated data sets can be solved more effectively and precisely. To assess soil characteristics, air pollution, and agricultural yield variables, one can use GPS, k-means, SVMs, and the K-nearest fertiliser approach. Soil tests reveal the fertility, impurities, and deficiencies of the soil. The majority of public and private soil testing laboratories provide unique soil analysis techniques and soil literature. Information on soil composition is used to suggest fertilisers. Farmers can use this to apply the proper fertilisers for their seasonal crops.

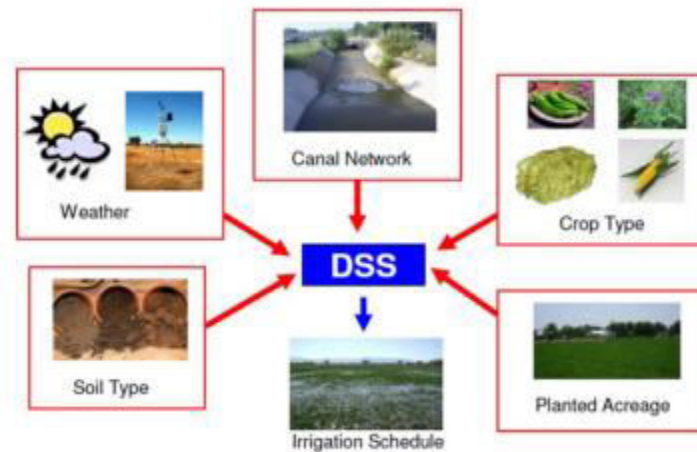


Figure 4. The DSS architecture and its use in agricultural settings.

4. Systems for predicting the weather

The effects of climate change on humans are one of the biggest obstacles facing the agricultural industry. The positive effects of Big Data on environmental consciousness are minor compared to those of e-commerce and advertising. A complex climate data set is hampered by consistency. Massive climate datasets are mined utilising big data analytics, which focuses on differences between conventional and climate data mining techniques. India's plant growth and yield are impacted by climate change. Crop duration is decreased when temperature rises. Crop respiration was increased, which altered insect attack patterns. Warmer weather increases CO emission, which lowers agricultural output. One can pinpoint the precise change in the agricultural climate of India by analysing rainfall and temperature data from the previous five years. Figure 5 demonstrates how sensors in various farm parts predict the efficacy of seeds and fertiliser. Software tells farmers where to plant hybrid seeds and where to plant different varieties.

5. Agriculture/ Crop Management

Crop yield is influenced by seasonal, economic, and biological factors, yet unpredictability costs farmers a great deal of money. To lessen crop damage and increase crop output, tubes must be built. I data collection and storage. Analytics-based suggestions are (iii) This comprehensive strategy necessitates collaboration in the supply chain, agricultural research, and ICT development. It takes innovative approaches to predict diseases, weeds, and pests using past data. Figure 6 demonstrates how Integrated Crop Management Systems (ICMs) strike a compromise between environmental responsibility and economic success. Waste reduction, energy efficiency, and pollution reduction are all part of ICMs. Technology in agriculture is useful.



Figure 6. Integrating crop management (ICM) techniques into farming

3. Type of Research

The present research paper is purely based on Descriptive Research.

4. Period of Research

The base for the present research papers is based 8 years.

5. Types of Data

❖ **Primary data:** In the present research paper primary data is not used

❖ **Secondary data:** the present research paper based on secondary data which is taken from websites, newspaper.

4. CONCLUSION

According to an assessment of agricultural technology, there are several ways to improve crop quality and quantity. In India, achieving the expected growth is difficult due to the lack of maintenance of production system resources. Several factors affect quality farming. Digital agriculture, precision agriculture, and yield analytics are developments of modern agriculture. In India, there's a gap between farmers and technology. Governments have implemented new technologies to support farmers. Despite this, farmers could benefit from user-friendly agro-advisory systems. These technical advances should assist farmers get the maximum agricultural output at lower cost.

REFERENCES

1. J. W. Jones, et al., "Toward a new generation of agricultural system data, models, and knowledge products: State of agricultural systems science," *Agricultural Systems*, pp. 269-288, 2017.
2. D. Jiménez, et al., "From Observation to Information: Data-Driven Understanding of on Farm Yield Variation," *PloS ONE*, vol. 11, no. 3, pp. 1-20, 2016.
3. L. Mariani and A. Ferrante, "Agronomic Management for Enhancing Plant Tolerance to Abiotic Stresses — Drought, Salinity, Hypoxia, and Lodging," *Horticulturae*, vol. 3, no. 4, pp. 52-69, 2017.
4. H. F. Abouzeina and W. M. Haggag, "Weed control in clean agriculture: A review," *Planta daninha*, vol. 34, no. 2, pp. 377-392, 2016.
5. D. Ramesh and B. V. Vardhan, "Data Mining Techniques and Applications to Agricultural Yield Data," *International Journal of Advanced Research in Computer and Communication Engineering*, vol. 2, no. 9, pp. 3477-3480, 2013.

AGRICULTURE INFRASTRUCTURE DEVELOPMENT FUND AND ATMA NIRBHAR BHARAT

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ABSTRACT

The role of infrastructure is crucial for agriculture development and for taking the production dynamics to the next level. It is only through the development of infrastructure, especially at the post harvest stage that the produce can be optimally utilized with opportunity for value addition and fair deal for the farmers. Development of such infrastructure shall also address the vagaries of nature, the regional disparities, development of human resource and realization of full potential of our limited land resource. Infrastructure projects, however, involve huge initial capital investments, long gestation periods, high incremental capital output ratio, high risk, and low rate of returns on investments. Rural infrastructure has direct and strong relationship with farmers access to institutional finance and markets, and increasing crop yields, thereby promoting agricultural growth. Agricultural infrastructure has the potential to transform the existing traditional agriculture or subsistence farming into a most modern, commercial and dynamic farming system in India. Agricultural infrastructure primarily includes wide range of public services that facilitate production, procurement, processing, preservation and trade. Improved infrastructure leads to expansion of markets, economies of scale and improvement in factor market operations.

In view of above, the Hon'ble Finance Minister announced on 15.05.2020 Rs 1 lakh crore Agri Infrastructure Fund for farm-gate infrastructure for farmers. Financing facility of Rs. 1,00,000 crore will be provided for funding Agriculture Infrastructure Projects at farm-gate & aggregation points (Primary Agricultural Cooperative Societies, Farmers Producer Organizations, Agriculture entrepreneurs, Start-ups, etc.). Impetus for development of farmgate & aggregation point, affordable and financially viable Post Harvest Management infrastructure. This paper attempts to study the issues related to Agriculture infrastructure, concept of Agriculture infrastructure development fund scheme. Also to evaluate the progress made by the institution of Maharashtra under this scheme and the recent changes made by cabinet. The research will help to identify the implementation of Agriculture Infrastructure Fund (AIF) Scheme in country during Post covid period.

Keywords: Agriculture Infrastructure Fund, postharvest, Agricultural infrastructure, Farmers Producer Organizations

INTRODUCTION

The lockdown imposed to curb its exponential spread have left an indelible mark on the way of life and business. The Government of India did not just provide a direct stimulus, as many other countries did, but prepared a calibrated response that included a mix of stimulus measures, liquidity support to MSMEs and structural reforms across many sectors. In his nation-wide address on May 12, 2020, Prime Minister Narendra Modi announced a Rs. 20 lakh crore stimulus package to tackle the impact of coronavirus. The clarion call for an Atmanirbhar Bharat aims to strengthen the country's domestic manufacturing ecosystem, make the Industry globally competitive, and embed the country as an integral hub in global value chains. The Atmanirbhar package has been further complemented through measures announced in Atmanirbhar 2.0 and 3.0 packages and various supportive actions by the Central Bank.

Various studies unanimously confirm that rural infrastructure is a sine qua non for significantly improving the quality of human life and phenomenally accelerating the process of agricultural development. Accordingly, DAC&FW has formulated the Central Sector Scheme to mobilize a medium - long term debt financing facility for investment in viable projects relating to postharvest management Infrastructure and community farming assets through incentives and financial support.

Agriculture and allied activities are the primary income source for ~58% of total population of India. Nearly 85% of the farmers are Small Holding Farmers (SHFs) with less than 2 hectares of land under cultivation and manage 45% of agricultural land. Annual income of majority of the farmers is very low. Further, India has limited infrastructure connecting farmers to markets and hence, 15-20% of yield is wasted which is relatively higher vs. other countries where it ranges between 5-15%. The need for proper agricultural infrastructure is evident as it plays a vital role during the whole process. From the initial step of sowing the seeds to the final step of distributing the product to the market through transportation, infrastructure is a key requirement. Given the requirement for growth in irrigation, roads, transportation, equipment, machinery, and infrastructure for precision agriculture, financial initiatives are vital in the agriculture sector's infrastructure. In the last few decades, the adoption of modern technologies and types of equipment has escalated the production and profitability in the agriculture sector, which clearly shows the important role of quality infrastructure.

The following are some of the issues faced by agriculture infrastructure-

Issues concerning Agriculture-infrastructure

1. About 40% of primary produce like grains, fruits and vegetables is lost before it reaches the market, due to lack of proper handling, cleaning, sorting, grading and packaging facilities at the village level.
2. The unreasonably long supply chain results in a steep increase in the total cost owing to procurement, transit and other taxes and service charges levied at various layers.
3. Due to such inefficiencies in the supply chain, it has been estimated that the price received by the farmers is only in the range of 25-60% of what the consumer pays.
4. Strengthening the supply chain can benefit the consumers and producers by 20-25% in cost reduction.
5. According to one report, the food processing industry is expected to reach Rs 4,000 billion by 2015 contributing around 6.5% to the GDP.

To effectuate the financial contribution to the agriculture sector, the **Agriculture Infrastructure fund (AIF)** scheme was launched in August 2020 by the Union cabinet. Agriculture Infrastructure fund comes up with a scheme that aims to provide medium-long term debt financing facility through 3% interest subvention and credit guarantee support on loans for the creation of post-harvest management infrastructure and community farming assets. Under this, Rs 1 lakh crore from 2020-21 to 2025-26 provision of funds has been made and interest subvention and credit guarantee assistance will be given till the year 2032-33. AIF scheme has the facility of convergence with any other scheme of State or Central Government, therefore in order to optimize the benefits of multiple government schemes for a particular project, these are being integrated with multiple external systems/portals for convergence of schemes on a large scale. Convergence of AIF has already been done for commercial horticulture development and cold storage development schemes of National Horticulture Board under INM Division of Ministry of Agriculture.

Overview of Agriculture Infrastructure Fund (AIF)-

1. The fund has been launched as part of 'Atmanirbhar Bharat' (self-reliant India) to make farmers self-reliant.
2. It is a pan **India Central Sector Scheme**, under the scheme, Rs. One Lakh Crore will be provided by banks and financial institutions as loans.
3. **The AIF Scheme Shall Provide a Medium** – long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support.
4. **National Bank for Agriculture and Rural Development (NABARD)** is providing a refinance facility under AIF to co-operative banks at 4 percent interest, while the Centre is granting a further 3 per cent interest subvention to all beneficiaries of AIF, making the effective rate for PACS at just 1 percent.
5. The seed money under **AIF** is 10 per cent to avail of the credit, any AIF beneficiary setting up a warehouse would get 25-33 per cent subsidy on capital after he deposits 20 percent seed money.
6. **Duration of the Scheme:** FY2020 to FY2029 (10 years).
7. **Eligibility:** The recipients of the fund include- Farmers, Agri-entrepreneur, Agricultural produce market committees, Self-help groups (SHGs), Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Startups, and Central/State agency or Local Body sponsored Public-Private Partnership Projects Primary Agricultural Credit Societies (**PACS**), Marketing Cooperative Societies, Farmer producer organisations (**FPOs**), .
8. **Interest Subvention:** All loans under this financing facility will have interest subvention of 3% per annum up to a limit of Rs. 2 crore. This subvention will be available for a maximum period of seven years.
9. **Credit guarantee:** under **Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)** scheme for a loan up to Rs. 2 crore.
10. **Management of Fund:** Monitored through an advance online **Management Information System (MIS)** platform.

Convergences allowed with several central and state schemes to reduce on-going cost & improve viability of projects Sub Mission on Agriculture Mechanization (SMAM) Community farming assets with up to 40%

procurement subsidy for establishment of custom hiring service centers. Rashtriya Krishi Vikas Yojana (RKVY) Convergence with state plan for funds provided by centre under RKVY scheme. PM Formalisation of Micro Food Processing Enterprises Scheme 35% capital subsidy along with additional support for FPOs, SHGs for working capital, training, DPR preparation. Sub schemes under Mission for Integrated Development of Horticulture 35% – 50% capital subsidy for infra including cooling units, pack house, ripening chambers.

Recent Modifications in Agriculture Infrastructure Fund (AIF)-

The following are some of the modifications approved by Cabinet recently; that will help to achieve multiplier effect in driving investments. Also, eligibility has been extended to include more beneficiaries –

- APMCs, State Agencies, National & State Federations of Cooperatives, Federations of Farmers Producers Organizations (FPOs) and Federations of Self-help Groups (SHGs) now eligible under the scheme.

Cap on number of projects per beneficiary increased from 1 project to 25 projects –

- Private entities can now submit upto 25 applications under the scheme; projects to be in different locations having different LGD code. No limit on applications for State agencies, Federations of farmer groups. APMCs can setup multiple projects in same location of different types.
- Interest subvention for loan upto Rs. 2 crore will be provided for each project of different infrastructure types e.g., cold storage, sorting, grading and assaying units, silos, etc. within the same market yard.

Duration of the scheme extended from 4 to 6 years –

- Period of financial facility has been extended from 4 to 6 years upto 2025-26 and overall period of the scheme has been extended upto 2032-33.

Under AIF Scheme, target of Rs.8,460 crores is allotted by Govt of India for the State of Maharashtra for the period of four years starting from FY 2020-21 to FY 2023-24. The below table 1 shows statewise ranking of different states who have sanctioned amount under AIF Scheme.

Table No.1 Statewise Ranking as on (11.05.2022)
(Amt in Rs.cr)

Sr.No.	Name of the State	Sanctioned Amt.	Disbursed Amt.
1	Madhya Pradesh	2115.32	1750.61
2	Andhra Pradesh	640.12	177.90
3	Rajasthan	581.91	494.77
4	Maharashtra	532.89	385.25

Source: Background notes and agenda notes of 155th SLBC meeting, Maharashtra.

Table No.2 -Performance of Institution in disbursing amount under Agriculture Infrastructure fund in Maharashtra as on (11.05.2022)
(Amt in Rs.cr)

Institution Category	Sanctioned Disbursed			
	A/c	Amt	A/c	Amt.
DCCBS with PACS affiliation	125	21.19	25	3.97
NBFCS	3	1.03	3	1.03
Regional Rural Banks	303	5.22	303	5.22
Scheduled Comm Bank	671	478.08	412	350.28
Scheduled Coop Banks	1	4.63	1	4.63
Small Finance Bank	18	20.13	18	20.13

State Cooperative Banks	4	2.61	0	0
Total	1125	532.89	762	385.26

Source: Background notes and agenda notes of 155th SLBC meeting, Maharashtra

In all over the India, the Madhya Pradesh state stood first in highest amount Sanctioned and disbursed of under AIF Scheme till 11th May, 2022 i.e., Rs. 2115.32 crores and Rs. 1750.61. While Maharashtra state has ranked fourth after Andhra Pradesh and Rajasthan in amount sanctioned. The State government has to take initiative to demand and get sanctioned more fund for development of rural infrastructure. Table no.2 depicts the figures of Account opened and amount disbursed by various institution under AIF Scheme in Maharashtra State.

The institution like DCCBS with PACS affiliation in Maharashtra has disbursed amount to only 25 Accounts against 125 Accounts i.e., only 20% and only 4 crores are amount disbursed against 21 crores till 11th May, 2022. While NBFCS, Regional Rural Banks, Scheduled Coop Banks, Small Finance Bank has achieved target 100%. Scheduled Commercial Bank need special efforts to achieve targets.

Issues in Loan Disbursal under Agriculture Infrastructure Fund (AIF) Scheme-

1. Disbursal is slow, under the ₹1-lakh crore **Agriculture Infrastructure Fund (AIF)** as **primary agri co-operative societies (PACS)** have been laggards in setting up the much-required infrastructure.
2. Conditions stipulated by the PACS to disburse credit based on the physical progress of the projects is the reason for the poor progress with only 4 percent of the sanctioned amount disbursed.

Way Forward

- The Indian agriculture supply chain is on the verge of a great transformation — from one characterized by high wastage, low processing and low global contribution to one that is more streamlined, more integrated and more significant in the global trade.
- Continuous financial and regulatory support from government, increasing participation of private and public corporations, and increasing exposure of foreign players is likely to diversify investments in developing the infrastructure across the value chain right from farm inputs to the consumers.
- According to one report, Indian agriculture post harvest value addition industries requires about 5.3 lakh persons in the unorganized sector and about 1 lakh in the organized sector, for this, AIF funds can diversify its portfolio for post harvest human resource development which has suggested by many Agriculture experts.
- The infrastructure development that is targeted for this fund scheme involves -Supply chain services including e-marketing platforms, Warehouses, Silos, Pack houses, Assaying units, Sorting & grading units, Cold chains, Logistics facilities, Primary centers, and Ripening Chambers. It also includes viable projects for building community farming assets like organic input production, bio stimulant production units and Infrastructure for smart and precision agriculture.

The above-mentioned Agri-infrastructure units build a strong foundation for quality post-harvest management and that's why it is crucial to focus on their development. A portal has been created so that the eligible applicants can directly register for the scheme and can get the financial facility as soon as possible. So far, the portal has received more than 22689 applications seeking subsidized loans worth INR 15340 crore under the Agriculture Infrastructure Fund (AIF) scheme. And a total of 10394 projects have been sanctioned under the scheme worth a loan of INR 7677 crore which includes in principle sanction by NABARD.

CONCLUSION

The government of India has introduced multiple reforms to render the best outcomes for the Agriculture infrastructure. The introduction of AIF has not only contributed to the financial growth but the production growth and technological growth of the Agriculture sector. AIF is creating an impact with all these initiatives and is making the Agriculture ecosystem stronger by bringing all the stakeholders together. Farmers, entrepreneurs, and businesses are collaborating for better results and better learning opportunities. The agriculture infrastructure fund scheme has the potential to build a world-class agriculture infrastructure in India and we are moving towards it slowly and steadily. The Indian Government's Atmanirbhar Bharat call is a timely intervention, which will help reduce the country's dependence on the overseas market and embrace technology advancements to enhance value addition and drive exports. The deepening trade wars in the world position India favourably to attract investors that are looking to de-risk their operations. China's 'dual circulation' policy is closer to the Atmanirbhar Bharat policy.

Along with agriculture, allied sectors will also need to be developed as secondary agriculture is of primary importance for the transformation of the rural economy. Changing the mindset of the community with proper incentives and partnerships can link the farmers to markets and increase their profits through value addition. The use of new science tools including IT and wide coverage of mobiles in rural India can initiate the process of rural transformation. Infrastructure and connectivity will shorten the production-marketing cycle. And lastly, skill development and raising education levels will raise the quality of Indian products and ensure global competitiveness. soon.

REFERENCES

1. <https://www.manage.gov.in/aif/aifpdf.pdf>
2. <https://www.investindia.gov.in/team-india-blogs/agriculture-infrastructure-fund-fulfilling-investment-necessity-farm-gate>
3. <https://www.northernarc.com/assets/uploads/pdf/COVID-19-Atmanirbhar-Package-Impact-on-Microfinance-sector-1589720254.pdf>
4. https://www.researchgate.net/profile/SuhasWani/publication/356786575_Transformation_of_the_Rural_sector_for_Atmanirbhar_India/links/62d52009a6abd57c6aeeb0fa/Transformation-of-the-Rural-sector-for-Atmanirbhar-India.pdf
5. https://docs.google.com/document/d/17r4sc9f-mvgLwc-BzvOW48I-aaaw7jNGE0Uyr6XLU_g/edit
6. Udaykumar MS, Vazhacharickal J, Bellundagi V, Hamsa KR and Umesh KB. "AtmaNirbhar and other agricultural relief packages with a special focus on COVID-19 pandemic situation in India", The Pharma Innovation Journal 2022; 11(2). Retrieved from https://www.researchgate.net/profile/PremVazhacharickal/publication/358955227_Atma_Nirbhar_and_other_agricultural_relief_packages_with_a_special_focus_on_COVID-19_pandemic_situation_in_India/links/621f1d820cbbf132bef0341d/Atma-Nirbhar-and-other-
7. Background Notes And Agenda Notes Of 155thslbc Meeting, Maharashtra Retrieved From File:/// C:/Users/Hp/Desktop/Slbc.Pdf

AGRICULTURE MARKETING STRATEGY OF COTTON GROWING FARMERS IN BEED DISTRICT

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ABSTRACT

The aim of present paper to examine the cotton production & marketing strategy of farmers in the Maharashtra. Cotton is a leading and traditional agricultural product in India. On the other hand, in India, the middlemen enjoy the cream at the cost of disability, illiteracy etc., of the poor Indian farmers. A small part of the price paid by buyers reaches the farmers while the middlemen suck the big part. Farmers are handicapped mainly in securing a fair and reasonable price for their produce. The reasons are many-low productivity due to improper implementation of all government agriculture-related programme lack of regulated markets, ungraded produce, no Agmark, inadequate storage and warehousing facility, etc. At present, the conditions have been greatly improved. Today, agriculture being modernized, leads to manifold productions. The role of marketing is fast changing. The research design employed in the study is descriptive type. The required data has been procured through different primary and secondary data observation methods. Researcher has selected 40 farmers from Beed district as sample using purposive sampling method.

Keywords: Agriculture marketing, APMC, Cotton growing farmers,

INTRODUCTION

Maharashtra State is having the largest cotton growing area in the country accounting for nearly one-third of the national cotton area (39.87 lakh hectares). Since there are vast tract of shallow soils with poor fertility and also the precarious and uneven distribution of rainfall over a larger area, the cotton production is only around 6-10 q/ha, though certain econiches are having higher productivity (20-30 q/ha) throughout the State. The recurrent droughts and early termination of monsoon rains during September in the Maharashtra region call for strong water harvest programmes and farm ponds. It is observed that there is a vast potential for water harvest in the undulating terrain of Maharashtra. The total rainfall in cotton-growing districts of Maharashtra is from 700 to 1000 mm and it should not be difficult to augment rain water through Farm ponds and Mini reservoirs. The irrigated cotton in Maharashtra is having high yield potential (30-40 q/ha). But as compare to another state like Panjab the productivity of Maharashtra state is very low and the area under cultivation is very large. Area and productivity-wise data are given below. The textile industry is one of the largest and most important sectors in the Indian economy in terms of output, foreign exchange earnings and employment.

Cotton is the backbone of the textile industry, which consumes 70% of the country's total fiber production. This industry provides one of the most basic needs of people and holds importance, maintaining sustained growth for improving quality of life. Today the world uses more cotton than any other fiber and cotton is a leading cash crop. Being a major contributor to the GDP, employment to rural areas and the less privileged, and as a major contributor to industrial production and export, the cotton textile industry has a bigger say in the future growth of the Indian economy. Several challenges stand in the way of Indian firms before they can own a larger share of the global market. Managing such a complex supply chain requires economies of scale and economies of scope with proper coordination through excellent managerial practices, technology, long term planning and facilitating policies.

The Current status of Cotton in Maharashtra

Within India, this report focuses on cotton farmers in Maharashtra, as they face several challenges:

1. Cotton Farming is Liable for Risks: Some of the major risks facing cotton farmers are droughts, Pests(inparticularthepinkbollworm,whichhasledto severecroplossesinrecentyears)andprice volatility. Crop insurance is used by only 54% offarmers.

2. Cotton Revenue is Low: As discussed above, Maharashtra has the lowest cotton yields among India's core cotton-growing states.This is pushed by the fact that most of Maharashtra's cotton farmers are predominantly rain fedputting them at more risk of crop losses due to droughts. Furthermore, landholdings in Maharashtra are small and fragmented at an average size of 1.44 hectares. Cotton farmers are also unorganized, making them price takers in their valuechain.

3. Cotton Cultivation is Expensive: Farmers are overly reliant on expensive hybrid seeds, chemical fertilizers and chemical pesticides. At the same time, the cost of agricultural labour is increasing due to labour migration tocities withinMaharashtra;cottonismainlygrownin15districtsintheCentralandEasternregions. Strong intra-state

differences between farmer situations exist; with yields varying from 1.6 quintals of lint per hectare in Beed to 4.7 in Amravati (data referenced is an average of the cotton seasons from 2012 to 2016). The average yield in Maharashtra lay at 3.5 quintals of lint per hectare.

Reforms in Agriculture Marketing

Based on a Model Act circulated by the central government, almost all major states enacted APMC legislation. The regulation was introduced to overcome the problems faced in traditional marketing system by ensuring mechanism for proper sale of produce, weighing, grading and standardization, market information, market charges in proportion to the services provided, prompt payment without any un-authorized deduction etc. The market regulation brought its impact in terms of providing higher prices and better returns to farmers, reduction of market charges and providing amenities at the time of sale of the product to the farmer in the vicinity.

The 2014 budget recognized the need for setting up a National Agricultural Market (NAM). Conceptually NAM would interlink various markets within the state and the country by creating a unified market through online trading platform, both, at State and National level and promotes uniformity, streamlining of procedures across the integrated markets, removes information asymmetry between buyers and sellers and promotes real time price discovery based on actual demand and supply, promotes transparency in auction process, and access to a nationwide market for the farmer, with prices commensurate with quality of his produce and online payment and availability of better quality produce and at more reasonable prices to the consumer. National Agricultural Market (eNAM) is a single pan India electronic platform for (i) Efficient and transparent price discovery; (ii) Gateway for all licensing; (iii) Facilitating intra state and interstate movement of commodities; (iv) Payment gateway and (v) All market operations. As on 31 July 2017, around 455 APMCs in 13 States are connected through eNAM.

REVIEW OF LITERATURE

Mariga (2004) noted that the development of marketing services, extension and training, seed production and access to inputs was fundamental in improving cotton production especially in the smallholder sector of Zimbabwe. Jayne et al (1994) used a profit function to econometrically estimate determinants of agricultural production in the country. The study indicated the importance of state marketing infrastructure and increased credit availability in stimulating crop production. Tokarick (2003) found out that multilateral trade liberalization in all agricultural markets (including cotton) is expected to induce a 2.8 per cent increase in the world prices of cotton, with 0.8 per cent from the removal of market price support and 2.00 per cent coming from the removal of production subsidies.

OBJECTIVE OF THE STUDY

The study is carried with the following specific objectives:-

1. To know the APMC reforms in agriculture marketing
2. To analyze farmers' preference to sale of cotton
3. To know satisfaction level of farmers from taking cotton crop production

RESEARCH METHODOLOGY

The present study has being descriptive types of research adopted by researcher. The following different aspects of methodology were adopted for the research study. The researcher has used the survey strategy for the thesis. The survey strategy is usually associated with the deductive approach. Researcher has selected 40 farmers from Beed district as sample using purposive sampling method.

RESULTS AND DISCUSSION

Table-1 Satisfaction level of Farmers by taking Cotton Crop Production

Are You Satisfied?	No. of Respondents	Percentage
Yes	26	65.00
No	14	35.00
Total	40	100.00

(Source: Field survey season 2022)

It was analyzed from table-1 that out of 40 respondents (26) 65.00 per cent of cotton growing farmers (respondents) were satisfied with taking cotton crop production and (14) 35.00 per cent of cotton growing farmers (respondents) were unsatisfied with taking cotton crop production. It was concluded that majority 2/3 of respondents were satisfied with taking cotton crop production.

Place of Sale Cotton Production

It was noted from table-2 that the cotton growing farmers sold their cotton production to the various marketing agencies; those are Wholesale private traders, Ginning and Pressing industries, Middleman or agents, Maharashtra state cooperative marketing federation and other.

Table-2 Place of Sale Cotton Production

Place of Sale	No.of Respondents	Total
Wholesale Private Traders	5	12.50
Ginning & Pressing Factories	10	25.00
Middleman or Agents (adat)	6	15.00
Maharashtra State Co-op Marketing Federation Ltd	17	42.50
Other Merchant	2	5.00
Total	40	100.00

(Source: Field survey season 2022)

It was observed that out 40 respondents (17) 95.00% of farmers sold their cotton production to Maharashtra state cooperative marketing federation Ltd; followed by (10).25.00% of farmers sold their cotton production to ginning and pressing factories; (6) 15.00% of farmers sold to middleman or agents; (5) 12.50% of farmers sold to wholesale private traders and (2) 5.00% of farmers sold to other merchant. It was found that the Most of cotton growing farmers of study area sold their cotton production to Maharashtra state cooperative marketing federation Ltd.

Prefers to Sale of Cotton Production

It was noticed table-3 that the respondents' opinions about prefers to sale of cotton production were collected on the basis of multiple preference to be noted and to give the ranks to the farmers prefer to sale of cotton production on the basis of parameters.

Table-3 Factors influenced to prefers sale of cotton

Prefers	No. of Respondents	Percentage	Rank
Offer Good Price	37	92.50	I
Easy to Transport	13	32.5	VII
By taking the right weight	31	77.5	II
Properly check the quality of grade cotton	22	55.00	IV
Immediate Payment	25	62.5	III
To No Cheating	21	52.5	V
The minimum cost of the sale process	15	37.5	VI

(Source: Field survey season 2022)

Note: multiple Responses were recorded size of sample 40

It was analysed from table-3 that the cotton growing farmers sold their cotton production to different marketing agencies depending on some specific reasons for choosing particular marketing agency. majority of respondents near about 92.50 per cent respondents opinion was that prefer to the buyer whose offer good price (I rank); Most of the 77.5 per cent respondents given their preference to proper weight taken by present marketing agency (II Rank); cotton growing farmers chose their marketing agency on the basis immediate payment for their cotton produce (Rank III); the buyer whose properly check the quality of grade cotton (Rank IV); cotton growing farmers chose marketing agency based on the relations due to the reason of no cheating in their transaction (V rank); the farmers chose marketing agency based on the minimum cost of the sale process it was gave (VI rank) and the respondents given seventh rank to that to the easy to transport (VII rank);

It was conclude that most of farmers chose their marketing agency for the reason of good prices offered for their cotton produce

CONCLUSION

From above discussion it was conclude that the cotton growing farmers sold their cotton production to different marketing agencies depending on some specific reasons for choosing particular marketing agency. Majority of farmers was that prefer to the buyer whose offer good price. Majority 2/3 of respondents were satisfied with taking cotton crop production and hypothesis tested result shown that there is no significance association between farmers annual income from cotton cultivation and satisfaction level by taking cotton crop production. It observed that the majority of cotton growing farmers sold their cotton production to the Maharashtra state cooperative marketing federation within available of other various marketing agencies in the market those are wholesale private traders, ginning and pressing industries, middleman or agents etc.

REFERENCES

1. Economic Survey of Maharashtra 2015-16, Directorate of Economics and Statistics, Planning Department, Government of Maharashtra, Mumbai
2. FICCIReport.2012. Cotton 2020- Roadmap for Sustainable Production. Federation of Indian Chambers of Commerce and Industry (FICCI). New Delhi. February 01, 2012
3. Jayne.T,Khatri.Y, Thirtle.C, Reardorn.T(1994) Determinants of Productivity Change Using a Profit Function: Smallholder Agriculture in Zimbabwe, AJAE,Vol 76.
4. Kothari C.R. (2012), Research Methodology; Methods and Techniques, New Age International, New Delhi.
5. Ramasundaram P., Vennila S., Phundan Singh, (2005)“Emerging Issues in Indian Cotton Cultivation”, Financing Agriculture, Vol. 37, No. 2, April-June 2005, P. 30
6. Singh, R. and Jaglan, R.S. (2005) Development and management of insecticide resistance in cotton whitefly and leafhopper- a review Agric. Rev., 26: 229-234
7. Current Cotton Scenario,<http://cotcorp.gov.in/current->

AN OVERVIEW OF AGRICULTURE IN INDIA

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ABSTRACT

The way farms and agricultural operations work now is very different from how they worked just a few decades ago. This is mostly due to advances in technology, such as sensors, devices, machines, and information technology. Robots, sensors for temperature and moisture, aerial images, GPS technology, and other high-tech tools are used all the time in agriculture today. Businesses can be more profitable, efficient, safe, and good for the environment with the help of these high-tech devices, precision farming, and robotic systems.

Keyword: Farming, Agriculture, Subsidy

INTRODUCTION

In recent decades, technology has altered farms and agricultural activities, including sensors, equipment, machinery, and information technology. Robotics, temperature and moisture sensors, aerial photography, and GPS technologies are all used in modern agriculture. Businesses become more profitable, productive, safe, and ecologically beneficial thanks to precision agriculture and robotic technologies.

Importance of Agricultural Technology

Farmers no longer routinely apply water, fertiliser, and insecticides to all fields. Instead, they can use little amounts to treat individual plants or focus on a particular location. Benefits:

- more plants
- Food costs are decreased by using less water, fertiliser, and pesticides.
- less environmental harm
- River and groundwater chemical levels are lower
- healthier workplaces
- Monitoring of the quality of the air and water is improved by robotic technology. More control over plant and animal production, processing, distribution, and storage is given to producers, which:
- Efficiencies and lower costs
- improved food and growth conditions
- lowered environmental effect

Features & Characteristics of Indian Agriculture

- Agriculture is a job. 61 percent of the population is employed there. It contributes 25% of the country's income.
- Monsoons are essential to Indian agriculture. Crops flourish when the monsoon is good; when it is bad, they fail. Crops can be hurt by floods. Due to inadequate irrigation, monsoons support crops.
- labor-intensive farming: Land pressure increased as the population grew. Land cannot be divided economically. Such farms are unable to use machinery.
- Farmers only work for a few months each year because of inadequate irrigation and erratic rains. Underutilization of work capacity. There is hidden and underemployment in agriculture.
- As a result of extensive subdivision and fragmentation, land holdings are small. Australia has 1993 hectares of land, the USA 158, and India 2.3.
- India employs conventional equipment and production techniques in its agriculture. It is caused by poverty and ignorance. Production is reduced by conventional technologies.
- Agriculture in India is poor. Per hectare, India produces 27 Qtls. of wheat. Compared to Britain, France produces 71.2 Qtls per hectare. The productivity of agricultural labourers in India, Norway, and the US is 162, 973, and 2408 dollars, respectively.
- Dominant food crops 75 percent of the area is used for growing wheat, rice, and bajra, with the remaining 25 percent used for commercial crops. Agriculture is delayed by this tendency.

Significance of Agriculture in Economy

- During the first two decades, agriculture generated 48–60% of GDP. In 2001–2002, it was 26%.
- Agriculture employs at least two-thirds of all employees in India. Other industries have been unable to absorb India's expanding labour force.

Farming provides food for the Expanding Population

- As a result of increased food demand, population-labor surplus countries like India experience fast increases in food output. These nations have low per capita food consumption, yet a little rise in wealth per person drastically increases food demand (in other words it can be stated that the income elasticity of demand for food is very high in developing countries).

Therefore, if agriculture cannot constantly increase its marketable excess of food grains, a disaster is probable. In many developing countries, agriculture has changed to keep up with growing food demands.

- It's crucial to create new capital. The largest sector in India, agriculture, can and ought to encourage capital formation. If not, the economy won't advance.
- Agriculture-related goods are used by the sugar, jute, cotton textile, and vanaspati industries. Food processing is supported by agriculture as well. So, these companies are driven by agriculture.

Industrial product market: • Due to the fact that two-thirds of Indians live in villages, rural purchasing power is essential for industrial expansion. During the green revolution, large farmers' income and tax burden grew, boosting their purchasing power.

- Both local and international trade rely heavily on Indian agriculture. Agriculture and the trade of food products drive service sector expansion.

Since the First Five Year Plan, agriculture has been the primary source of income for both the federal and state governments. Governments receive a large financial benefit from agriculture and allied industries like fishing and animal husbandry. The Indian railway and state transport networks get a considerable amount of freight revenue from both semi-finished and finished agricultural products.

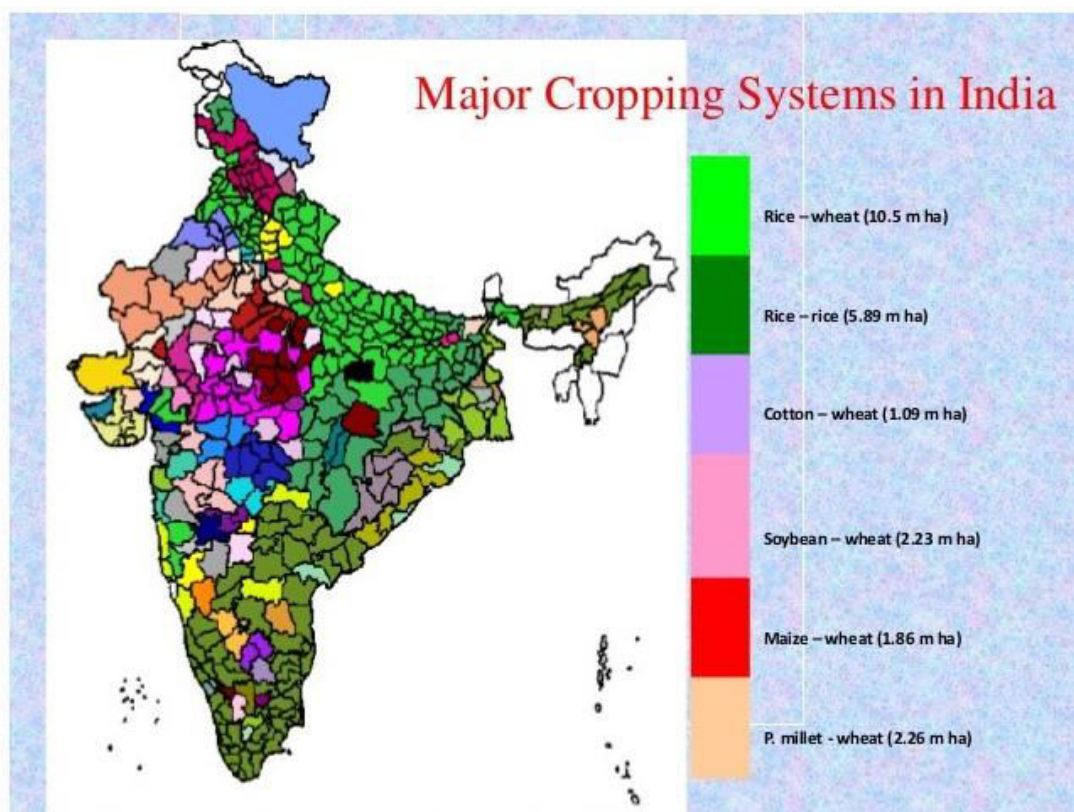
- Many skilled and unskilled labour are needed in the construction industry and other fields. Indian agriculture employs people.

Greater competitive advantages: • Self-sufficiency in raw materials and low labour costs provide Indian agriculture a cost advantage when exporting a variety of agricultural products.

India's Principal Crops

India's crop year is July–June. Monsoons divide the Indian planting season into Kharif and Rabi. During the southwest monsoon, the kharif cropping season is July–October, while the Rabi cropping season is October–March (winter). Summer crops are grown March–June.

- **Rabi Crops** are planted in the winter months (October to December) and harvested in the spring (April to June). Rabi staples include wheat, barley, peas, gramme, and mustard. While wheat and other rabi crops are grown throughout India, they are notably significant in Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir, Uttarakhand, and Uttar Pradesh. Winter precipitation from western temperate cyclones is advantageous for these crops. The aforementioned rabi crops have also benefited from the green revolution in Punjab, Haryana, western Uttar Pradesh, and some areas of Rajasthan.
- **Kharif Crops** are gathered in different regions of the country between September and October after the monsoon. Paddy, maize, jowar, bajra, tur (arhar), moong, urad, cotton, jute, peanut, and soyabean are also produced during this season. Major rice-growing regions include Assam, West Bengal, coastal Odisha, Andhra Pradesh, Telangana, Tamil Nadu, Kerala, Maharashtra (Konkan coast), Uttar Pradesh, and Bihar. Paddy is presently grown in Haryana and Punjab. Three paddy crops are grown each year in Assam, West Bengal, and Odisha. Boro, Aman, and Aus



TYPES OF SUBSIDIES

Food Subsidy

- The primary goal of the food subsidy is to supply food to a sizable portion of the Indian population that lives below the poverty line. In our nation, the PDS system is used to distribute the subsidised food items. The primary foodstuffs provided to BPL families vary by region, but the staples include: Wheat Rice Sugar Milk
- Including cooking oil

Export Subsidy

- The government offers export subsidies to encourage exports and support the businesses. The export subsidies provide new markets for domestic goods and help our products compete on the global market.

Fertilizer Subsidy

- Farmers are helped by the government by offering fertiliser at a reduced cost. The government pays the difference between the actual cost and the MRP; the fertiliser is offered at a fixed MRP that is less than the actual cost.

Irrigation Subsidy

- Compared to market prices, the Indian government offers irrigation infrastructure at a lesser cost. It is the discrepancy between irrigation charges paid by farmers and the state's maintenance and operation costs of irrigation infrastructure. This might be accomplished by providing farmers with access to public commodities like canals, tube wells, dams, etc. that are built by the government and used for free or at very cheap costs. It could also be done using inexpensive private irrigation equipment like pump sets.

Power Subsidy

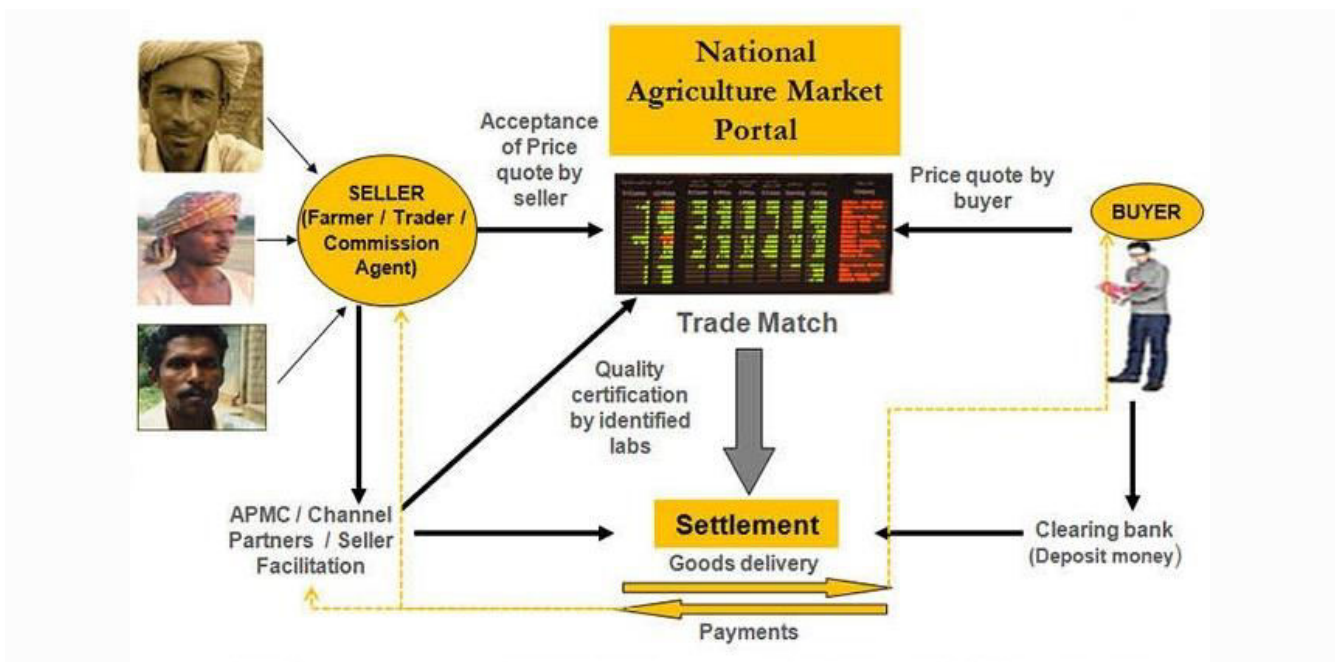
- The government must be charging farmers at a discount rate, according to the electricity subsidies. Farmers primarily use power for irrigation-related goals. It is the discrepancy between the price farmers paid and the cost of producing and distributing power to them. The power is either produced by the State Electricity Boards (SEBs) or purchased from other producers like NHPC and NTPC. Power subsidies "incentivize farmers to spend money on pumping stations, tube wells, borewells, etc.

Agriculture / Farm Infrastructure Subsidy

- Private initiatives in a number of sectors don't appear to be enough to increase agricultural output. For production and selling operations, it is essential to have access to good roads, power, storage facilities, market intelligence, port transit, etc. These facilities fall under the category of public goods, whose advantages are shared by all local farmers despite their astronomical costs. Due to their mass and associated issues with income collection, no single farmer will volunteer to supply these facilities.

E-NAM (National Agriculture Market)

- E-NAM (National Agriculture Market)** aims to assist farmers, traders, and buyers with internet trading and help them receive a better price through efficient marketing. It is an online trading platform for agricultural produce.
- Small Farmers Agribusiness Consortium (SFAC)** is the principal organisation responsible for eNAM's implementation under the direction of the Indian government's Ministry of Agriculture and Farmers' Welfare.

**Why do we need it?**

- State governments oversee the commercialization of agricultural products.
- Each state's APMC Act has a unique set of provisions.
- The agricultural markets are now fragmented, with each state acting as a distinct market due to a lack of compatibility and uniformity.
- Multiple market zones are further separated within each state. A separate Agricultural Produce Marketing Committee (APMC), which imposes its own marketing regulations, will manage these distinct territories that have been created.
- The free flow of agricultural commodities across markets is hampered by this market fragmentation, even on a state level.
- Multiple handlings of agricultural products and various mandi fees result in rising prices for consumers without corresponding advantages for producers.
- By establishing a single market via an online trading platform at the state and federal levels, e-NAM addresses these issues.
- Three modifications to each state's agricultural marketing legislation are required by e-NAM in order to ensure smooth operations.

Challenges and Issues Relating to Subsidies

- The failure of policymakers to address problems in the farm industry is made up for by subsidies.
- Subsidy: Successive administrations have used subsidies to secure domestic food security and rural livelihoods in place of comprehensive programmes.
- In the meantime, uncontrolled subsidy distribution has distorted production and resulted in excessive food storage.
- Survival kit: It may be vital to comprehend government handouts and evaluate them in comparison to those of other nations when subsidies have turned into Indian farmers' only means of subsistence.

CONCLUSION

Innovations in the agrifood and life sciences can make a significant contribution to both climate reduction (by lowering India's GHG emissions) and adaptation/resilience (by ensuring the viability of the country's farmers). Along with growing worries about animal welfare and environmental sustainability, we are also moving toward a future where protein consumption will be higher. To fulfil global demand, agrifood life sciences have the potential to turn India's abundant millets and pulses into cutting-edge plant proteins. While increasing crop yields is urgently needed to feed a growing population, doing so will also result in a decline in water tables and further deterioration of soil quality. A position that was previously difficult is getting far more difficult as a result of climate change. Farmers in India will begin to feel the full effects of climate change within the next ten years, and digital technology won't be enough to ensure a prosperous future for the country's rural areas.

REFERENCES

1. Johl, S. S. (1995). Agricultural Sector and New Economic Policy. *Indian Journal of Agricultural Economics*, 473-487.
2. Dogra, B. (2002). Land Reforms, Productivity and Farm Size. *Economic and Political Weekly*, pp. 532-533.
3. <http://www.yspuniversity.ac.in/>
4. <http://www.hillagric.ac.in>

DIRECTIONS FOR WOMEN EMPOWERMENT: OBJECTIVES AND TOOLS

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INTRODUCTION

*Indian women should be free from stereotypes. She should be able to live as a person, her emotions should be considered as a person. Mahatma Phule, Savitribai Phule, Agarkar, Maharshi Karve, Ranade, Dr. All these social reformers like Babasaheb Ambedkar acted against the people. So today's woman is carving her own name in all spheres of life across this threshold. She is carrying the burden of her children on her shoulders and taking care of the responsibilities of her parents, in-laws and all her relatives. Even today, as a woman, she is not treated equally in all societies. For example, in raising her, the difference in her work income, the existence of her in making any decision, in teaching, many such differences are observed with us from birth. So Simone de Beauvoir wrote a sentence on the opening page of *Cine The Second Sex*. That is, "a woman is not born, but she is created." That is to say, we see a huge difference between the dress of a boy and a girl, eating and playing. So what is the direction of women empowerment. It is not possible to give a definite opinion on how it should be.*

As Simone de Beauvoir puts it about a married woman, "It was in the best interests of society for a married woman not to be completely before her husband. So, despite the end of feudalism, the enslavement of women did not end. In order to run the cart of the society and the family properly, the woman bows down with full dedication. As a result, she has to endure much suffering. But rights are not given much. Therefore, it is important to think about the direction and pace of development of women."

Keywords: Women, Empowerment, Decision making, Dimension.

* What is Women Empowerment

Women empowerment means creating an egalitarian society by eliminating the heterogeneous social system based on gender. Efforts are being made at the international level to create this new system. Therefore, in order to ensure that women are not deprived of social, political, economic, educational and cultural benefits, the empowerment of women will be achieved by consciously awakening women and giving them their rights. In short, women empowerment is a process related to the development of women that upholds women's rights.

* Direction for Women Empowerment

Shashi Mishra, in her article on Women Empowerment Development and Entrepreneurship, said that women accounted for 10% of global income but women accounted for 1% of global wealth. Women face all kinds of discrimination. Birth rate, essential needs, opportunities are reflected in employment, education. Women's development is an indicator of socio-economic progress. "In other words, women's empowerment does not appear to have given women economic autonomy yet. Although the notion that a woman is only a child is misunderstood by women, the masculine mentality still does not seem to be ready to empower women. It is safe to say that this is the misfortune of the entire human race. In the case of Indian women, you can see that since India is an agricultural country, the entire focus of agriculture is on women. Women have to do all the work from planting to removal. Women are working shoulder to shoulder with men in the fields of industry, service, business, job politics, sports, literature, administration, education, private etc. Yet the secondary position given to them by the pre-trade tradition has not diminished. Therefore, at present, the pace of women empowerment does not seem to have increased as fast as it should have. As a result, empowerment still needs to be directed.

* Purpose of Women Empowerment

1) Giving justice to Women: - The first important objective is to develop women by giving them economic, social and rights.

2) Creating an Egalitarian System: - In a gender based society, women are exploited due to male dominance. The main objective is to eradicate this process of exploitation and create a system based on gender equality that gives equal opportunity, prestige, status and power.

3) Elimination of Injustice and Oppression against Women: - Women are subjected to various kinds of injustice and oppression. She has to deal with many physical and mental atrocities like dowry, domestic violence, prostitution, shopping, kidnapping, murder of a girl. The main objective of women empowerment is to eradicate these atrocities.

4) Increasing Employment Orientation: - Economic weakness is the root of true exploitation. Due to financial

difficulties, women fall prey to various temptations. If we want to save women from injustice and oppression, then the important objective is to make them self-reliant and employment oriented by removing their financial strength.

5) To stop the Ejaculation of Women: -Women are weak, weak, tender-hearted or they have tolerance when talking about them. They are not philanthropists, they are selfish, husbands should be considered as lords, they should be served, children and children are their duty. She should live her life with these thoughts in mind. This rusty mentality is the reason for the ejaculation of women. The aim of empowerment is to change the masculine mentality of men and stop the ejaculation of women.

6) Increase Participation in Decision Making Process: -Women should be given equal rights with men in political, economic and social decision-making process.

7) Achieving Mental and Intellectual Development of Women:- Although education has reached the doorstep, women are discriminated against in teaching. Education is the first step in life development. Recognizing this, Mahatma Phule started the first school for girls. The Phule couple knew the importance of education for women. Without education, ignorance remains. Ignorance is the root cause of exploitation. If this foundation is to be destroyed, it is very important that the light of knowledge enters the lives of women. Because education makes man human. Increases thinking ability. Education is the basic source of all-round human development. If women get this education, they will be able to develop their mental and intellectual development and live a better life. The mother is the foundation of the family. If it is educated and trained then the house will not survive without prosperity. Therefore, the objective of women empowerment is to develop the mental and intellectual development of women.

8) National Development Tools from Women Empowerment: - The responsibility of women who constitute 50% of the society is also important in national development. It's not just male monopoly. Women can also play an important role in this. Despite the developmental vision, they are shirked from national responsibility. Because of that we keep women who are highly skilled in planning away from the national process and as a result the nation suffers. To prevent this from happening, national development goals can be achieved through women empowerment. This is the goal of women empowerment.

*** Tools for Women Empowerment**

Many tools can be used effectively in women empowerment. These tools are as follows.

1) Today we see that 21st century women are doing remarkable work shoulder to shoulder with men in every field. It is making its mark in various fields. Even today, our society seems to be very indifferent in educating women. In the life of Dr. Babasaheb Ambedkar, the advancement and development of women has a very important place. At the conference held on 20 July 1942 in Nagpur, Dr. Babasaheb Ambedkar, while communicating, says, "Teach them without discriminating between boys and girls, make them ambitious, remove their inferiority complex, and do not marry until you have the strength to learn and take responsibility." If we look at the situation in rural India in rural India today, if we think about the treatment and education of women there, it is clear that even today, a lot of atrocities are being committed against women. Nearly 50 per cent of the population in India is female and if its illiteracy rate is high then how can its mental and intellectual development be achieved. Education is also an important tool for developing their latent qualities. They need to be made literate and empowered through education.

2) Financial Self-Reliance:- "If we want to measure the progress of a society, I consider the progress of women in that society - Dr. Babasaheb Ambedkar. An important tool to empower women is to make them financially self-sufficient. It is necessary to take education and stand on one's own feet financially as well as provide employment opportunities. At the same time, by empowering them to make decisions, to include them in the decision making process, to give them financial rights. Because the social, political and economic progress of the nation cannot happen without them. If women are included in the economic development of the country as partners, then the development of the country is possible with the development of women. Therefore, economic self-reliance is considered as an important tool for women's empowerment.

3) Participation in the Decision Making Process: -From ancient times the status of women in society has seen many ups and downs. From time immemorial, the place of women has been a factor in the rise and fall of society. Today we see in the 21st century that there is no area where women are not involved. But not necessarily in the amount he wants. Therefore, women empowerment in India today is the most effective tool for development. She was able to automatically join the mainstream of balanced development of the society. At the same time, there is a need to empower women by involving them in planning, building their confidence in their abilities, building a positive image of themselves, enabling them to make decisions, and empowering them to

make collective decisions. Therefore, women empowerment is an important tool to involve women in the decision making process.

4) Pressure: - Today we see that feminist organizations are actively working at national and international level. These organizations are constantly putting pressure on the government to take immediate action against the injustice, oppression, violence and mistreatment of women and to implement various laws and schemes for the welfare of women. Pressure is considered to be the main tool to break the deadlock on many issues and seek justice.

5) Public Awareness: - It is necessary to improve the role, status and prestige of women in women empowerment. So it takes time to create awareness. Awareness is a tool that plays its role in two ways. One is to make women aware of their rights and the other is to change the mindset of the patriarchal culture that treats women as such. Even today we see that there is a need to create awareness among the people through various schemes at different levels of society to eradicate the stereotypes, traditions, superstitions, patriarchal culture, misconceptions and mentality about women among the people and give them the right to live as human beings. Without that, there is no real empowerment of women.

6) Laws for Women: - After the Second World War, many nations tried to empower women through laws. Social, political and economic rights were granted to women through various laws. This accelerated the process of empowerment. For this, the pressure system, feminist organizations, political parties kept trying. At the same time, all the provisions such as the Women's Policy, as well as the reservation of women, the Prevention of Sexual Harassment of Women in the Workplace, which have been amended from time to time, have contributed to the protection and empowerment of women. So laws appear to be an important tool for women's empowerment.

7) Media: - The growing network of media has a growing positive and negative impact on people and society. In the process of women empowerment, its use is proving to be effective. As a result, crime seems to be on the rise. At the same time, the role of the media is becoming important in spreading awareness among the people about the government's plans and policies for women's health, education, family welfare, government schemes for employment, and women's empowerment. Therefore, the media is becoming an important tool for women's empowerment.

SUMMARY

Although the process of women empowerment has gained momentum in the twentieth century, the seeds of this process have been around for a long time. It is a process that promotes women's rights, provides opportunities for development on an equal footing with men, and creates a new system based on gender equality.

REFERENCES

- 1) Simone de Beauvoir, 'The Second Sex', translated by KarunaGokhale, PadmagandhaPrakashan, First Edition 2010.
- 2) Above, as it is.
- 3) 'Yojana', September 2016, p.35
- 4) Rajput, Dhondiram Singh: 'SakshamMahila', ShubhPrakashan, First Edition, December 2012.
- 5) Pargaonkar, Arun and Bhagwat, Vidyut: 'The Way of Women's Question: Towards Transformation', PratimaPrakashan, 2nd Edition 2001.
- 6) Dr. Cheema, H. S.: 'Women Empowerment in the 21st Century', Himalaya Publishing House.
- 7) Patil, Naresh and MeshramMedhavi: 'Women Empowerment: 21st Century Questions and Challenges', Euro World Publications.

ATMANIRBHAR BHARAT ABHIYAN WITH SPECIAL REFERENCE TO AGRICULTURE

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INTRODUCTION

COVID-19 has spread across the globe, exposing limitations of healthcare, inefficiency of social protection frameworks and lack of economic flexibility. Indian Governments has also taken drastic measures like imposing country-wide lockdowns and closing borders due to spread of the pandemic. These strategies have caused slowdown in economic activity and trade, disrupting global supply chains. All the contact dependent services which include hospitality, tourism, amusement activities, and related businesses are facing hard times. The crisis has disturbed the cyclic flow of funds in various economies in India. The government has stressed on people centric, people driven and planet friendly development governance structure. India has not fought only with COIVD, but also fighting carious other natural challenges. We have always tried to convert the crisis into the opportunities.

India has the largest agriculture sector which is spread all over the rural area of the country. The agriculture sector plays a very important role in the Indian economy for a long time. The agriculture sector has passed through several phases of growth since Independence. Agriculture is the primary source of livelihood for around 58 per cent of India's population. As far as agriculture is concern, self-sufficiency has been an objective from the first five-year plan, which allocated about one third of plan funds to agriculture. Given the importance of the agriculture sector, the Government took several steps for its sustainable development. The Government is continuously working to enhance agricultural productivity, farmers' income and their welfare in a sustainable manner. The agricultural reforms measures under Atmanirbhar Bharat is indeed extremely timely and effective implementation would make the sector a reliable growth engine for the nation's economy.

Prime Minister Narendra Modi has stressed on the need for the country to be self-reliant in agriculture. He added that the goal of self-sufficiency in agriculture is to make a farmer productive as well as an entrepreneur. The 'Atmanirbhar Bharat Abhiyan' is a mission toward strengthening the weaker sections of the society with the various Government Reforms and Relief Measures. Besides combating the scarcity of food and medical facilities during the pandemic, this mission by PM Modi is an initiative to make the Indian economy self-sufficient in every possible aspect.

Agriculture continues to be the source of livelihood for majority of the population. Agriculture plays a very crucial role in Aatmanirbhar Bharat. Atmanirbharta for agriculture is a splendid vision which can provide much needed food security to the nation in an uncertain world order. The Mission has been extremely successful as evidenced by increase in production and productivity of wheat, rice and pulses. Aatmanirbhar Bharat campaign does not mean only making reductions in imports, but to develop capacity of India and its creativity using the skills at optimum level. It has lots of opportunities for various Indian communities but many times questions are raised on the challenges ahead, but there are millions of measures are available for such challenges.

REVIEW OF LITERATURE

- **Gajjar (2020)** -The real India lives in its villages and smaller towns and therein lies the future of India. Rural India has been ignored for more than 67 years and the Atmanirbhar Bharat Abhiyan will bring the change that is required to bridge the divide rural India and Urban India, and will improve the Indian rural economy. The principal source of income of India is agriculture. So the Atmanirbhar Bharat Package basically focused on the Indian agriculture sector. Latest technological development has through a dramatic change in every field and agriculture is no exception on it. A Self-reliant India Movement impacted positively on agriculture field and related services they provide for users.
- **Modi (2020)** - While the entire world is fighting with the COVID-19 Pandemic, India too fighting with the same, however with the objective of converting this pandemic in an Opportunity too. The present scenario is of such nature that we do more imports compare to exports, and hence a lot of amount of our foreign reserve goes out. India has chosen the way of making itself dependent on its own capabilities. This all is a step ahead towards making India 'Aatmanirbhar'. Since India is not only a developing economy, rather it is the largest growing developing economy throughout the world and hence the step becomes more important for in this road. However with a new light, many of industries are growing and ready to take risk to become independent to all kinds of challenges to face in the light of the new hope of the India which is 'Aatmanirbhar Bharat'.

- **Nidhi & Sunil Kumar (2021)** - In this paper the researcher has conceptualized the 'Atam Nirbhar Bharat Abhiyan' accompanying with features, pillars, objectives, opportunities accessible and the challenges that can stand up in modelling India as 'Atam Nirbhar Bharat'. In this study researcher has explained the abhiyan that government has launched in 2020 to achieve the mission of making India.
- **Shete & Siddhi Dave (2021)** - The paper delivers the extended arm towards the five significant pillars of the AtmaNirbhar Bharat mission named Economy, Infrastructure, System, Demography, and Demand. It also highlights the four prime sectors like Rural Tourism, Electronic, Information Technology, and Modern Agriculture which are competent to give a quantum scale growth in this initiative. The paper covers the differential building blocks of the AtmaNirbhar Bharat mission.
- **Khatri (2022)** - With the unpredicted times of COVID, the Indian economy faces challenges from different sources. India has been facing problems due to shut down in the economic activities for more than a year. Prime Minister Shri Narendra Modi announced an economic stimulus package for Rs 20-lakh-crore, towards building a 'Atmanirbhar Bharat' with the aim of making the country independent against the tough competition in the global supply chain and to help in empowering the poor, labourers, migrants who have been adversely affected by COVID. This study interprets Atmanirbhar Bharat Abhiyan and discusses it in terms of opportunities and challenges and also discusses measures to be adopted in terms to overcome the challenges.
- **Vishandass & Thakwani (2022)** - India is net food exporting country after feeding 1.35 billion people, yet farmers' income levels have not increased as expected. On one hand, granaries of public procurement agencies such as FCI are overflowing with rice and wheat, and on the other, more than half of the domestic consumption demand of edible oils is met by imports. Clearly, the production of agriculture commodities is not calibrated with emerging demand and this is one of the reasons for a low level of farmers' income. Increasing production of palm oil in the country offers an opportunity not just to move towards 'Atamirbhar in Agriculture' but also has credible potential to augment farmers' income levels.

Objectives: The specific objectives of the paper are:

1. The paper aims to analyse the concept of Atmanirbhar Bharat and
2. It also studies Atmanirbhar in Agricultural sector.

RESEARCH METHODOLOGY

The secondary sources are used for the present research paper.

Atmanirbhar Bharat Abhiyan

Hon'ble Prime Minister Shri Narendra Modi has announced the 'Atmanirbhar Bharat Abhiyan' on May 12, 2020 with a special economic and comprehensive package of Rs 20 lakh crores which was aimed towards achieving the mission. The Mission focuses on the importance of promoting local products. The mission is also expected to complement 'Make in India' initiative which intends to encourage manufacturing and agriculture sector which have a great potential. Vocal for Local, Re-Skill and Up-Skill campaigns will raise the quality of living of individuals.

Atmanirbhar Bharat has been called by some as a re-packaged version of the Make in India movement using new taglines like 'Vocal for Local'. The program highly emphasis domestic manufacturing and productions of goods to meet the domestic demand thereby lowering the import burden. The state of the world today teaches us that (AtmaNirbhar Bharat) Self-reliant India is the only path. The AtmaNirbhar Bharat initiative is not only the sole responsibility of the government, but also of every citizen.

Atmanirbhar Bharat Abhiyan will act as an umbrella for building India a bigger and more important part of global economy by pursuing policies that are more streamlined, productive, driving, resilient and being self-sustaining and the self-generating. Under this scheme, Indian government has laid the provision of Rs. 20 lakh crore as a stimulus package for different sectors to revive the economy from the adversity of the pandemic. So, it is proved to be blessing in disguise for our domestic sectors. The 2nd and 3rd phase of the abhiyan adding on more benefits for our locals. This Abhiyan directed towards fostering the local products and urge everyone ameliorates the quality, rejuvenate supply chain, provide the finest products. It intensified more on inner strength and self-belief for modelling 'Atam Nirbhar Bharat Abhiyan' a successful mission. The Five pillars of Atmanirbhar Bharat focus on:

1. **Economy:** An economy that brings Quantum Jump rather than incremental change.
2. **Infrastructure:** Represents the modern India.

3. **System:** Technology-driven systems fulfil the needs of the 21st century.
4. **Demography:** Vibrant Demography of the largest democracy.
5. **Demand:** Full utilisation of the power of demand & supply

Atma-Nirbhar in Agriculture

Everyone knows that India is an agricultural country. But the development is not much in the agriculture of our country. If we want to become Atma-Nirbhar in the area of agriculture, then we have to bring more development. We have to educate our farmers about the technical agricultural facilities. The agriculture sector is the building block for India's Atma-Nirbhar Bharat mission. Lack of advanced instruments, poor technological application, uniform maximum selling price, etc. is some of the issues that need to figure out. More powers and financial aids should be given to farmers so that maximum yield can be produced. Whatever the production is, sometimes due to poor crop or due to short sale, all the farmers throw away that produce. For this, the government provide cold storage and a large storage area, so the crops will not get spoiled. It is important to strengthen our agriculture to create an Atma-Nirbhar Bharat.

CONCLUSION

Agriculture is the soul of Indian economy. Over the past decades the government has accordingly focused on the agriculture sector for the farmer empowerment and economic development. The agricultural sectors are the pillars of Atmanirbhar Bharat. Aatmanirbhar Bharat will make the farmers and the farming sector self-reliant. We are committed to the larger purpose of nation building and achieving our country's vision of 'Atmanirbhar Bharat' with innovative agribusiness solutions. The agricultural reforms measures under Atmanirbhar Bharat is indeed extremely timely and effective implementation would make the sector a reliable growth engine for the nation's economy.

REFERENCES

1. Ashok Vishandass & Nitisha Thakwani (2022) - Atmanirbhar in Agriculture-Doubling farmers' income - <https://www.iipa.org.in/>
2. Brahmdeo Modi (2020) - Aatmanirbhar Bharat: Opportunities and Challenges - International Journal of Advanced Research in Commerce, Management & Social Science, Vol. 03, No. 03, pp 18-21.
3. Dharti Gajjar (2020) -A Review on: Atmanirbhar Bharat Package (A Self - Reliant India Movement) in Agricultural Development of Rural India - International Research Journal - Shodh Samiksha Aur Mulyankan.
4. <https://blog.mygov.in/atmanirbhar-krishi-aatmanirbhar-bharat/>
5. <https://thewire.in/agriculture/agriculture-atmanirbharta-decision-politics>
6. <https://unacademy.com/content/ssc/study-material/general-awareness/atmanirbhar-bharat-abhiyaan/>
7. Nidhi Madan & Sunil Kumar (2021) - Atam Nirbhar Bharat: Opportunities and Challenges - International Journal for Innovative Research in Multidisciplinary Field, Vol. 7, Issue 11.
8. Shritish Shete & Siddhi Dave (2021) - Review paper on scope of Atmanirbhar Bharat - International Journal of Advance Research, Ideas and Innovations in Technology.
9. Varada Khati (2022) - Atma Nirbhar Bharat-Opportunities and Challenges - International Journal of Innovative Research in Technology, Vol. 9, Issue 2.

AUTOMATION AND FARMING INDUSTRY

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ABSTRACT

Agriculture's advent marked a turning point in human history. The first significant alteration in the connection between completely modern humans and the environment was the ability of humans to engineer the environment to provide enough food to sustain tremendous population expansion. A wider variety of developments, including the use of fire and prepared food as well as self-driving machines, were spurred on by the development of agriculture. In 12,000 years, agriculture has brought us so far, yet we are now at a crossroads. And with an estimated 9.7 billion people on the planet by 2050, agricultural production will need to rise by at least 70% from current levels in order to keep up with nutritional trends. More than ever, farmers are under pressure to produce wholesome goods, which is further endangering the health of our world. Modern agriculture has undergone a dramatic transformation thanks to new technological developments in fields like robots, drones, and computer vision software. Today's farmers have access to instruments that will enable them to fulfil the demands of the expanding global population.

Keywords: Automation, Agriculture, Transformed, Advancements.

INTRODUCTION

A pivotal turning point in human history was the beginning of the agricultural revolution. The first significant shift in humans' interaction with the environment occurred when they figured out how to manipulate nature in order to produce enough food to support rapid population increase. This was the beginning of fully modern humans' relationship with the environment. Agriculture was the catalyst for a wide range of other technological advances, including the use of fire, the preparation of food, and the development of machinery that drives itself. In the past 12,000 years, agriculture has brought us a great deal of progress; yet, we have now reached a crossroads. In addition, because the world's population is expected to reach 9.7 billion people by the year 2050, agricultural production would have to rise by at least 70 percent beyond its present level in order to meet the demands of changing dietary patterns. The strain that is being put on the health of our planet as a result of the increased competition among farmers to produce foods rich in nutrients is at an all-time high. The use of newly developed technology in modern agriculture, such as robotics, drones, and software for computer vision, have brought about a fundamental shift in the industry. In order to satisfy the demands of the world's expanding population, farmers now have access to tools that will help them.

What is Farm Automation?

Automation of the crop or livestock production cycle on farms increases efficiency and is frequently referred to as "smart farming." A growing number of businesses are focusing on robotics innovation to create robots that can automatically water plants, sow seeds, and operate tractors and harvesters. Despite the fact that these technologies are still relatively new, more traditional agriculture businesses are incorporating farm automation into their operations.

Technologies Automation and Automation

The main objective of agricultural automation technology is to take care of simple, routine operations.

The following prominent technologies are those that farmers use the most frequently.

✦ Harvest Automation

Automating the process of picking fruits and vegetables has always been challenging. Robots used for harvesting must handle produce carefully to prevent bruises and damage. No matter where or how they are cultivated, Agrobot has successfully created the first robot for delicately collecting strawberries. Up to 24 robotic manipulators collaborate from a flexible movable platform to choose the fruit that fulfils the farmer's quality standards. The first commercial robotic apple harvesting firm in the world is another business called Abundant Robotics. Their machines handle fragile fruits by pulling air into the machine, rather than using claw or handlike graspers to pluck apples from the branch.

✦ Autonomous Tractors

Autonomous tractors can be operated remotely or even pre-programmed to grant a producer total autonomy. The autonomous tractor from Rabbit Tractor benefits row crop producers not just by cutting labour expenses but also by improving operational efficiency and yield. Bear Flag Robotics is even creating tractor automation kits that easily retrofit current tractors with cutting edge autonomous technology and implement control, making automation more affordable for farmers.

✦ Seeding and Weeding

Robotic weeding and sowing systems can target particular crop patches. This can easily cut down on labour and tedious farm duties when sowing. With computer vision, weeding robots may be extremely precise and use 90 percent fewer pesticides. Blue River Technology uses robots and computer vision technologies to precisely spray herbicides only where and in exactly the amount that is required. Farmers now have a new method to get rid of and avoid weeds that are resistant to herbicides. Another firm that manufactures weeding robots is ecoRobotix. This is the first fully autonomous device for weeding intercropping cultures, meadows, and row crops that is also more economical and kind to the environment.

✦ Drones

Drones can be used to apply fertiliser, insecticides, and other treatments from above while remotely monitoring the environment. With the aid of imaging and infrared analysis, they can also rapidly and economically pinpoint problem regions to assist farmers in making early diagnoses. With an autonomous drone, base station, and analytics platform, American Robotics is creating a fully autonomous "Robot-as-a-service" that offers growers insights at resolutions, frequencies, and speeds never before imaginable.

Advantages of farm automation

Major concerns like a growing global population, a lack of farm labour, and shifting consumer demands are addressed through farm automation technologies. Automation of conventional farming procedures has enormous advantages.

Consumer Benefit

The preferences of consumers are moving to include more organic and sustainably produced goods. Produce is delivered to consumers faster, fresher, and more sustainably thanks to automated technology. Automation boosts productivity by boosting yield and manufacturing rate, which lowers costs for consumers.

Labor Efficiency

Over 50% of the cost of running a farm is labour, and 55% of farmers say labour shortages are a problem for them. 31 percent of farmers are switching to less labor-intensive crops as a result. However, harvest robots have a lot of potential. Robotics technology allows for the automation of routine operations, which lowers labour costs and the amount of work that is required in the agriculture sector due to a labour shortage. 30 farm labourers might be replaced with a single strawberry robot harvester, which could pick a 25-acre area in three days.

Reduced Environmental Footprint

Farm automation techniques can increase agriculture's profitability while simultaneously minimising its environmental impact. Software designed specifically for a given site can lower greenhouse gas emissions while also reducing the use of fertiliser and pesticides.

Challenges of farm Automation

Farm automation still presents several difficulties that must be overcome. Farmers face a significant barrier to entry due to high adoption costs of robotic technologies, particularly in developing nations. Robotic planters, for instance, must carry heavy loads of water or pesticides; hence, the gear must be made differently, which increases the cost to make it larger. High repair costs are also associated with such specialist equipment when it comes to technical problems and equipment failure. Farmers will need to combine their expertise and experience with these new technology in order to properly exploit farm automation.

CONCLUSION

Farm automation technology is still in its infancy, but it has the potential to revolutionise agriculture. By advancing technologies, production methods, and software, it provides a route towards sustainable and more effective agriculture. Automation technology advances yearly, and what was cutting-edge only a few years ago may soon be normal and affordable. Agricultural management will always involve a significant amount of human interaction, yet completely autonomous vehicles and farm machinery are on the horizon.

REFERENCE

1. Johl, S. S. (1995). Agricultural Sector and New Economic Policy. *Indian Journal of Agricultural Economics*, 473-487.
2. Ramesh, G.B., Loksha, H., Jagrati B Dshmanya, Vijaya, B., Wali, M.G. Patil and Prabhuling, T. 2017. Growth trends in Export and Import of Horticultural Crops from India and Karnataka: An Economic analysis. *Econ. Aff.*, 62(3): 367-371.

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3. Cuddy, J.D.A. and Vallè, P.A.D. 1978. Measuring the instability of time series data. Oxford B. Econ Stat., 40: 53-78.
 4. Paramasivan, C. and Pasupathi, R. 2017. A study on growth and performance of Indian agro-based exports, Int. J. Human. Soc. Sci. Res., 3(9): 01-05.

CHALLENGES AND FUTURE PROSPECTS OF ENTREPRENEURSHIP AGRIPRENEURSHIP IN INDIA

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ABSTRACT

This study covers the idea of agripreneurship, the obstacles these businesspeople must overcome in order to establish themselves properly, and the chances for these entrepreneurs' future success in overcoming all the issues that the agribusiness community is currently facing. It has the ability to solve issues including maximizing utility, new technologies, revenue diversification, growth, and increased employment. There is additional information on the potential financial benefits of agribusiness for the Indian agricultural sector.

Keywords: Agri-Business, Economic Development, Agripreneurship etc.

1. INTRODUCTION

Entrepreneurship transforms a nation's economy and introduces new technologies and breakthroughs. There are numerous examples of businesses that were founded with the idea of entrepreneurship for employment and innovation (Singh & Pravesh, 2017). Great economies have recently realised the need to encourage entrepreneurship since it can address societal issues (Uplaonkar & Biradar, 2015). Government programmes like Make in India and Start-up India support business development. Entrepreneurs can be found in a variety of industries, including tourism, automobiles, textiles, software, food manufacturing, and consultancy (Singh & Pravesh, 2017). Funding for their product presents these Entrepreneurs with their biggest challenge right away. They need to persuade financing organisations to approve the plan and begin providing funding. Despite the fact that there are numerous ways to market them, they are poorly carried out, which makes it difficult for them to get money (Verma, Sahoo, & Rakshit, 2019). When their company succeeds, it can grow and go global. They may now trade concepts, innovations, and technologies thanks to globalisation (Singh & Pravesh, 2017). The majority of people in India are farmers. 60 percent of the workforce works in this industry, which contributes 14 to 20 percent to the GDP (Chand, 2019). The world's agriculture is changing. Agriculture is expanding beyond crop farming and animal husbandry in this dynamic environment for rural livelihood (Verma et al., 2019). Although government initiatives have helped this industry grow significantly, the results are dismal. A significant portion of the population relies on agriculture, making it the foundation of the economy. In order to attain overall economic development, more expansion is required. This industry is also susceptible to cyclones, heavy rain, and late monsoons (Merriott, 2016). Other problems include farmer debt, a lack of funding for agriculture, inadequate storage and transportation infrastructure, ineffective marketing, and the advantages of intermediaries (Weekly & Weekly, 2019). Numerous solutions and suggestions are made, but their proper implementation is questionable since people lack the necessary knowledge and leadership for enhanced initiatives.

Agripreneures are now here. India's central and state governments have developed growth and development strategies to encourage self-employment and entrepreneurship following the reform (Verma et al., 2019). It's crucial to research how regional factors affect a person's decision to become self-employed in order to tighten these restrictions (In, For, & Development, 2016). Since the GDP stops growing after a certain point in industrialised economies, the transition from salaried to self-employed labour is essential. However, entrepreneurs can still boost the GDP by looking for untapped opportunities. Many people must work for themselves in order to truly impact the economy (Verma et al., 2019). India is still regarded as having an agrarian economy, thus we must safeguard it. Only the development of agriculture will allow for this. India's agricultural output is only half that of other nations' per acre (Rao et al., 2010).

1.1. KEYDEFINITIONS**1.1.1. Agripreneurship**

Agripreneurship is defined as "generally, sustainable, community oriented, directly marketed agriculture. Sustainable agriculture denotes a holistic, system oriented approach to farming that focuses on the interrelationships of social, economic & environmental process" (Uplaonkar & Biradar, 2015).

1.2. TYPES OF ENTERPRISES

1.2.1. Farmers and Ranchers

This entails treating each family as a business endeavor and providing them with the necessary funds and technology to maximize their output.

1.2.2. Producers of Services

Services of many kinds are required in rural areas. Input borrowing, renting of equipment of common services. Opportunities in cattle husbandry include breeding, immunising, diagnosing, and treating illnesses.

1.2.3. Input Suppliers

Producers of agricultural inputs are in high demand. Fruit and vegetable seeds, biofertilizers, vermicompost, manure, biopesticides, irrigation supplies, mineral mixtures, etc.

1.2.4. Farm produce processing and Marketing

The most productive cooperatives are those for fruit growers and sugar producers in many states. Only the leaders involved can determine whether such an endeavour is successful. For such an endeavour to compete with other market participants, particularly retail and intermediary dealers, it requires sufficient specialised support (Uplaonkar & Biradar, 2015). (Chand, 2019).

2. LITERATUREREVIEWS

- ❖ **Dash & Amardeep 2018):** "Review on organic farming as a prospective sector for agripreneurship development," focuses on the same tribal youth with agricultural potential. Ineffective agriculture and low sustainability caused underemployment and unemployment in Odisha, the subject of this study. The author exhorts tribal kids to start their own businesses and help others in their community with promising futures.
- ❖ **Meena, & Kumar, 2014:** Instead of concentrating on agriculture, this essay addresses the need to develop agribusinesses. Their plan is to create and support agribusinesses, which will in turn support the entire agricultural industry because these companies won't tolerate the loss of agriculture because it is where they source their raw materials. They will take the necessary steps to ensure the growth of the agricultural industry and the economy at large.
- ❖ **Lakshmi, 2018:** This review article covers the issues surrounding the promotion of agripreneurship in India's agricultural industry. Similar to Mr. Bairwa's earlier piece (Bairwa, 2014). Farmers' production choices are influenced by crop yield analysis based on market value and cost.

3. THE NEEDFOR THE STUDY

Entrepreneurs make the unimaginable a reality. In India's agri-sector, poor management and policy creation are resulting in significant losses. Few Indian farmers employ modern methods and technology. This study aims to comprehend how agripreneurs can assist these farmers by bringing in money, new technologies, and sustainable techniques for other tasks like warehousing, formal credit systems, marketing agricultural produce for a better price in the market, developing the farmers' economic status, assisting with transportation of the produce, and reducing waste. When the government is unable to complete a task, society can complete it on its own. The government can provide facilities and financial support, but if the end user doesn't make good use of them, it's a waste. Agribusiness owners look for possibilities everywhere, which improves their efficiency and has an effect on agriculture.

4. OBJECTIVESOF THE STUDY

1. To investigate and comprehend the idea of agripreneurship.
2. To identify the difficulties agricultural entrepreneurs confront.
3. The prospects for Indian agribusinesses in the future

5. RESEARCH METHODOLOGY

The study is entirely based on a survey of 15 papers that discuss the concept, the difficulties faced by these entrepreneurs, the many opportunities in this industry, and the demand for economic development in rural India.

6. CHALLENGES

Agripreneurs face a number of challenges as they work to develop allied or support businesses. Illiteracy among farmers and rural residents may be the issue. Most of the issues listed are brought on by this. Other sociocultural factors present challenges for these people as well.

6.1. Low productivity

Low agricultural productivity is frequently brought up in publications as a big worry because of an unpredictable monsoon, poor soil fertility, and subpar seeds and farming inputs (Verma et al., 2019). Agripreneurs can, in a way, increase production, but many people still believe that agriculture is unprofitable due to low productivity, therefore they choose to leave the industry rather than improve it. Only if farmers continue farming and produce enough high-quality crops can these enterprises be successful.

6.2. Inadequate Capacities for infrastructure

While poor and small-scale farmers cannot use new technologies for greater production and ease of work, only a few large farmers can afford them (Verma et al., 2019). Because farming technology is not generally accessible, agribusiness owners must make significant financial investments in it. Technology development is still lagging behind the USA and Europe, despite several efforts. Rural business owners deal with poor transportation and communication systems.

6.3. Skilled Workers Moving to Metropolitan Regions

Since there are so few educated and talented people in rural areas, even if they go to the metropolis, rural communities won't prosper. This is the biggest challenge. Locals are the most knowledgeable about a situation. They can offer fresh ideas if they desire to resolve these problems (Singh & Pravesh, 2017). 2019 (Verma et al.). An outsider may not comprehend the issue because they still focus on making cash. Considering the benefits, encouraging rural residents to start their own businesses is a better solution than having outside companies set up shop.

6.4. Farmers' Lack of Entrepreneurial Spirit

Only talented people can launch and run new enterprises, similar to the prior reasoning. According to the majority of authors, farmers lack the entrepreneurship needed to set up and run such business models. Because of this, no new farms are developing. Establishing efficient awareness and consulting organisations would help these people flourish and reveal their inner entrepreneurs (Veni & Lakshmi, 2018).

6.5. Decreasing Demand for Ag-Related Services

Farmers can get assistance with pesticide production, produce storage, transportation, value-adding or processing, export agencies, etc. from agricultural-related services (Singh & Pravesh, 2017). Interest in these businesses decreases as agricultural products become less profitable. Transportation, warehousing, and service businesses cannot function without agricultural products. Some local service companies struggle to draw customers and are forced to close as a result of government subsidies and free services, which demotivates them. The government might encourage locals to launch their own enterprises and provide services rather than providing subsidies. It expands the industry beyond agriculture or business (Verma et al., 2019).

7. FINDINGS

We've looked at the types, requirements, challenges, etc. of agripreneurship. All of the authors discussed the requirements, significance, and benefits for the Indian economy, however the majority of the papers did not look at the current situation and solutions. The articles cover the growth of farmers with entrepreneurial skills, inspiring them to advance in their own development as opposed to continuing to engage in unprofitable farming activities using antiquated methods and technology and relying on the government for funding and other related support services. How does the government support entrepreneurs? Strategies to aid entrepreneurs in launching new businesses are mentioned in one article. It is challenging for start-ups in this field to secure funding and put their ideas into practise without government assistance. The main problem is rural talent moving to cities for employment. This makes their life challenging and prevents much development in rural areas due to a lack of innovation in the industry, a reliance on outdated technologies, and a lack of productive government money users. One source claims that the main goal of development or promotion plans should be to create individuals who can have an impact on the economy by applying their abilities to a variety of endeavors. Additionally, literacy aids in recognizing and obtaining government benefits. Therefore, programmes for policy literacy can aid in helping these people understand government initiatives, which will aid in their utilisation and achievement of the objective.

7.1. Schemes for Promoting Agricultural Entrepreneurs

7.1.1. Agri Business Centre Scheme

The Agri-clinics and Agri-Business centers Scheme is carried out by the National Agricultural Extension Management Institute (MANAGE), Hyderabad. The Scheme aims to enhance the provision of agricultural inputs, services, and technology.

7.1.2. Institutional Support for Agri-businesses

NABARD was established by RBI in July 1982 with a focus on agribusiness, small businesses, and agriculture. All of RBI's agro-based and rural development projects are managed through NABARD.

7.1.3. PanchayatMandi

The commercialization of regional produce has been achieved by self-governance through village markets and festivals. The panchayat mandi lessens the power of middlemen. The APMC and state marketing boards must cooperate effectively with the Zilla Panchayat (Agriculture generating market committee).

7.1.4. Stateagricultural Marketing Bank

These are created by the government to control agricultural product prices on a regular basis. To help farmers, it controls the markets for food and oil seeds.

7.1.5. NCOSAMB (TheNational Councilfor State Marketing Board)

Modern training facilities are necessary for an agricultural nation like India. These training facilities are supported by the Indian government. NCOSAMB organised this course.

7.1.6. State Trading Corporation

The State Trading Corporation of India Ltd. was established by the Indian government in 1956. The business has extensive knowledge of large-scale international trade.

7.1.7. OtherInstitutions and Schemes

The National Horticulture Board, MFPI, Agri-export zones, Agri-Udaan, MSME in agriculture, SHGs for women's empowerment, dairy entrepreneurship development plan, and other incentives are only a few examples.

8. CONCLUSION

Agripreneurship is becoming more and more popular, particularly in India. The implementation of this idea in the agricultural industry could have a significant effect on farmers' income, productivity with new technology, and ability to stay out of debt traps. The authors of the aforementioned literature review focused on economic issues like financing farmers, promoting agroproducts, transportation, women's emancipation, and tribal youth development. The business models that agripreneurs can utilise to succeed are only covered in one article. On how well the current agribusinesses are performing, little information is provided. The papers that were studied addressed similar problems that affect farmers and agribusiness owners in rural areas. Agripreneurship was highlighted in certain articles as a way to help rural communities deal with social issues and as a way to overcome obstacles. These ideas have a lot of potential once they are put into practise. To get aid to its intended recipient, knowledge of government policy is necessary. The government should make sure that these programmes are utilised, spread throughout the targeted industry, and boost the nation's economy. In a nation with abundant natural resources for farming and agriculture, agribusiness has a lot of promise. We don't have a lot of cutting-edge technology because our economy is agrarian. Due to the dependence of a large portion of the population on agriculture and related activities, this is leading to catastrophic losses, farmer indebtedness, and other socioeconomic issues. Without technology, nothing will change in this industry.

REFERENCES

1. Dash, D., & Mahra, G. S. (2018).Generating livelihood for tribal youth throughagripreneurship development : Prospects,retrospect , constraints and strategies. 7(5), 3412–3416.
2. Dayakar Rao, B., Patil, J. V, Rajendraprasad, M. P., Reddy, K. N., Devi, K.,Sriharsha, B., & Kachui, N. (2010).Impact ofInnovations in ValueChain on Sorghum Farmers. Agricultural Economics Research Review, 23, 419–426.
3. In, I., For, E., & Development, A. (2016).Innovation In Agricultural Research And Education Foragripreneurshipdevelopmentin India Mini Review Article. 1(3), 72–78. Retrieved from <http://www.innovativefarming.in/index.php/Home/article/view/18/17>
4. Kumar, V. (2017). Agripreneurship for sustainablegrowth in agricultureand allied sectors.

CHALLENGES AND OPPORTUNITIES OF AGRIBUSINESS AFTER COVID IN INDIA

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ABSTRACT

Agriculture is the biggest and very important sector for any country. Similarly, the agriculture sector plays a very important role in the Indian economy. Even in the field of employment, this sector has a great presence as it employs more than 50% of the Indian population. Also, among this Corona crisis and global recession, agriculture has emerged as the most evergreen sector. Agripreneurs are now realizing the importance of quality transformation and value addition in agriculture. Despite all these healthy trends, agri-business has its own challenges for rural development in terms of resource use, rural livelihoods and rural ecology. Issues related to appropriate technology, labor productivity, cooperation, credit and marketing and extension facilities are also important in the new system of reforms. With risk and uncertainty being the inevitable norms of modern business, serving the farmers and saving farming has become the need of the hour. This article highlights the significant achievements of the sector even before the outbreak of COVID-19 and assesses that the new emerging challenges call for a second Green Revolution with next-generation reforms.

Keywords: Agribusiness, Agriculture, Credit, Marketing, Covid 19, Opportunity

JEL Classification: Q13, Q1, E51, M31,

INTRODUCTION

India has witnessed a silent revolution emerging from a food-deficient and import-dependent nation in the early 1960s to the global agricultural superpower it is today. India has emerged as the world's largest producer of milk, pulses, jute and spices, and has the world's largest cattle herd (buffalo). It is the second largest producer of rice, wheat, cotton, sugarcane, tea, groundnuts, fruits, vegetables and goat meat. In times of COVID-19, Indian agriculture has demonstrated remarkable resilience. Despite the success in terms of production which has ensured food security in the country, food inflation and its volatility remain a challenge, which requires higher public investment, storage infrastructure and supply chain such as promotion of food processing as per the empirical findings of Party intervention is required. The agriculture sector was able to withstand the shock of Covid-19 and registered an average real growth of 3.6 per cent in 2020-21, while the overall economy contracted by 6.2 per cent. Given concerns about successive waves of COVID-19, many countries have started stockpiling food grains Acquired at higher prices, while India remains comfortable with 2.8 times its public stock of food grains, with a record 17.1 percent increase in agricultural exports in 2020-21 and a large increase in procurement of marketable surplus in 2020-21 and 2021-22.

OBJECTIVES OF THE STUDY

- To understand the concept of Agribusiness.
- To understand the challenges and opportunities after COVID in India.

RESEARCH METHODOLOGY

The design of the study is exploratory.

DATA COLLECTION

The study is based on secondary data.

The **Secondary Data** will be collected from various government and non-Government reports, Economic survey of Maharashtra and India, well Published Books, Journals, Research Papers, Articles, Newspapers, Magazines, Internet and websites.

REVIEW OF LITERATURE

Das, A. (2019) It was observed that the farmers were badly affected by the coronavirus. The entire supply chain got disrupted for the lockdown. Agribusiness has shown little light in this dark moment. Coronavirus has created many opportunities in this field which can help the people of India in future. Also, it can help in improving the Indian economy. Roy, P. and Chowdhury, S. (2015) Farmers have been badly affected by the Corona virus. The entire supply chain got disrupted for the lockdown. Agribusiness has shown little light in this dark moment. coronavirus has done This sector has created many opportunities which can help the people of India in future. Also, it can help in improving the Indian economy. Hans, V. B. (0000) conclude, from "backward agriculture" to "value added agriculture", Indian agriculture has come a long way. But there are still miles to go. And no doubt Indian farmers have the necessary amount of grit required to undergo the

metamorphosis to bring about a healthy transition from restrictive farming to innovative farming. This is agriculture business after all. Kumar, M. (2019) The Indian Council of Agricultural Research and State Agricultural Universities should work together to develop agricultural models adapted to a variety of socio-economic and bio-physical settings, with a focus on farm income. better value At least one-third increase in farmer's income can be achieved through procurement, efficient post-harvest management, improved irrigation facilities, competitive value chain and adoption of allied activities.

Impact of COVID-19 on Indian Agribusiness

The corona virus has had an unimaginable impact on various sectors in India. The agriculture sector has not escaped its onslaught. Both farmers and agriculture-related industries have gone through tough times due to the coronavirus. The effects of coronavirus on agriculture were-

Due to the lockdown since March, the farmers were facing a lot of difficulties in harvesting the Rabi crop. In India, the rabi crop is harvested in April or May but due to the lockdown the harvesting process was uncertain due to labor crunch. The laborers returned home due to the fear of Corona virus and the lockdown. Along with this, farmers also faced difficulties in sowing of Kharif, due to lack of laborers, farmers could easily solve their problems by using advanced agricultural machinery in crop agriculture, but most of the Indian farmers were poor and advanced agricultural machinery was rented. Couldn't take or buy. Moreover, it is difficult to find skilled drivers to operate the farming machines.

Minimum Support Price – Kharif Crops (2021-22)

Commodity	Variety	MSP for 2020-21 (Rs. Per quintal)	MSP for 2021-22 (Rs. Per quintal)	Cost of Production 2021-22 (Rs/quintal)	Increase over previous year (Rs. per quintal)	Return over cost (%)
Paddy	Common	1868	1940	1293	72	50
	Grade A	1888	1960	-	72	-
Jowar	Hybrid	2620	2738	1825	116	50
Bajra	-	2150	2250	1213	100	85
Maize	-	1850	1870	1246	20	50
Ragi	-	3295	3377	2251	82	50
(Tur)	-	6000	6300	3886	300	62
Moong	-	7196	7275	4850	79	50
Urad	-	6000	6300	3816	300	65
Cotton	Medium Staple	5515	5726	3817	211	50
	Long Staple	5825	6025	-	200	-
Groundnut	-	5275	5550	3699	275	50
Sunflower	-	5885	6015	4010	130	50
Soybean	Yellow	3880	3950	2633	70	50
Sesamum	-	6855	7307	4871	452	50
Nigerseed	-	6695	6930	4620	235	-

Source: pib.gov.in/Farmer portal/ Arthpedia

Minimum Support Price – Rabi Crops (Rabi Marketing Season) -2022-23

Commodity	Variety	MSP for 2021-22 (Rs. Per quintal)	MSP for 2022-23 (Rs. Per quintal)	Increase over previous year (Rs. per quintal)	Return over cost (%)
Wheat	-	1975	2015	40	100
Barley	-	1600	1635	35	60
Gram	-	5100	5230	130	74
Masur	-	5100	5500	400	79
Rapeseeds& Mustard	-	4650	5050	400	100
Sunflower	-	5237	5441	114	50
Toria	-	4650	5050	400	-
Other Crops					-

Copra (2022 crop season)	Mailing	10335	10590	255	-
	Ball	10600	11000	400	-
De-husked coconut	-	2700	2800	100	-
Raw Jute	-	4500	4750	250	-

Source: pib.gov.in/Farmar portal/ Arthpedia.

Challenges of after COVID

As the days are passing by, Coronavirus is taking more and more outbreaks. Dealing with the effects of coronavirus, the biggest challenge is to keep the agribusiness sector running properly. Due to the fear of coronavirus and inconvenience of transportation, the number of laborers in the agribusiness sector is very less. In such a situation, proper marketing of Rabi crop is a challenge. Keeping the agriculture supply chain running is one of the big challenges. Businesses in the dairy, livestock, fisheries and poultry sectors are also facing economic slowdown due to lack of demand from agro-processing and value addition industries.

Opportunities after COVID

Farm Machinery: Due to Covid-19 and lockdown, there was a shortage of laborers to do agricultural activities. The farmers were in a lot of trouble when it came to harvesting the rabi crop and planting the kharif crop (20). However, it has opened the door for mechanization approaches within the agricultural sector with transformative change where often pieces of machinery are used in viable areas with large hectares of land for conducting agricultural activities (21). **E-commerce:** Due to Corona virus and lockdown, the demand for online shopping has increased considerably. People showed interest in online shopping instead of traditional shopping. In the month of April 2020, the e-commerce demand in the world increased by 206%. So, e-commerce is a new opportunity for agribusiness (22). **Entrepreneurship Opportunity:** We all need food to survive. Different foods have different benefits. Milk, meat, fish, eggs etc. play a very important role in combating malnutrition. Furthermore, these products have emerged as a potential way to deal with food safety problems. This sector has become more important after the outbreak of Coronavirus. Hence, there are a lot of entrepreneurship opportunities after the outbreak of Coronavirus. **Farmer Producer Organization (FPO):** Farmer Producer Organizations (FPOs) and Farmer Producer Companies (FPCs) play an important role in improving the agribusiness sector. It helps farmers in farming and helps. To take the farm crop to the market. The utility of FPO and FPC has come to the fore during the lockdown. Government of India has announced 10000 FPOs for 2020-21. Therefore, it has a great opportunity after the coronavirus (23).

Top Five Agribusiness in India

Business ideas are the most profitable business which provide high returns and make your agribusiness career successful. So, have a look at the top 5 agribusiness.

▪ Agriculture Form Business

This business covers a huge Indian population and is ranked No. 1 in the top agribusiness list. In this business, you have to work according to the demand and interest of the market. Agriculture Agribusiness involves the production and sale of crops locally. If you want, you can start this business with less investment or more investment. In this you can export crops to local or distant areas. As per expert suggestion you should start this business with minimum investment which will be beneficial for future.

▪ Vermicompost Organic Fertilizer Production

It is a low investment business and provides high profits without any extra effort. Also, a little awareness and proper knowledge about it helps you to start this business and provide high production as per the demand. There are also many excellent factors involved in this business which attract all the new businessmen who have just started their agriculture business.

▪ Dairy Agribusiness

It is one of the famous and highest growing businesses in India. As the demand for milk and milk products is always high which attracts all the new entrepreneurs. It is one of the most profitable agribusinesses in India. So, it is a good idea for you to start dairy business. This business requires good capital investment and some guidance from dairy experts.

▪ Flower Business

Flower business is the most profitable plants, which give the highest returns. Flower production is the fastest growing crop trend in agriculture today. So doing flower business with low investment is the best idea for new entrepreneurs. This business requires the production of all kinds of flowers, especially unique ones. Growing, processing and selling flowers sets you on the right track to earning money with a sustainable business from the first year itself. Therefore, we can say that this is one of the most profitable agribusiness ideas in India.

▪ Poultry Farming

Poultry farming is one of the fastest growing and profitable agriculture business in India. As per the current Indian market scenario, poultry farming has covered a large Indian population and large Indian area as well. Poultry business is also the best idea to become a successful businessman.

CONCLUSION

The corona virus changed the traditional life of the people. People now think about their daily life differently. Many people are now interested in modern technology. Coronavirus taught us how to grow our daily lives with technology. Before Coronavirus, most of the people of India were not interested in online shopping but then Corona forces us to think about this modern system. Coronavirus brings many problems in agriculture sector but at the same time it also brings a lot of opportunities for agribusiness. Now people don't think of going to market for shopping, they want to buy vegetables, fruits or daily need things sitting at home. Farmer's income is a big problem in agriculture sector. Coronavirus opens doors to agricultural machinery that can increase productivity as well as farmer's income.

REFERENCES

1. Das, A (2020) Challenges and Opportunities of Agribusiness in Post-Covid-19 Situation in India: A Review, International Journal of Current Microbiology and Applied Sciences ISSN: 2319-7706 Volume 9, <https://doi.org/10.20546/ijcmas.2020.908.327>
2. Kumar, M. (2019) Agriculture: Status, Challenges, Policies and Strategies for India, International Journal of Engineering Research & Technology, ISSN: 2278-0181, Vol. 8 Issue 12, pp 1-5.
3. RBI (2022) Indian Agriculture: Achievements and Challenges, RBI Bulletin January 2022, pp 43-59.
4. Roy, P. and Chowdhury, S. (2015) Challenges in Indian Agriculture and its Implications for Organizing Extension, International Journal of Social Science, Vol. 4, No. 2&3, pp. 201-215, DOI Number: 10.5958/2321-5771.2015.00014.9.
5. Chand, R. (2019) Transforming Agriculture for Challenges of 21st Century, Hosted by AURO University, Surat (Gujarat).
6. Hans, V. B. (0000) Agri-business and Rural Management in India – Issues and Challenges, pp 1-22.
7. Agriculture blog (2021) Top 5 Agribusiness in India – Most Profitable Business Ideas, pp 1-7.

CORPORATE FARMING IN INDIA: OPPORTUNITIES AND CHALLENGES

¹Dr. Nitin Pandharinath Malegaonkar and ²Dr. Mahesh Bhausaheb Thorat¹Assistant Professor and ²Assistant Professor and Head, Department of Commerce, Shri Sant Savta Mali Gramin Mahavidyalaya, Phulambri, Aurangabad (MS)**ABSTRACT**

To quadruple farmer income, India is changing its agricultural policies. Reforming policies is difficult and fraught with issues. Small and marginal landholdings present a viability conundrum. Contract and corporate farming are encouraged by the APMC Act and Model APMC Act. Laws are being changed by state governments to support corporate farming and contract farming. Large agribusiness organisations purchase or lease wastelands for farming all over India. This paper presents a theoretical framework and outlines challenges and opportunities for corporate farming in India beyond contract farming.

Keywords: corporate farming, aggregation

INTRODUCTION

Businesses across industries emphasise collaborative efforts to achieve synergies and work with suppliers to provide cutting-edge goods and services in an era of globalisation, privatisation, and liberalisation. To compete with secondary and tertiary industries in terms of GDP contribution, the Indian agriculture sector needs to be modernised. A challenge that can only be overcome by combining fields to use technology, farm supplies, and machine equipment to boost efficiency is that the majority of Indian farmers have marginal landholdings. Cooperative and contract farming are rarely used by farmers and corporations, but when they are, it is common for firms to breach agreements and for farmers to be taken advantage of. Contract farming eliminated the patron-client relationship between large and small producers, gave farmers more stable income, gave women jobs, taught them new farming practises, and helped them become better farmers. Businesses provide poor extension services, overcharge for their services, transfer risk to producers, offer low produce prices, favour large farmers, delay payments, and underpay for losses caused by natural disasters, according to farms, who also find that contracts are biased and strictly enforced. (1999) In comparison to the firm, which they believed benefited more than them, farmers considered they had little bargaining leverage. Additionally, they were reliant on the businesses for loans and other supplies. If a processor and farmer are not on equal footing, how can an agreement be fair? Anti-farmer contract clauses and a lack of market options eventually strengthen contracting. Groundwater overuse, soil salinization, a decline in soil fertility, and pollution are a few examples of the environmental harm caused by contract farming. When local resources, particularly land and water, are depleted or when productivity falls, businesses move to new farmers and regions. The analysis demonstrates that while contracting initially raises salaries and employment, over time the ties between businesses and farmers deteriorate to the cost of the growers, and the system harms local agricultural systems both ecologically and economically. (1999) Contracts are typically seen to be unjust, succinct, and vague. The contract itself is not hazardous; rather, how it is used is. (1999).

Contract Farming

Contract farming is defined as a system for the production and supply of agricultural or horticultural products under forward contracts between producers/suppliers and buyers. The essence of such an arrangement is the commitment of the cultivator to provide an agricultural commodity of a certain type, at a time and a price, and in the quantity required by a known and committed buyer, typically a large company.

A specific percentage of the contractor's crop, based on yield and contracted acreage, must be planted and harvested by the farmer under the terms of the contract. Not necessarily at an established cost. In most cases, the contractor provides the inputs and technical know-how necessary for cultivation, while the farmer supplies the land and the labour. Even if this practise is new, contract farming is an old one, particularly in the US, where corporate agriculture is at its most developed. International agricultural trade is dominated by multinational corporations like Cargill, Archer Daniels Midland, and Monsanto. Integrating horizontally and vertically enables these businesses to dominate the market. As a result, farm incomes have decreased, and consumer prices have increased while corporation margins have increased. This explains why there has been a growing disparity between farm and retail prices in the US during the past ten years. In order to penetrate India, Pepsi Foods Ltd. (PepsiCo) constructed a tomato processing plant in Hoshiarpur, Punjab, in 1989. The contract farming method was utilised by PepsiCo, in which a cultivator plants the company's crops on his land while the corporation supplies seeds or saplings, agricultural practises, crop inspections, and crop management guidance.

LITERATURE REVIEW

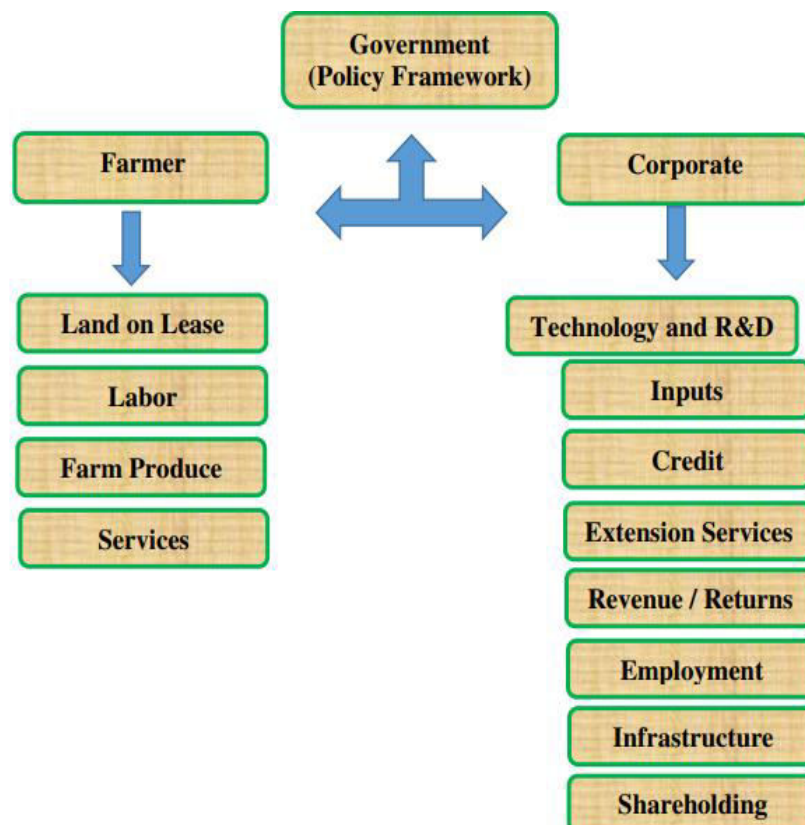
- ❖ **(Eaton & Shepherd, 2001):** In order to produce and supply agricultural goods at set prices, farmers, processors, and/or marketers enter into a contract. The buyer participates in the arrangement by contributing ideas and offering technical advice. The farmer and the business both agree to supply a certain commodity in the quantities and according to the standards of quality established by the customer.
- ❖ **(Mishra, 1997):** According to Mishra, corporate farming is more effective than traditional farming practises in India. Private investment rises, boosting output, income, and exports as a result (Mishra, 1997). According to the 2017 Agriculture Census, marginal farmers with holdings of less than one hectare control up to 67 percent of India's cropland. 1.15 hectares make up the farm. The average size of these holdings has decreased from 1970–1971 on average.
- ❖ **(Johl, 1995):** According to the Johl, small and marginal farms in Punjab are incapable of providing for a family (Johl, 1995). Small farmers use commercial crops to survive. Small farms are divided up. Due to the divide caused by land transactions, these areas are no longer feasible in terms of technology, resources, and family sustenance.

Objectives

1. To study the main issues and possibilities for corporate farming
2. To investigate the factors influencing corporate farming in India among farmers

THEORETICAL FRAMEWORK

Taking into consideration the drawbacks of contract farming, which include the possibility of a breach of contract by either party, soil salinization, myopic land use that leads to a decline in quality and soil fertility, biased contracts, overpriced extension services by businesses, low prices of the produce, favouring large farmers, delays in payments, a lack of compensation for natural calamity loss and unfair pricing, and the complexity of risk-sharing arrangements, we can see that contract farming is not ideal (passing on the risk to the farmer). Large agricultural businesses can play a crucial role in the preservation of soil quality and fertility through long-term partnerships and a balanced agricultural portfolio, as well as by creating employment opportunities, assuming all of the risk, providing ranchers with shareholdings, extending technologies and expertise to leverage on scale, and extending technologies and expertise to leverage on scale.



Type of Research

The present research paper is purely based on Descriptive Research.

Period of Research

The base for the present research papers is based 8 years.

Types of Data

- ❖ **Primary Data:** In the present research paper primary data is not used
- ❖ **Secondary Data:** the present research paper based on secondary data which is taken from websites, newspaper.

CHALLENGES AND OPPORTUNITIES**Opportunities for Farmers**

1. Lessened risk of performance failure
2. Less reliance on the weather 3. Increased output, effectiveness, and income
4. Long-term association to preserve soil fertility and quality
5. Job opportunities and skill development.
6. Quicker transmission of technology
7. A guaranteed market with lower price risk for farm products
8. A decrease in debt
9. Stock ownership

Challenges for Farmers

1. The organization's credibility and dependability as an agricultural firm
2. Businesses may engage in monopolistic activity.
3. Knowledge of the papers, contracts, and leases.
4. Failure to abide by the terms and conditions of the lease,
5. Confirmation of returns and payments.

Opportunities for Agribusiness Enterprise

1. Reverse Integration
2. Scale- and scope-based supply side efficiencies
3. Dependable access to high-quality agricultural products
4. The sale of surplus goods abroad and domestically at a premium.
5. Choosing organic and environmentally friendly goods
6. Creating long-lasting connections
7. Support for the environment and society

Challenges for Agribusiness Enterprise:

1. Ranchers' stronger emotional connection
2. Farmers' preparedness for corporate agriculture
3. Land supply limitations
4. Cultural and social limitations
5. Fields' observation

CONCLUSION

The unprofitability of marginalised landholdings in India can be eliminated by combining land through corporate farming, which will increase the efficiency and effectiveness of agricultural resources and inputs through the use of technology and expertise to produce high-quality agricultural output consistently in higher volumes to support the sponsoring agribusiness enterprise and for improved returns for the smallholders.

REFERENCES

1. Dogra, B. (2002). Land Reforms, Productivity and Farm Size. *Economic and Political Weekly*, pp. 532-533.
2. Jhota, S. S. (1995). Agricultural Sector and New Economic Policy. *Indian Journal of Agricultural Economics*, 473-487.
3. Mishra, S. N. (1997). Agricultural Liberalisation and Development Strategy in Ninth Plan. *Economic and Political Weekly*, A19-A25.
4. Rangswamy, G. (1993). Corporate Agriculture: The key to poverty eradication. *Guide on Food Products (GFP) Year Book*.

CORPORATE FARMING THE FUTURE OF INDIAN FARMING

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I. INTRODUCTION

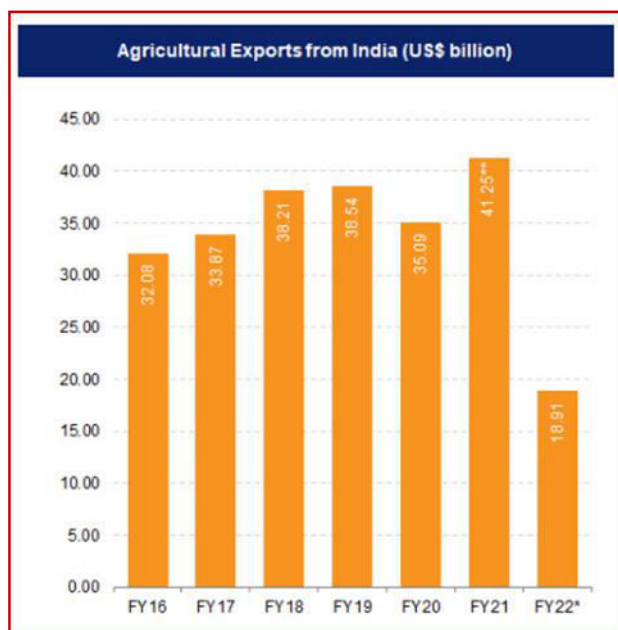
Agriculture is the primary source of income for 58 percent of Indians. India is the world's biggest producer of milk, lentils, spices, and buffaloes. It ranks second in the production of fruit, vegetables, tea, farmed fish, cotton, sugarcane, wheat, rice, and sugar. India employs half of all agricultural workers worldwide and has the second-largest agricultural land area. We are so fed by farmers. Indian consumer expenditure will increase 6.6% in 2021 as a result of the pandemic. The Indian food industry is poised for significant development and an increasing proportion of global food commerce because of its significant value-added potential, particularly in food processing. Food processing, one of India's key industries, represents 32% of the nation's food industry and ranks fifth in terms of production, consumption, exports, and anticipated growth.

II. MARKET SIZE OF CORPORATE FARMING IN INDIA

By 2025, Inc42 projects that the Indian agriculture industry would be worth US\$24 billion. 70% of the food and grocery market in India, which ranks sixth, is retail. Foodgrain production is projected to be 149.92 million tonnes in FY 2022–23 (only for Kharif). The industry is driven by population increase in India. The demand for agricultural products has risen nationally as a result of rising earnings in both rural and urban areas. As a result, the business is being driven by applications like blockchain, artificial intelligence (AI), geographic information systems (GIS), drones, remote sensing, and e-farming.

Last year, Exports Increased.

- ✓ Exports of marine products reached \$6.12 billion in FY22 (through December 2021).
- ✓ The value of rice exports was \$6.12 billion.
- ✓ Exports of buffalo meat totaled \$2.51 billion dollars.
- ✓ Exports of sugar totaled \$2.78 billion USD.
- ✓ Tea exports came to 570.15 million US dollars.
- ✓ The value of coffee exports was \$719.95 million.



III. INVESTMENT

The following are significant investments and advancements in agriculture.

- The overall amount of FDI inflows from April 2000 to June 2022 was \$2,600.70 million.
- The Indian government will roll out Kisan Drones in 2022 for spraying pesticides and fertiliser, evaluating crops, and digitising land records.

- India exported agricultural and processed food worth \$9,598 million in FY 2022–23 (April–July 2022), an increase of 30% year over year.
- PM Narendra Modi introduced the PM-KISAN Funds in October 2022 during the PM Kisan Samman Sammelan 2022, with a total investment of Rs. 16,000 crore (\$1.93 billion).
- To provide affordable financing for Mega Food Parks (MFP) and processing facilities, the National Bank for Agriculture and Rural Development (NABARD) launched a Rs. 2,000 crore (US\$ 242.72 million) Special Food Processing Fund in August 2022.
- At the Central Arid Zone Research Institute (CAZRI), which has offered outstanding services for more than 60 years under the Indian Council of Agricultural Research, Minister of Agriculture and Farmers Welfare Narendra Singh Tomar inaugurated four new facilities in August 2022. (ICAR).
- In FY 2021–22, the GVA of the agriculture and related sectors was 18.8%. (until 31 January, 2022)

In the fiscal year 2021–2022, agriculture and related activities increased 3.9%. (until 31 January, 2022)

- Post-pandemic consumer expenditure in India will climb by 7% in 2022.
- The Indian processed food industry is predicted to grow to Rs. 3,451,352.499 crore (US\$ 470.01 billion) by 2025, up from Rs. 1,931,288.699 crore (US\$ 263.0 billion) in FY20 as a result of government efforts such as the US\$1 trillion infrastructure plan and the Pradhan Mantri Kisan Sampada Yojna. Food processing employs 1.77 million people. All forms of automatic FDI are permissible.

From 2017 to 2020, India received \$1 billion USD in agritech assistance. India ranks third in terms of agritech startup activity and investor interest.

- Nestle India will invest 700 crore rupees (\$100.16 million) to build its ninth factory in Gujarat.

IV. GOVERNMENT INITIATIVES IN CORPORATE FARMING IN INDIA

The sector has lately been impacted by the following government initiatives.

Department of Agriculture, Cooperation, and Farmers' Welfare received Rs. 1.24 lakh crore (\$15.9 billion) from the Union Budget for 2022–2023. Rs. Eight thousand five hundred and fourteen crore (US\$1.1 billion) was given to the Department of Agricultural Research and Education.

- ❖ The PM Formalization of Tiny Food Processing Firms (PMFME) programme, worth Rs. 10,000 crore (\$1.27 billion), was introduced in July 2022 with the goal of offering financial, technical, and business support to micro food processing businesses.
- ❖ The Indian government intends to use drones known as Kisan Drones for spraying pesticides and fertiliser, evaluating crops, and digitising land.
- ❖ NABARD will assist in establishing a blended capital fund for entrepreneurs in rural and agricultural businesses involved in the value chain for farm products.
- ❖ Modern technologies are distributed to farmers through a nationwide network of 729 Krishi Vigyan Kendras, including crop variety seeds, animal and fish breeds, and productivity and protection technologies.
- ❖ In Anand, Gujarat, "Dairy Sahakar" was introduced by the Union Minister of Home Affairs and Cooperation in October 2021.
- ❖ In October 2021, the Ministry of Civil Aviation launched Krishi UDAN 2.0. The strategy promotes agriproduct distribution via air. At 53 airports, mostly in the Northeast and tribal areas, Krishi UDAN 2.0 will benefit farmers, freight forwarders, and airlines.
- ❖ To promote citrus and value-added product exports, APEDA and ICAR-Central Citrus Research Institute (ICAR-CCRI), Nagpur, inked a Memorandum of Understanding (MoU) in October 2021.
- ❖ The Union Ministry of Agriculture and Farmers Welfare announced a special programme in October 2021 to provide 820,600 free seed mini-kits in 343 districts across 15 major producing states. This scheme might boost farmer income by accelerating seed replacement.
- ❖ In September 2021, Mr. Narendra Modi announced 35 nutrient-rich and climate-resilient crop varieties.

- ❖ The Digital Farm Mission for 2021–25 of the Indian government promotes agricultural efforts utilising cutting-edge technology including artificial intelligence (AI), blockchain, remote sensing, geographic information systems (GIS), drones, and robots.
- ❖ The "Production-Linked Incentive Scheme for Food Processing Industry (PLISFPI)," worth US\$1.46 billion, will promote Indian food brands abroad and develop global food manufacturing champions.
- ❖ To support cooperatives, the Indian government would spend Rs. 2,000 crore (\$306.29 million) to computerise the Primary Agricultural Credit Society (PACS).
- ❖ Under the automatic method, India accepts 100% FDI in food product marketing and online commerce.



V. MAJOR PLAYERS IN CORPORATE FARMING

Agrovet

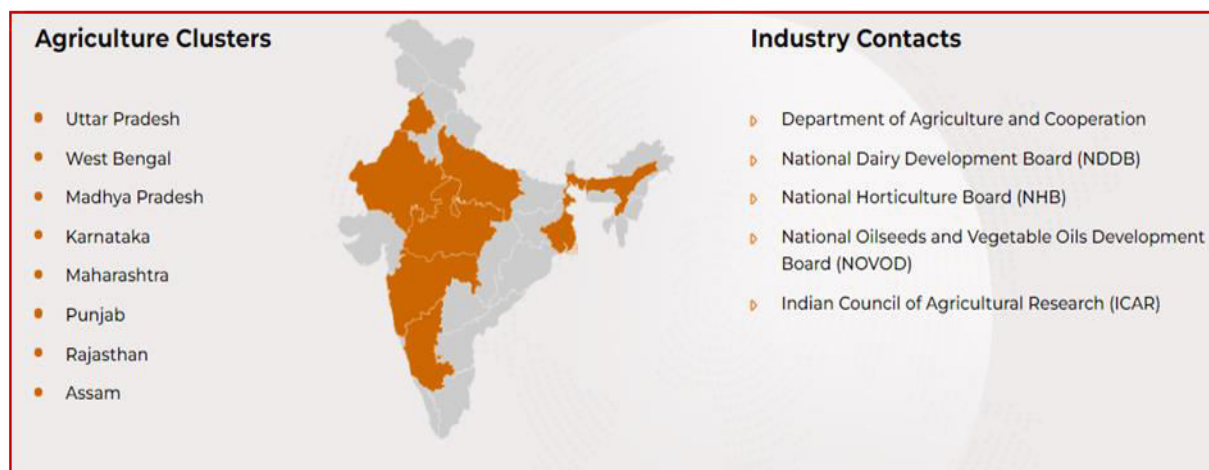
Godrej Agrovet is a part of Godrej Group. The corporation's agricultural activities are varied. It works in the production of animal feed, pest control for crops, oil palm, dairy, poultry, and processed foods. Animal feed accounted for 49.4% of revenues in FY 2021–22. In India, it is a significant organised participant in compound animal feed.

Rallis

Rallis, a division of Tata Chemicals, sells agricultural supplies. It is the best crop care firm in India. Over 40,000 retail counters are served by 2,300 distributors in more than 80% of India's districts. Rallis is renowned for its thorough understanding of Indian agriculture, steadfast interaction with farmers, high-quality agrochemicals, expertise in branding and marketing, and reliable crop care solutions. Five million farmers benefit from the company's agricultural solutions.

Britannia Industries

Indian food giant Britannia has a long and distinguished history. India's most reliable food brand is this one. It offers products like milk, yoghurt, biscuits, bread, cakes, rusk, and cheese. Organized bread is dominated by it. 50% of Indian households and five million retail locations carry its products. It anticipates a spike in demand for rural services during the COVID-19 epidemic and would invest Rs. 700 crore (US\$ 99.30 million) in new facilities over the following 2.5 years.



VI. RESEARCH METHODOLOGY

❖ Type of Research

The present research paper is purely based on Descriptive Research.

❖ Period of Research

The base for the present research papers is based 10 years.

❖ Types of Data

Primary data: In the present research paper primary data is not used

Secondary data: the present research paper based on secondary data which is taken from websites, newspaper.

VII. CONCLUSION

By 2022, India's agricultural income should have doubled. India's agriculture sector is expected to expand in the next years as a result of increased investment in irrigation, warehousing, and cold storage. The yields of Indian farmers will undoubtedly increase thanks to GM crops. India may become self-sufficient in pulses over the next several years as a result of scientists' attempts to breed early-maturing pulses and the increase in the minimum support price. Over a five-year period, the PM Matsya Sampada Yojana will invest \$9 billion in fisheries. By 2024–2025, the government desires 220 lakh tonnes of fish. Adopting Total Quality Management (TQM) standards like ISO 9000, ISO 22000, HACCP, GMP, and GHP can help the food processing industry. India's agricultural exports could reach \$60 billion by 2022.

REFERENCES

1. Mishra, S. N. (1997). Agricultural Liberalisation and Development Strategy in Ninth Plan. *Economic and Political Weekly*, A19-A25.
2. Rangswamy, G. (1993). Corporate Agriculture: The key to poverty eradication. *Guide on Food Products (GFP) Year Book*.
3. Johl, S. S. (1995). Agricultural Sector and New Economic Policy. *Indian Journal of Agricultural Economics*, 473-487.
4. Dogra, B. (2002). Land Reforms, Productivity and Farm Size. *Economic and Political Weekly*, pp. 532-533. .

CREDIT APPRAISAL PROCESS OF HOME LOAN IN BANKS

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Aurangabad²R.B. Attal Arts. Science & Commerce College, Georai, District- Beed**ABSTRACT**

Just like every bank charges different rates for home loans from different customers, in the same way, each bank has its own set criteria that one must satisfy to qualify as a certified borrower of money/assets from the bank. All banks have their own rules to decide the credit worthiness of their borrowers. Creditworthiness of a customer lies in assessing if that customer is capable of repaying the loan amount in the stipulated time, or not. Here also, every bank has its own methodology to determine if a borrower is creditworthy or not. It is determined in terms of the norms and standards set by the banks. Banks employ their own unique objective, subjective, financial and non-financial techniques to evaluate the creditworthiness of their customers.

Keywords: - Home loan, Credit Appraisal, EMI, CIBIL

INTRODUCTION**Home Loan in India**

A home loan is a loan product where the lender provides funding for purchase or construction of a house/residential property. The housing loan may also be availed either for buying a new flat or resale of a residential house. One can also avail a housing loan, to buy a plot of land and carry out construction on the same, which is called the composite loan. Home loans in India are provided by the lenders on the agreement value of the house or market value whichever is lower. In the case of home loan for resale of flats, most lenders get the property valued independently and they will provide the housing loan based on their value rather than the cost mentioned in the purchase agreement.

Banks Broadly Check

1. **CIBIL Score and Report:** It is one of the most important factor that affects your loan approval. A good credit score and report is a positive indicator of your credit health.
2. **Employment Status:** Apart from a good credit history, lenders also check for your steady income and employment status.
3. **Account Details:** Credit Facility statuses and suit filed cases are carefully examined by lenders.
4. **Payment History:** Lenders check for any default on payments or amount overdue cases, which might project a negative overview of your overall report.
5. **EMI to Income Ratio:** Banks also consider the proportion of your existing loans when compared to your salary at the time of loan application. Your chance of loan approval gets reduced if your total EMI's exceed your monthly salary by 50%.

Credit Appraisal

Credit Appraisal is the process by which a lender/banker appraises the technical feasibility, economic viability and bankability including creditworthiness of the prospective borrower. It is a very important step in determining the eligibility of a loan borrower for a loan

Criteria for Credit Appraisal:

- Incomes of Applicants and Co-applicants,
- Age of Applicants,
- Educational Qualifications,
- Profession,
- Experience,
- Additional Sources of Income,
- Past Loan Record,
- Family History,
- Employer/Business,
- Security of tenure,

Tax History,

Assets of Applicants and Their Financing Pattern,

Recurring Liabilities,

Other present and future liabilities and investments (if any).

Based on these parameters, the maximum amount of loan that the bank can sanction and the customer is eligible for is worked out. The broad tools to determine eligibility remain the same for all banks.

The 3 Methods Used To Arrive At Eligibility

1. Installment to Income Ratio (IIR)

2. Fixed Obligation To Income Ratio (FOIR)

3. Loan to Cost Ratio (LOCR)

1. Installment to Income Ratio (IIR)

This ratio is generally expressed as a percentage. This percentage denotes the portion of the customer's monthly installment on the home loan taken. Usually, banks use 33.33 per cent to 40 per cent ratio. This is because it has been observed that under normal circumstances, a person can pay an installment up to 33.33 to 40 per cent of his salary towards a loan. Example: If we consider the installment to income ratio equal to 33.33 per cent, and assume the gross income to be Rs. 30,000 per month, then as per the ratio, the applicant is eligible for a loan with the maximum installment of Rs. 10,000 per month or 3:1.

Fixed Obligation To Income Ratio (Foir):

This ratio signifies the importance of the regularity in the repayment of previous loans. In this calculation, the bank considers the installments of all other loans already availed of by the customer and still due, including the home loan applied for. In other words, this ratio includes all the fixed obligations that the borrower is supposed to pay regularly on a monthly basis to any bank. Statutory deductions from salary like provident fund, professional tax and deductions for investment like insurance premium, recurring deposit etc. are exempt from these fixed obligations.

Example: Assume that monthly income of an applicant is Rs 30,000 and the applicant has a car loan installment of Rs 4,000 per month, a TV loan installment of Rs 1,000 per month.

In addition to this his proposed housing loan installment is Rs 10,000 per month. Numerically, the ratio is equal to Rs. 15,000 or 50 per cent (i.e. 50 per cent of the monthly income). If the bank has decided on the standard of 40 per cent of ratio as the criteria, then the maximum total installments the person can pay, as per the standard, would be Rs 12,000 per month.

As he is already paying Rs 5,000 for the car and TV, he only has Rs 7,000 left out. Hence, the customer would be given only that loan for which the EMI would be equal to Rs 7,000, keeping in mind the repayment capacity of the applicant.

Loan to Cost Ratio (LOCR)

This ratio is used by banks to calculate the loan amount that an applicant is eligible to pay on the basis of the total cost of the property. This ratio sets the upper limit or the maximum loan amount that a person is eligible for, irrespective of the loan eligibility under any other criteria. The maximum amount of loan the borrower is eligible to pay is pegged as equal to the cost or value of the property. Even if the banks' calculations of eligibility, according to the above mentioned two criterions, turns out to be higher, the loan amount can't exceed the cost or value of the property. This ratio is set equal to between 70 to 90 per cent of the registered value of the property. Hence, while deciding on the maximum amount of loan a customer can be given, the banks use these three parameters. These parameters help in computing loan eligibility, which is crucial in calculating the creditworthiness of a customer. It also acts as a guide to determine the loan amount.

Step I - Submission of Loan Application

The financial institutions require that an entrepreneur seeking financing assistance should furnish detail information about the project in a prescribed form the borrower submits an application form that seeks comprehensive information about the project.

Step II - Initial Processing of Loan Application

When the application is received; an officer of the financial institution reviews it to ascertain whether it is complete for processing. If it is incomplete the borrower is asked to provide the required additional information. When the application is considered complete, the financial institution prepares a 'flash report' which is

essentially a summarization of the loan application. On the basis of the 'Flash Report', it is decided whether the project justifies a detailed appraisal or not.

Step III - Appraisal of the Proposed Project

The detailed appraisal of the project covers the Marketing, Technical, Financial, Managerial, and Economic aspects. The appraisal memorandum is normally prepared within two months after site inspection. Based on that a decision is taken whether the project will be accepted or not.

Step IV - Issue of the Letter of Sanction

If the project is accepted, a financial letter of sanction is issued to the borrower. This communicates to the borrower the assistance sanctioned and the terms and conditions relating thereto.

Step V - Acceptance of the Terms & Conditions by Borrowing Unit

On receiving the letter of sanction from the financial institution, the borrowing unit convenes its board meeting at which the terms and conditions associated with the letter of sanction are accepted and an appropriate resolution is passed to that effect. The acceptance of the terms and conditions has to be conveyed to the financial institution within stipulated period.

Step VI - Execution of Loan Agreement

The financial institution, after receiving the letter of acceptance from the borrower, sends the draft of the agreement to the borrower to be executed by the authorized persons and properly stamped as per the Indian Stamp Act, 1899. The agreement, properly executed and stamped, along with other documents as required by the financial institution must be returned to it. Once the financial institution also signs the agreement, it becomes effective.

Step VII – Disbursement of Loans

Periodically, the borrower is required to submit information on the physical progress of the projects, financial status of the project, arrangements made for financing the project, contributions made by the promoters, projected funds flow statement, compliance with various statutory requirements, and fulfillment of the pre-disbursement conditions. Based on the information provided by the borrower, the financial institution will determine the amount of term

loan to be disbursed from time to time. Before the entire term loan is disbursed, the borrower must fully comply with all the terms and conditions of the loan agreement.

Step VIII - Creation of Security

The term loans (both rupee and foreign currency) and the deferred payment guarantee assistance provided by the financial institutions are secured through the first mortgage, by way of deposit of title deeds, of immovable properties and hypothecation of movable properties. As the creation of mortgage, particularly in the case of land, tends to be a time consuming process, the institutions permit interim disbursements against alternate security (in the form of guarantees by the Promoters). The mortgage, however, has to be created within a year from the date of the first disbursement. Otherwise, the borrower has to pay an additional charge of 1 per interest.

CONCLUSION

The housing sector is one of the essential participants to the economy and gives boom impulses to the broader monetary improvement of our country. The position of the financing institutions viz. Banks and Housing Finance Companies has grown appreciably over time in the housing zone. While appraising a domestic mortgage, creditors look for private details which include a good credit score history, annual and monthly profits, current EMIs of the purchaser, a clean title to the house / property and the vicinity of the residence before approving a domestic loan application. It must constantly be saved in thoughts that taking too many loans might restriction purchaser's credit score worthiness. Also maintaining credit score in correct form and Good and consistent repayments keep one out of debt traps and will beautify applicant's credit score worthiness in destiny.

REFERENCES

- www.google.com
- <https://consumeraffairs.nic.in>
- <https://www.cibil.com/loan-approval-process>
- <https://www.souharda.coop/pdf>

CRITICAL ANALYSIS OF CROP-INSURANCE SCHEMES AND IT'S EFFECTIVENESS IN THE STATE OF MAHARASHTRA

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INTRODUCTION

Agriculture which is an imperative area of economy is viewed as generally as an industry. It faces different sorts of normal dangers. Protection is an imperative instrument to give insurances under unsafe exercises and that assumes critical part in the horticultural creation choice, concoction utilize choice, development hones and editing design choices. Yield protection is a critical measure/instrument utilized by agriculturists for moderating the budgetary misfortunes because of different kinds of regular disasters/dangers which harm and destruct the creation. It is additionally one of the vital instruments that can be utilized by a rancher to balance out his pay against incomplete or finish trim disappointment because of antagonistic climate [such as debacles, surge, hail, dry spell etc.] Or because of related unfavorable physical product conditions which are outside his ability to control.

Prior to the presentation of harvest protection, ranchers took trim advance from the distinctive monetary foundations, that is, from various formal credit establishments such as co-agent credit organizations, local country banks and business banks. So, they progressed toward becoming loanee agriculturists. There were no harvest protection offices. All things considered if the yields were harmed by regular catastrophes, there was no way of getting or accepting repayment from the safety net provider. After harvest harm they were limited in the red trap.

After the presentation of harvest protection plot (the Comprehensive crop insurance scheme (CCIS)) was presented in Indian horticulture from first April 1985 overall India and the national agricultural insurance scheme (NAIS) or Rashtriya Krishi Bima Yojana (RKBJ) has been running great for the session 2000-

2001 with the dynamic help and understanding of the Maharashtra government all the loanee ranchers are obligatorily guaranteed and get the advantages of product protection after yield harms because of characteristic disasters. The national agricultural insurance scheme (NAIS) pays the reimbursement to the influenced ranchers by its own particular repayment paid run the show.

Different kinds of harvest protection plans have been presented in the field of Indian agribusiness, for example, Comprehensive Crop Insurance Scheme (CCIS), national agricultural insurance scheme (NAIS) or Rashtriya Krishi Bima Yojana (RKBJ), seed crop insurance scheme (SCIS), firm income insurance Scheme (FIIS), Rainfall Insurance Scheme (RIS) and Weather based crop Insurance Scheme (WBCIS). The trim protection plans are worked on zone approach, singular approach and pilot premise as indicated by the sorts of products. Among the above expressed product protection conspires, the comprehensive crop insurance scheme (CCIS) and the national agricultural insurance scheme (NAIS) are worked based on territory approach and the NAIS likewise works on singular approach for limited disasters, and the remaining crop protection plans are taken after on pilot premise.

STATEMENT OF THE PROBLEM

Crop insurance is purchased by agricultural producers, including farmers and others to protect themselves against either the loss of their crops due to natural disasters, such as hail, drought and floods, or the loss of revenue due to declines in the prices of agricultural commodities. So the study of crop insurance scheme has its own significance.

SIGNIFICANCE OF THE STUDY

The results of this research will be of immense value to insurers for providing farmers with technical assistance and advice aimed at maximizing their production, policy makers, research scholars, Agriculture Insurance Company of India Limited, National Insurance Academy. Besides the study

Will be of direct benefit to the government in number of ways as follows-

1. It can facilitate implementation of a consistent National Agricultural policy.
2. It can be used as a vehicle for more rational land use by emphasizing on certain types of crops, certain farming practices etc.

3. It can reduce the need for government management of ad hoc disaster relief programmes.

4. It can be used for design new crop insurance scheme for farmers.

The aim of the present study is to conduct original empirical research in the area of crop insurance.

OBJECTIVE OF THE STUDY

1. To find out the age of the crop loanee.

2. To find out Economic Status of the Farmer those who taken a Crop Loan.

3. To examine the educational status of farmers of Crop Loan taker.

RESEARCH METHODOLOGY

Exploratory Research design will be used for the purpose of the study. Crop insurance scheme have not been properly researched in Maharashtra state; although this field has gained a lot of attention in the National level. Hence the basic understanding of this field is not very clear. Current research study will be based on primary and secondary data and hence exploratory research design will be most suitable way of research in the current field.

Primary Data

This study is based upon primary data. Primary data is the foundation of this study. The researcher will collect primary data by means of personal visits and questionnaires. The researcher will collect filled questionnaires from selected farmers. The data will be classified, tabulated and presented in graphic form. It will be subjected to analysis and interpretation techniques by use of statistical methods.

Secondary Data

This secondary data will be collected from the research books, report of agricultural sectors, Government report, Published or unpublished sources, Journals, Magazines, Newspapers etc. There search could not have been facilitated with the help of quantitative number churning method, hence qualitative research as a methodology was used for the current research. Qualitative research helped in understanding the context of all the types of crop insurance practices.

Selection of Samples

There are 5 regions & 36 Districts present in the State of Maharashtra. Out of these two districts from each region i.e. 10 districts will be selected for study & 100 respondents will be selected randomly from these 10 selected districts. Therefore total number of respondents would be 1000.

Table of Sample Selections

Sr.	Name of the Region	Selected Dist.	No. of sample
1	Marathwada	Beed	100
		Aurangabad	100
2	Vidharbha	Buldhana	100
		Yavatmal	100
3	Khandesh	Nandurbar	100
		Jalgaon	100
4	Kokan	Raigad	100
		Ratnagiri	100
5	West Maharashtra	Satara	100
		Solapur	100
	Total		1000

Classification of Sample

The researcher has classified of sample in to two category i.e. Rural Respondents and Urban Respondents. The researcher choose 500 sample from Rural area and 500 sample chosen from urban area. Therefore there are equal chance to all respondents.

Data Analysis

Importance of agriculture sector in Indian economy cannot be undermined. The sector along with its significant achievements in form of Green, Blue and White revolution has developed certain stress points over

a period. From the above analysis it is clear that the natural disasters like cyclone, storm and variation in rainfall are the major risks in the study area. In the theoretical framework crop insurance stabilizes the farmer's income during the losses in crop production. But in real picture it doesn't act as risk management instrument during the loss in farming. The farmers perceive that the crop insurance is mainly suits for large farm size farmers and its extent in risk sharing was very low. They also considered that the premium rate is not affordable by small and marginal farmers. Bank officials place a major role in making awareness among farmers but they are not suits to explain the real terms and condition of crop insurance among farmers. So the service providers have to look on the product innovations and appropriated distribution channel to make crop insurance reach more effectively.

Age of the Respondents

Out of 1000 respondents maximum numbers of respondents are in below 18 to 40 years i.e. 72.30% followed by this the age group of 60 and above i.e. 15.40% were found. In total respondents are 39.40% respondent are in urban area and 32.90% in rural areas. Only 1.20% and 2.50% respondents are found from below 18 year Urban and Rural area respectively. Thus the conclusion that the maximum number of the age of the respondents are between 18 to 40 years.

Religion of the Respondents

Out of total Urban Respondents 44.50% respondent are from Hindu religion and out of Rural respondents 42.90% are from Hindu religion. This is the maximum of the all religion i.e. 87.40% this is a very huge percentage. Only 2.80% respondents are from Muslim religion, followed by Sikhs are only 1.10% and other religion are 8.70% are found. So it concludes that the mode of respondent of religion is Hindu religion.

Educational Qualification of the Respondents

The educational qualification of the respondents. 13.80% respondents are up to secondary or higher secondary schools from urban respondents are found. 19.10% respondent are of Secondary or higher secondary from rural area. Here very important that graduates or post graduate are aggressive in Urban and Rural areas both that is 22.60% and 24.00% respectively. Followed that technical education are taken by respondents are 9.10% and Other educated are 11.40%. So it concludes that the Graduate or Post graduate respondents are maximum.

CONCLUSION

Therefore we have seen that despite of the various efforts to make the crop insurance scheme more viable, it has only served limited purpose. The implementing agencies have to face the constraints that sometimes are built in the system and sometimes come externally. Unless the program is restructured carefully, its future prospects to include more farmers seem less likely. It requires renewed efforts from the government, financial

institutions and the farmers as well. Providing help to the private sector insurers would also help in increasing the coverage of the programs and improve the viability of the scheme. With improvement in the rural infrastructure, increase in the tenure of the contract period of the private insurers, decreasing the unit level to village panchayat, and improvement in technology, the scheme will lead to better performance. It is perhaps not just the supply side problems but also the demand side elements that need to be studied, in order to have a better understanding of the bottlenecks and other constraints that lead to the poor performance of the scheme. Therefore in our next chapter we discuss the demand side analysis of the implementation of MNAIS in Maharashtra.

In spite of the advance of water system and change in foundation and correspondence the hazard in farming creation has expanded in the nation. The hazard is considerably higher for cultivators than generation, as is obvious from bringing down hazard in zone and higher hazard underway. State insightful outcomes demonstrate that exclusive in the states where water system is exceptionally solid, it helped in diminishing the hazard. Those states where water system isn't exceptionally reliable keep on facing high hazard. In a

few states ranchers confront twin issue of low profitability joined by high danger of creation. As, with the progression of time, neither innovation nor some other variable aided in lessening generation hazard, especially in low efficiency states, there is solid need to devise and stretch out protection item for rural creation.

POLICY RECOMMENDATIONS

1. In the State of Maharashtra amid this season of four gathered auxiliary information from the Agriculture Insurance Company of India Limited (AICIL), we locate that lone two paddies, for example, Wheat, Sugarcane, Cotton, Grapes are incorporated under the harvest protection plot. Bethat as it may, in our investigation area there are three Paddies which are developed by the agriculturists are Wheat, Sugarcane, Cotton, Grapes. It is important to incorporate the Wheat into the harvest protection plot.
2. In the winter season numerous products are developed. Among these the critical harvests are Wheat, Sugarcane, Cotton, Grapes. In any case, there are just two overwhelming harvests under the Crop Insurance plan, for example,
3. The repayment confine is settled by the safety net provider and stays unaltered amid the protection time frame. Bethat as it may, it is important to shift year to year as the measure of harvest harm because of regular catastrophes changes in the influenced years.
4. Government protection arrangement depends on the Area Yielded it protection plot. Accordingly the influenced agriculturist of the guaranteed territory gets no reimbursement if that protected zone isn't announced to be the influenced zone all in all. In that circumstance if the back up plans present the individual yield trim protection plot based on specific terms and condition these separately influenced ranchers will be profited.

REFERENCES

1. Agahi, H., Zarafshani, K. and Behjat, A. M. (2008), "The Effect of Crop Insurance on Technical Efficiency of Wheat Farmers in Kermanshah Province: A Corrected Ordinary Least Square Approach", *Journal of Applied Sciences*, Vol. 8, No. 5, pp. 891-894.
2. Bhende M J. (1992). *Farm Planning Under Risk : A Whole Farm Planning Approach*. A Thesis submitted in partial fulfillment of Ph.D. Degree to the University of Agricultural Sciences, G.K.V.K., Bangalore, Unpublished.
3. Binswanger H P. (1980). *Attitudes towards Risk: Experimental Measurement in Rural India*. *American Journal of Agricultural Economics*, 62(3) : 174-82.
4. Booth, Wayne C., Colomb, Gregory G., Williams, Joseph M. (2003). *Craft of Research*, edn. 2. London: University of Chicago Press.
5. Borse, M. N. (2004). *Handbook of research methodology: modern, methods and new*. Jaipur: Shree Niwas Publications.
6. Converse, J. M. [et al.]. (1986). *Survey questions - handcrafting the standardized questionnaire*. Newbury Park: SAGE Publishing.
7. Dandekar, V. M., (1976), "Crop Insurance in India", *Economic and Political Weekly*, Vol. XI, No. 26, June-26, pp. A-61 to A-80.
8. *District Statistical Handbooks - Hooghly*, The Office of the Director, Bureau of Applied Economics and Statistics, Government of West Bengal, New Secretariat Building; 1, Kiron Sankar Roy Road, Kolkata-700001.
9. Goodwin, B. K. (May 1993), "An Empirical Analysis of the Demand for Multiple Peril Crop Insurance", *American Journal of Agricultural Economics*, Vol. 75, No. 2, pp. 425-434.

ETHANOL BLENDING IN INDIA

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INTRODUCTION

India is one of the fastest growing economies in the world. Today's energy demand in our country is rising because of expanding economy, increasing population, switched to urbanisation, modifying lifestyles and evolving spending power. To conserve this rate of growth, energy inputs are critical. Near about 98% of the fuel demand in the road transportation sector is currently fulfilled by fossil fuels and the remaining 2% by renewable energy¹. India is the world's rank third oil absorbing and importing nation, spent USD 119.2 billion in 2021-22 (April 2021 to March 2022)². India is anxious to reduce its dependence on imported crude oil and ethanol-blended petrol is part of that strategy. Also, concerns for the conventional sources of energy will be exhausted have prompted the nation to view bio-fuels as a possible alternative to conventional liquid fossil fuels.

Initiatives Taken by Government of India

Government of India under Aatmanirbhar Bharat mission with the objective to enhance India's energy security, reduce import dependency on fuel, save foreign exchange, address environmental issues and give a boost to domestic agriculture sector, has been promoting the Ethanol Blended Petrol (EBP) Programme. A "Guideline for Ethanol Blending in India 2020-25" was also released by the Hon'ble Prime Minister in June, 2021 which gives out a detailed procedure for achieving 20% ethanol blending. This Guideline also mentioned an intermediate turning point of 10% blending to be achieved by November, 2022³. It desires to reach a 20 percent ethanol blending target by 2025 for which it will need 1000 crore litres of ethanol.

To increase native production of ethanol the Government since 2014 took multiple interventions such as:

- Re-habilitation of administered price mechanism.
- Opening of substitute route for ethanol production.
- Revision to Industries (Development & Regulation) Act, 1951 which order exclusive control of denatured ethanol by the Central Government for smooth movement of ethanol across the country.
- Limiting in Goods & Service Tax (GST) on ethanol meant for EBP Programme from 18% to 5%.
- Differential ethanol price based on raw material available for ethanol production.
- Extension of EBP Programme for India except islands of Andaman Nicobar and Lakshadweep with effect from 01st April, 2019.
- Interest Subvention Scheme for improvement and augmentation of the ethanol production capacity by Department of Food and Public Distribution (DFPD).
- Publication of Long-Term Policy on ethanol acquisition.

By blending 20% ethanol by 2025, the nation could experience significant benefits, including yearly savings of Rs 30,000 crore in foreign exchange, energy backing, reduced carbon emissions, build on air quality, self-reliance, the use of broken-down foodgrains, an increase in farmer incomes and the creation of jobs.

In this view, ethanol has emerged as an important renewable fuel for transportation purposes. There are three main uses of ethanol in India. This includes clean liquor manufacturing (45 percent), alcohol-based chemical manufacturing (as a solvent in the synthesis of other organic chemicals) (40 percent) and the rest is used for blending with petrol and other purposes.

With a view to achieve 10% ethanol blending in petrol by 2021-22 and 20% by 2030, constraint in available ethanol distillation capacity was identified as one of the actionable points. In order to address the ethanol distillation capacity constraint, Department of Food and Public Distribution (DFPD) notified a Scheme on 19th July, 2018 for extending financial Assistance to sugar mills for enhancement and augmentation of the ethanol production capacity⁴. Ministry of Petroleum and natural gas has also issued a 'Long Term Ethanol Procurement Policy' under EBP Programme on 11.10.2019.

The Cabinet Committee on Economic Affairs chaired by Hon'ble Prime Minister Shri Narendra Modi has approved higher ethanol price derived from different sugarcane based raw materials under the EBP Programme for the forthcoming sugar season 2022-23 during ESY 2022-23 from 1st December 2022 to 31st October, 2023:

- The price of ethanol from C heavy molasses route be increased from Rs.46.66 per litre to Rs.49.41 per litre.
- The price of ethanol from B heavy molasses route be increased from Rs.59.08 per litre to Rs.60.73 per litre.
- The price of ethanol from sugarcane juice/sugar/sugar syrup route be increased from Rs.63.45 per litre to Rs.65.61 per litre.
- Additionally, GST and transportation charges will also be payable.

Nitin Gadkari, the Union Minister for Road Transport and Highways, has already stated earlier that petrol engines need to be compliant with 20 percent ethanol by 2025, five years sooner than the previous deadline of 2030. Maruti Suzuki, in partnership with SIAM and the Government of India, recently showcased a prototype flex-fuel Wagon R that can run on any concentration of ethanol-blended petrol, from 20 percent ethanol (E20) to 85 percent ethanol (E85). Now, the Indian government has finalised its plans for mandating all cars to be ethanol material-compliant from 2023, while all vehicles will have to be E20 compliant from 2025 onwards. Imports of Fuel Oil in India decreased to 0.54 TONNE Million in November from 0.63 TONNE Million in October of 2022.

ADVANTAGES

- Promotion of energy security and reduced dependence on the volatile Middle-East.
- Minimise import dependence: Bridging the current account deficit due to the inelastic nature of crude oil imports.
- The momentum to clean energy which in turn helps in fulfilling our Paris agreement commitments. 1 crore litre of 10% ethanol blended petrol reduces 20000 tons of CO₂ emission.
- It may conduct to improved employment opportunities for people and an alternate income for farmers in the face of a non-remunerative agricultural profession. One 100 KLPD 2G biorefinery can contribute 1200 jobs in Plant Operations.
- It leads to efficient waste management of the 62 million tonnes of annual waste produced in India by engaging it to ethanol production.
- Health benefits: Prolonged reuse of Cooking Oil for preparing food, particularly in deep-frying is a potential health hazard and can lead to many diseases. Used Cooking Oil is a potential feedstock for biodiesel and its use for making biodiesel will prevent the diversion of used cooking oil in the food industry.
- It augurs well with the ongoing initiatives of the Government such as Make in India, Swachh Bharat Abhiyan, Skill Development and offers a great opportunity to integrate with the ambitious targets of doubling Farmers' Income, Import Reduction, Employment Generation, Waste to Wealth Creation.

CHALLENGES

- Creation of artificial scarcity if food grains and tubers are diverted to ethanol production, thereby leading to food inflation.
- Diversion of agricultural land for cultivation of biodiesel crops.
- Modification of vehicles and the introduction of E-20 compatible components may prove to be a hurdle.
- Skewed distribution of ethanol production areas in the country.
- Deficit of ethanol storage infrastructure like storage tanks, nozzle calibration issues, etc

REFERENCES

1. The Hindu, May 20, (2022)
2. Oil ministry's Petroleum Planning & Analysis Cell (PPAC), (2022)
3. Ministry of Petroleum & Natural Gas 05 JUN, (2022)
4. Department of Food and Public Distribution (DFPD), (2022)

GROWTH, PROBLEMS AND PROSPECTS FOR AGRI STARTUPS IN INDIA

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ABSTRACT

Agri startups are the need of farmers as well as the nation. There is a gradual increase in the number of agri startups and investment in it in India. Agritech startup is key to the transformation of India's massive agricultural sector and rural economy. It addresses the problems of Indian agriculture and has the potential to change the face of Indian agriculture sector and eventually raise farmers' incomes. This research paper is trying to study the need of agri startups in India. It further highlighted the scenario of startups and growth of agri startups in India. Problems and prospectsof agri startups in India are also discussed in this paper.

Keywords: Agri Startups, Agriculture, Farmers, Agricultural Technology etc.

INTRODUCTION

Indian agriculture sector has the second largest agricultural land globally. Agriculture plays a huge role in shaping the national economy by contributing nearly 16% to India's GDP with 44% of the total workforce employed in it. Despite India being an agrarian economy and a top producer and exporter of several agricultural commodities, multiple challenges such as high weather dependency, supply chain inefficiencies, depleting resources and low productivity hold back the sector from performing to its potential. The use of technology in the agricultural industry has been limited in India. Agritechstartup is key to the transformation of India's massive agricultural sector and rural economy.¹

OBJECTIVES OF THE STUDY

- 1) To study the need of agri startups in India.
- 2) To highlight the scenario of startups and growth of agri startups in India.
- 3) To study the problems and prospects of agri startups in India.

RESEARCH METHODOLOGY

This study is based on secondary data which is collected from various journals and websites. The main aim of this research paper is to study the problems and prospects of agri startups in India. This research paper is trying to add in the existing literature on agri startups in India.

Need For Agri Startups in India

Today's farmer faces a lot of challenges to sustain their livelihood through farming. Malpractices in the unorganized agricultural markets and the absence of organized marketing systems for production are becoming a major concern for Indian farmers. Moreover, they have to deal with poor transportation and storage services and much more. They have limited access to superior technology to get timely information and agricultural solutions which leaves them vulnerable and all by themselves. Agritech startups have the potential to address these challenges from the very beginning, and subsequently change the face of Indian agriculture. They are the knights in shining armour for Indian farmers.²

Scenario of Startups in India

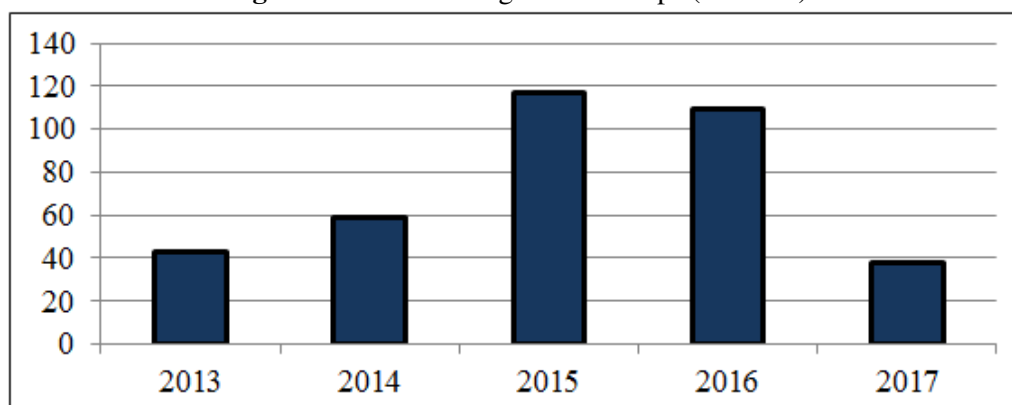
The ongoing initiative of startup India was launched by the Government of India in 2016. The objective is to boost startup culture and create an environment of entrepreneurship in India. India is the 3rd largest start-up hub in the world. It is expected to witness a consistent annual growth of 12-15%. India has about 50,000 startups in India. About 31945 start-ups under the Startup India Initiative are recognized by DPITT to date. Startups in the country have been able to create an estimated 40,000 new jobs over the year, taking the total jobs in the start-up ecosystem to 1.6-1.7 lakh. Bangalore has been listed within the world's 20 leading startup cities in the 2019 Startup Genome Project ranking. It is also ranked as one of the world's five fastest growing startup cities.³

Growth of Agri-Startups in India

There has been an incremental growth in agritech start-ups in India, as total start-ups increased from 43 in 2013 to more than 1,300 as of April 2022. According to a Ken Research report, the Indian Agritech market was expected to grow at a CAGR (revenue) of 32 per cent from FY20 to FY25. Karnataka, Maharashtra and Delhi-NCR had the most number of Agri-tech start-ups in the country. Currently, 8% or 1294 of the total recognized start-ups in the country are in Agri startups space as per the Economic Survey of 2019-20. Of these, 54% are classified as Agri-tech while the rest are in the field of dairy farming, food processing and organic agriculture.⁴

A total of 366 agri-based startups have come up from 2013 to 2017. Figure 1 shows that the maximum number of startups (117) started in the year 2015. It was followed by 2016, 2014, 2013 and 2017. It is to be noted that more than 50 percent of the startups in the last 5 years got started in year 2015 and 2016.⁵

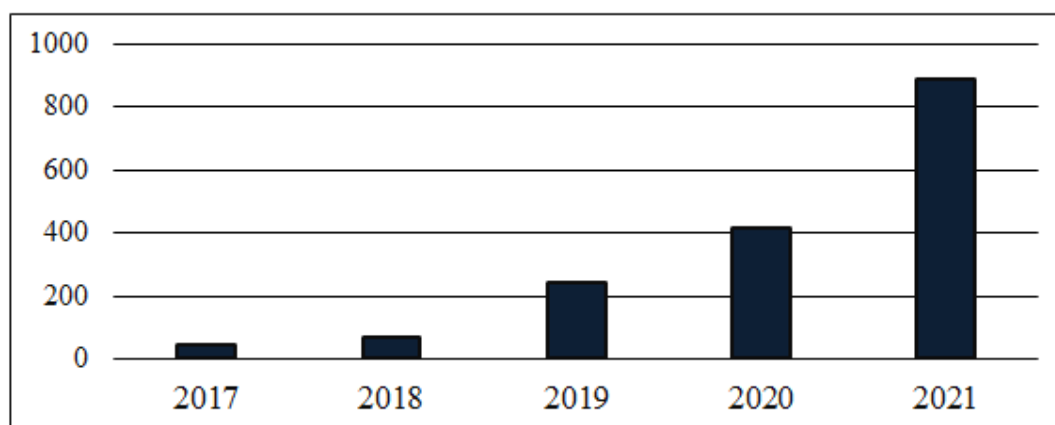
Figure 1: Growth of Agritech Startups (2013-17).



Source: NASSCOM, 2018.

India has received a total funding of US\$ 1.6 billion in agritech start-ups till 2021, and the investments and growth phase had started in 2019. Agritech funding stood at US\$ 245.2 million in 2019 and increased at a CAGR of 90% to US\$ 889 million as of 2021. Around US\$ 305 million out of the US\$ 1.6 billion funding was directed towards market linkage segment, which includes the setting up of digital marketplace for agri inputs. Bengaluru, Chennai and Pune are among the top three start-up hubs with respect to funding received.⁶

Figure 2: Agritech Funding in India.



Source: INC 42

Leading Agritech Startups in India

There are many agritech startups in India, but the leading agritech startups in India are as follows:⁷

1) Ecozen Solutions

Ecozen Solutions is based in Pune, which was founded in 2010 by Devendra Gupta, Prateek Singhal, and Vivek Pandey. It focuses on developing technology-enabled products to strengthen the farm-to-fork value chain of perishables, with a focus on renewable energy and sustainable development. Till now, Ecozen has developed two products so far: a) Ecofrost, is a device that acts as a portable cold room that maintains a low temperature. It works on solar power and b) Ecotron, a pump controller for irrigation that also works on solar power. According to the company, approximately 20,000 farmers in India have used their products.

2) Freshvnf

FreshVnF is founded by entrepreneurs Atul Kumar, Vikas Dosala, Sumit Rai, and Aashish Krishnatre in 2018. It is a Mumbai based Agritech startup that uses machine learning (ML) to optimize a farm-to-fork supply chain by connecting farmers with hotels, restaurants, and cafes. It has delivered around 15 tonnes of fresh produce per day to more than 300 clients. The company now aims to provide fresh farm produce to the end customer within 16 hours of harvesting.

3) FIB-SOL Life Technologies

FIB-SOL Life Technologies is an agritech startup that was founded in 2013 by a team of post-doctoral and doctoral scholars of IIT Madras. The company's technology is focused on developing low-cost bio-fertilizers that help farmers to improve crop yield and soil quality. The company offers three products for its customers under GEL and DROPS which provide microbial nutrients to enrich the fertility of farmlands.

4) Barton Breeze

Barton Breeze is a commercial hydroponic farm specialist, using controlled sustainable technology and modern farming techniques, to create highly productive agri-models for the new-age farmer. Barton implements Artificial Intelligence and IoT (Internet of things) for productivity. Software is developed where a device is clipped on the leaves and stem of each plant. The software is connected to the computers and informs the user when a particular plant needs more nutrients or minerals.

5) BharatAgri

BharatAgri is a farming technology platform where they work with farmers directly. BharatAgri follows the mission of bridging the gap between technology and agriculture in India with a vision to reach out to maximum Indian farmers. They support farmers to "Grow Efficient, Grow More" through the systematic implementation of scientific techniques by providing critical information at appropriate times and regular monitoring.

6) Fasal

Fasal is a Bengaluru-based agri-tech platform founded in 2018. It is an AI-powered platform for the agricultural ecosystem. It records a variety of growing conditions on the farm and then uses artificial intelligence and data science to make on-farm predictions, before delivering the insights anywhere on any device including Android, iOS, tablets and the web.

7) Rise Hydroponics

Rise Hydroponics started in 2020. Rise Hydroponics is providing Soilless Farming Solutions to make agriculture a sustainable business by helping small farmers, creating urban farmers & making India future ready for 2030.

Problems Faced by Agri Startups in India:

There are various problems that are being faced by these start-ups. Which are as follows:⁸

- 1) **Rigid Old Models:** One of the major reasons for rejection of funding for agri start-ups have been the business models. The existing systems are too rigid that it is difficult to break and scale the new business models. There is a presumption that agriculture cannot have a viable business model and when the business models do not meet the expectations, the investors shy away.
- 2) **Lack of Commercial Guidance:** When it comes to expansion of agri start-ups, what is needed is good commercial guidance. In fact, this guidance is what aids them in networking, finding resources and gaining expertise, however, it is still not available in agricultural start-ups.
- 3) **Incubators' Competence:** Start-up Incubators do not have the expertise and competence to guide these Farm Oriented Start-ups. Their focus is chiefly on IT, health etc. This proves to be a problem for the ones who want to succeed.
- 4) **Investor Apathy:** Considering that the sector is filled with a lot of uncertainties, there is a lot of investor apathy when it comes to agri start-ups.
- 5) **Lack of Subject Matter Experts/ Mentors:** One of the chief problems faced is that not many mentors are available in this space. The experienced ones who are available are not entrepreneurs and the ones you know have no idea about this space. There is also a need for education support for the next generation in the field.
- 6) **Application of Technology:** When it comes to agri tech, there is also the issues faced by the end users. There is very little technology adoption here.
- 7) **Urban Investors Lack of Understanding:** Investors mainly have urban backgrounds. These are people who mainly know to cater to urban demands. The problems and solutions of these start-ups may not be easily understood by these backers.

Prospects for Agritech Startups in India

According to an EY report, the Indian agritech market potential is estimated to be around US\$ 24 billion by 2025. Global venture capital firms and private equity players are interested in investing in Indian agritech companies, and funding has witnessed stellar growth despite the pandemic. Agritech firms have played a pivotal

role in supporting farmers during the pandemic. Government intervention has helped the agriculture output to show positive growth during the crisis, and now, the aim is to double farm income. The Indian start-up ecosystem and the government is already contributing and supporting farmers, but there are still promising prospects ahead for agritech in India.⁹The following table highlights the agritech segment and start-ups focusing on each segment:

Agritech Segment	MarketPotential(US\$ Billion) *
Market linkage and supply chain	12
Farm inputs	2
Precision agriculture and farm management	3
Farming as a Service	3
Financial Services	4

Source: EY *Estimate for 2025

CONCLUSION

Agritech startups are the need of the nation right now. More and more entrepreneurs are setting up companies in this field, grabbing the opportunity to transform the sector. The government policies are also giving thrust to these startups so that they can easily find investors. The farmers can finally look forward to better price realization now and embrace this new initiative. A wave of agritech startups in India has come in up last few years to address the problems of Indian agriculture and has the potential to change the face of Indian agriculture sector and eventually raise farmers' incomes.

REFERENCES

- 1) Reema Aswani (2021). Agritech: Agriculture Sector in India - Opportunities and Challenges. Retrieved from <https://community.nasscom.in/communities/agritech>.
- 2) Rishita Jain (2022). Growth of AgriTech Startups in India: Government Initiatives, Leading Agritech Startups and More. Retrieved from <https://startuptalky.com/indian-agritech-startups-growth>.
- 3) <https://www.makeinindia.com/startup-ecosystem-india>
- 4) Singh Rajesh (2022). Livestock Based Agritech Start-Ups in India: Probable Reasons for Agritech Start-Ups Failing in India.
- 5) Anand, Anupam & Raj, Saravanan. (2019). Agritech Startups: The Ray of Hope in Indian Agriculture.
- 6) <https://www.ibef.org/blogs/promising-investment-prospects-in-agritech>
- 7) <https://bwdisrupt.businessworld.in/article/These-Five-Agri-tech-Startups-Are-Helping-Farmers-To-Grow-Good-Quality-Produce/09-08-2021-400029/>
- 8) Subramanian (2019). Problems faced by Agri Start-ups in India. Retrieved from [https:// www.linkedin.com/pulse/problems-faced-agri-start-ups-india-i-m-v-subramanian](https://www.linkedin.com/pulse/problems-faced-agri-start-ups-india-i-m-v-subramanian).
- 9) <https://www.ibef.org/blogs/promising-investment-prospects-in-agritech>
- 10) Bholane K. P. (2021). Recent Trends and Prospects for Agricultural Marketing in India. Indian Agriculture and New Agriculture Acts (An Edited Book), pp. 121-127.
- 11) Bholane K. P. (2017). Digital India: Issues and Concerns. Proceedings on International Conference on Recent Trends in Commerce and Management (ISBN – 978-93-24457-16-8).
- 12) Bholane K. P. (2020). Green Economy in the Context of India. Vidyawarta - Peer Reviewed Journal, Vol. 34 (1), pp. 0437-0441
- 13) Bholane K. P. (2013). A Policy Shift from Economic Growth to Green Growth with Special Reference to India. EXCEL International Journal of Multidisciplinary Management Studies, Vol. 3(12), pp. 126-132.

IMPACT OF INVESTMENT BY FII'S ON INDIAN STOCK MARKET WITH SPECIAL
REFERENCE TO EQUITY PRICES OF REAL ESTATE

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ABSTRACT

*The foreign institutional investors (FII) have become a significant driving force of the Indian capital market and their growing presence marks the development of the capital market of India. The major part of investment in Indian capital market is attributed to institutional investors among whom foreign institutional investors (FIIs) are of primary importance. Foreign Institutional Investors (FII) means an institution established or incorporated outside India which proposes to make investment in securities in India. They are VI registered as FIIs in accordance with Section 2 (f) of the SEBI (FII) Regulations 1995. FIIs are allowed to subscribe to new securities or trade in already issued securities. In the Union Budget 2013-14, announced on 28 February 2013, vide Para 95, Honourable FM announced his intention to go by the internationally accepted definition for FIIs and FDIs, as follows In order to remove the ambiguity that prevails on what is 2013-14, announced on 28 February 2013, vide Para 95, Honourable FM announced his intention to go by the internationally accepted definition for FIIs and FDIs, as follows In order to remove the ambiguity that prevails on what is Foreign Direct Investment (FDI) and what is Foreign Institutional Investment (FII), it is proposed to follow the international practice and lay down a broad principle that, where an investor has a stake of 10 percent or less in a company, it will be treated as FII and, where an investor has a stake of more than 10 percent, it will be treated as FDI. A committee will be constituted to examine the application of the principle and to work out the details expeditiously. Hence, the understanding of determinants of FII is very important for any emerging economy as FII exerts a larger impact on the domestic financial markets in the short run and a real impact in the long run. The present Research is an attempt to find out determinants of foreign institutional investment in India, a country that opened its economy to foreign capital due to their foreign exchange crisis. The objective of the study is to find out whether there exists relationship between FII and Indian capital market. **Keywords:** FII, Indian Capital Market, BSE SENSEX, NIFTY 50*

INTRODUCTION

In India, stock exchanges began operating in 1875. The BSE is the country's oldest stock exchange. 318 people joined Native Share and Stock Brokers Association, today known as the Bombay Stock Exchange or BSE for short, at the beginning of the history of Indian stock trading. The Indian government officially recognized BSE in 1965. BSE is more well-known than the National Stock Exchange in terms of popularity. BSE and NSE promote themselves as interchangeable terms for the Indian stock market. The histories of the Indian stock market and the BSE are remarkably similar. Sensex, a 30-stock sensitive index, was created for the first time in 1986. The performance of the equities of 30 financially strong benchmark companies is used to calculate the Sensex. The BSE first surpassed the 1000 threshold in 1990. In 1992, it surpassed the 2000, 3000, and 4000 mark. The liberal financial policies introduced by Dr. Man Mohan Singh, the country's then-finance minister, were the cause of the stock market's tremendous increase. With the Harshad Mehta scam, the market's positive vibe was abruptly lost. The public learned that Mr. Mehta, widely known as the big-bull of the Indian stock market, had fraudulently siphoned enormous sums of money from banks. He used 270 million shares from around 90 different companies to gamble. As the Sensex lost 570 points and dropped flat, millions of small investors fell prey to the scam. The Government established The Securities and Exchange Board of India by an Act in 1992 to stop such frauds. The statutory organization known as SEBI oversees and controls the operations of stock exchanges, brokers, sub-brokers, portfolio managers, investment advisors, etc. According to top SEBI officials, with the advent of online trading and daily settlements, the likelihood of fraud is now negligible. SEBI imposes a number of strict safeguards to protect the interests of investors. In 1999, the Sensex exceeded 5000, and in 2000, it reached 6000. On June 7 and September 8 of 2005, the 7000 and 8000 milestones, respectively, were attained. Large numbers of foreign institutional investors (FII) are making significant investments in the Indian stock markets. The liberal economic policies followed by succeeding governments attracted a significant amount of institutional international investor.

INDIAN STOCK MARKET HISTORY

The Indian Stock Exchanges have a 200-year history, making it one of the oldest stock markets in Asia. East India Company was the dominant institution in the 18th century, and by the century's conclusion, business in its loan securities had fully taken off. Business on corporate stocks, bank shares, and stock in cotton presses began in Bombay in the 1830s. By the end of 1839, the trading list had expanded. 1840s About six brokers received

recognition from banks and merchants. 1850's The brokerage industry expanded quickly during the 1860s, bringing more people into the sector. There were now 60 brokers in all. 1875 In Bombay, "The Native Share and Stock Brokers' Association" (often referred to as "The Bombay Stock Exchange"). 1880's growth of the cotton mills business and establishment of numerous others. "The Ahmedabad Share and Stock Brokers' Association" was founded in 1894. 1880 - 90's A surge in tea stocks and coal prices followed a sharp rise in the share prices of jute manufacturers in the 1870s. The "Calcutta Stock Exchange Association" was established in 1908. Madras saw a boom in 1920, and at "The Madras Stock Exchange," 100 brokers conducted business. 1923 When the recession hit, there were just three brokers left, and the Exchange was shut down. Initiation of the Lahore Stock Exchange in 1934 Lahore Stock Exchange and Punjab Stock Exchange merger in 1936 1937 Madras Stock Exchange Limited (Pvt.) Limited reorganization and establishment led by With the construction of new textile mills and plantation enterprises, the stock market activity in South India have improved.

Bangalore Stock Exchange Page | 5 Limited was established in 1957 but didn't receive official accreditation until 1963. Prior to 1957, when the majority of the other Exchanges submitted applications for recognition under the Securities Contracts (Regulations) Act of 1956, they were in a deplorable situation. The Act acknowledged the following exchanges:

1. Bombay 2. Calcutta 3. Madras 4. Ahmedabad 5. Delhi 6. Hyderabad 7. Bangalore 8. Bombay 9. Calcutta 10. Madras 11. Ahmedabad 12. Delhi 13. Hyderabad 14. Bangalore 15. Indore

Many more stock exchanges were established during 1980's, namely: Cochin Stock Exchange (1980), Uttar Pradesh Stock Exchange Association Limited (at Kanpur, 1982), Pune Stock Exchange Limited (1982), Ludhiana Stock Exchange Association Limited (1983), Gauhati Stock Exchange Limited (1984), Kanara Stock Exchange Limited (at Mangalore, 1985), Magadh Stock Exchange Association (at Patna, 1986), Jaipur Stock Exchange Limited (1989), Bhubaneswar Stock Exchange Association Limited (1989), Saurashtra Kutch Stock Exchange Limited (at Rajkot, 1989), Vadodara Stock Exchange Limited (at Baroda, 1990), Coimbatore Stock Exchange, Meerut Stock Exchange.

SCOPE OF THE STUDY

The impact of foreign institutional investments and the Indian equity stock market are examined in this research. Information derived from secondary data from various websites is included in the research's scope. The different facts and figures were taken from the websites of the BSE, NSE, Money Control, RBI, and SEBI. Given that Sensex and Nifty are the most commonly utilized market indexes and are frequently used as benchmarks by market participants, they are an obvious candidate for inclusion in the study

IMPORTANCE OF THE STUDY

The Indian stock market is extremely volatile, and FII play a significant part in both the market's upward and downward movement. FIIs frequently acquire and sell equities in large quantities, and their departure can have a significant withdrawal effect. Therefore, the goal of this study is to identify the patterns of how institutional activities affect stock market buyers' and sellers' behaviour.

STATEMENT OF THE PROBLEM

Prior to making investing decisions, fundamental research includes an examination of overall economic trends. In this context, investors frequently examine the FII trend in a given nation. The precise nature of the connection between stock performance and FII investment is still unknown. The association between FII investment and stock performance, particularly for the Indian market, hasn't been thoroughly studied, nevertheless. Even while there is study in this area, it only establishes associations rather than causal relationships

OBJECTIVES OF THE STUDY

1. To analyze the trend investment by FIIs in Indian stock market.
2. To understand the relation between FIIs investments and stock market volatility.
3. To analyze the factors influencing volatility.

RESEARCH METHODOLOGY

The study is based on regression and correlation model representing relationship between Indian Stock Market (Dependent variable) and FII (Independent Variable). This study is based on secondary data. The required data related to FII have been collected from various sources i.e. Bulletins of Reserve Bank of India, publications from Ministry of Commerce, SEBI Handbook of Statistics, Govt. of India. CNX Nifty data is down loaded from the websites of NSE. Daily closing index value are taken and averaged to get the index value for each year, which is considered as more representative figure of index for the entire year. The current study considers 18 years' data starting from Jan 2002 to DEC 2020

The Indian Real Estate Industry

One of the industries with the highest international recognition is real estate. Housing, retail, hospitality, and commercial are its four subsectors. The expansion of the business environment and the demand for office space, as well as for lodging in cities and semi-cities, are excellent complements to the growth of this industry. In terms of the direct, indirect, and induced effects on all areas of the economy, the construction industry comes in third among the 14 key industries.

After the agricultural sector, the real estate industry in India is the second largest employer. Additionally, greater non-resident Indian (NRI) investment is anticipated in this industry over the long and short terms. NRIs are predicted to prefer Bengaluru above other cities for their real estate investments, which will be followed by Ahmedabad, Pune, Chennai, Goa, Delhi, and Dehradun.

Industry Size: From Rs. 12,000 crore (US\$1.72 billion) in 2019 to Rs. 65,000 crore (US\$9.30 billion) in 2040, the real estate market will increase. In India, the real estate market is anticipated to grow to US\$ 1 trillion in size by 2030 from US\$ 200 billion in 2021 and to account for 13% of GDP by 2025. Additionally expanding considerably are retail, hospitality, and commercial real estate, giving India's economy the infrastructure it needs expanding demands.

ICRA forecasts that Indian businesses would raise more over Rs. 3.5 trillion (US\$ 48 billion) through infrastructure and real estate investment trusts in 2022 as opposed to the US\$ 29 billion raised so far.

From July 2020 to December 2020, the office market in the top eight cities had sales totaling 22.2 Million square feet, while new completions during that time were recorded at 17.2 Million square feet. In the second half of 2020, the Information Technology (IT/ITeS) sector dominated in terms of sectoral occupiers, accounting for 41% of all occupiers. This was followed by the BSFI and Manufacturing sectors, which each accounted for 16% of all occupiers, and the Other Services and Coworking sectors, which recorded 17% and 10% of all occupiers, respectively.

By 2025, Savills India projects that the need for data center real estate would rise by 15 to 18 Million square feet.

At 5.7 Million square feet, the manufacturing industry leased 24% of all office space in 2020. Between Pune, Chennai, and Delhi NCR, SMEs and electronic component Page | 80 makers leased the most, followed by the auto industry in Chennai, Ahmedabad, and Pune. 34 percent, 26 percent, and 9 percent, respectively, of office space leases were in the 3PL, e-commerce, and retail sectors. Office investments accounted for 71% of all PE real estate investments in Q4 FY21. Office investments were followed by retail investments (15%), residential investments (7%), and warehouse investments (7%).

JLL India reports that in the third quarter of 2021, India's net office absorption increased by 8% YoY in major cities to 5.85 million square feet. Sixty-two percent of the total volumes tallied in the quarter were concentrated in three cities: Delhi-NCR, Mumbai, and Pune.

In India's eight micro markets, there were a total of 55,907 new housing units sold between July and September 2021. (59 percent YoY growth). Between July 2021 and September 2021, there were 65,211 new housing units available, a 228 percent YoY increase across the top eight cities from the 19,865 units that were introduced in the third quarter of 2020.

The commercial sector is anticipated to see rising investments in 2021–2022. For instance, the Chintels Group announced in October 2021 that it would invest Rs. 400 crore (US\$ 53.47 million) in the development of a new commercial complex in Gurugram that would be 9.28 lakh square feet in size.

In contrast to the required building pace of five houses per 1,000 people, according to the Economic Times Housing Finance Summit, only roughly three houses are produced per 1,000 people annually. An estimated 10 million housing units are currently needed in urban areas. By 2030, the country will need an additional 25 million affordable housing units to accommodate the increase in the urban population

Investments

With increased demand for both business and residential spaces, the Indian real estate sector has recently experienced rapid growth. Increasing investor interest in securing favourable prices in the midst of the pandemic is likely to propel institutional investments in the Indian real estate sector to reach Rs. 36,500 crore (US\$ 5 billion) in 2021, according to Colliers India, a property consultant. In the first half of 2021, private equity investments in Indian real estate reached US\$ 2.9 billion, a >2x increase from the first half of 2020, according to a recent research by Colliers India.

Exports from SEZs increased by 13.6% from Rs. 7.1 lakh crore (US\$ 100.3 billion) in FY19 to Rs. 7.96 lakh crore (US\$ 113.0 billion) in FY20. To make the market more accessible to small and retail investors, the Securities and Exchange Board of India reduced the minimum application value for Real Estate Investment Trusts from Rs. 50,000 (US\$ 685.28) to Rs. 10,000-15,000 (US\$ 137.06 - US\$ 205.59) in July 2021.

Construction is the third-largest sector in terms of FDI inflow, according to data made public by the Department for Promotion of Industry and Internal Trade Policy (DPIIT). The third-largest sector in terms of FDI inflow is construction. Between April 2000 and June 2021, FDI in the sector—which includes construction development and activities—amounted to US\$51.5 billion.

The following are some of the significant investments and developments in this industry.

Private equity investment inflows into India's real estate market between January 2021 and September 2021 totaled US\$3.3 billion. From 29,520 units in the same period last year, home sales volume across seven major Indian cities increased by 113% YoY to 62,800 units in the third quarter of 2021. This indicates a healthy recovery following the strict lockdown imposed in the second quarter due to the spread of COVID-19 throughout the nation. Institutional real estate investment in India increased by 7% year over year in the third quarter of 2021. Compared to the same period last year, investment totaled US\$ 2,977 million in the first nine months of 2021, up from US\$ 1,534 million.

The 16-story commercial skyscraper in Navi Mumbai owned by Aurum Ventures was purchased by Ascendas India in November 2021 for Rs. 353 crore (US\$ 47 million), making it the largest sale of a solo commercial tower by a global institutional investor in recent years.

In order to provide homebuyers with legal counsel and support, REA India-owned online real estate company Housing.com partnered with online legal aid start-ups LegalKart, Lawrato, Vidhikarya, and Vakil in 2021. In the third quarter of 2021, the top three cities—Mumbai (39 percent), NCR-Delhi (19 percent), and Bengaluru (19 percent)—attracted 77 percent of all investments. According to a CBRE report, India's flexible space stock, which is currently 36 million square feet, will likely increase by 10 to 15 percent YoY over the next three years.

In June 2021, GIC announced plans to buy a minority stake in Phoenix Mills' portfolio (worth US\$ 733 million) in order to create an investment platform for Indian retail-led mixed-use assets. To increase its presence in the nation, Blackstone Real Estate purchased Embassy Industrial Parks in May 2021 for Rs. 5,250 crore (US\$ 716.49 million).

SRAM & MRAM Group worked along with Indian companies Gupta Builders and Promoters Private Limited (GBP Group) and Area CAS Developers and Infrastructure Private Limited (Area Group) to enter the Indian real estate sector. It intends to put \$100 million into the real estate industry. A rock reports that compared to Q4 FY20, housing sales in seven cities climbed by 29 percent, while new launches increased by 51 percent.

Blackstone, a private market investor, has made large investments in the Indian real estate market, totaling Rs. 3.8 lakh crore (US\$ 50 billion), and it plans to make more investments totaling Rs. 1.7 lakh crore (US\$ 22 billion) by 2030.

Working remotely is becoming more popular in 2021, and demand for inexpensive homes with ticket sizes under Rs. 40–50 lakh is anticipated to surge in Tier 2 and Tier 3 cities, driving up prices in such regions.

In order to develop a platform that will concentrate on high-yield possibilities in the Indian residential real estate market, HDFC Capital Advisors (HDFC Capital) and Cerberus Capital Management (Cerberus) teamed in April 2021. The platform aims to buy inventories and give last-mile financing for home construction projects across the nation.

Godrej Properties announced in March 2021 that it would start ten new real estate projects in Q4. By purchasing equity shares from HDFC Venture Trustee Company in March 2021, Godrej Properties increased its equity stake in Godrej Realty from 51% to 100%. The wholly owned subsidiary of SOBHA Limited, Sabha Highrise Ventures Pvt. Ltd., purchased a 100% stake in Annalakshmi Land Developers Pvt. Ltd. in January 2021.

Governmental Programs

Numerous actions have been made to promote sector growth by the governments of the individual States and India. Real estate businesses have a lot to gain from the Smart City Project, which aims to develop 100 smart cities. Some more significant government efforts are listed below:

The RBI announced in October 2021 that the benchmark interest rate would remain at 4%, significantly bolstering the nation's real estate market. Sales of homes are anticipated to rise by 35–40% during the holiday season in 2021 as a result of the low home loan interest rate regime.

Tax deductions for housing loan interest up to Rs. 1.5 lakh (\$2069.89) and a tax holiday for projects that build affordable housing have been extended through the end of the fiscal year 2021–2022, respectively, under the Union Budget 2021–22.

For the primary purchase or sale of residential units of value (up to Rs. 2 crore (US \$ 271,450.60) from November 12, 2020 to June 30, 2021) there were income tax relief measures for real estate developers and home buyers included in the Atmanirbhar Bharat 3.0 package announced by Finance Minister Mrs. Nirmala Sitharaman in November 2020.

The establishment of a Rs. 25,000 crore (US\$ 3.58 billion) alternative investment fund has been authorized by the Union Cabinet in order to revive approximately 1,600 housing projects that have stalled in the country's top cities (AIF). With an initial corpus of Rs. 10,000 crore (US\$ 1.43 billion), the government established the Affordable Housing Fund (AHF) at the National Housing Bank (NHB) to address the shortfall in priority sector lending among banks and financial institutions for HFCs' microlending.

India had officially sanctioned 425 SEZs as of January 31, 2021, 265 of which were up and running. IT/BPM-related special economic zones (SEZs) make up the majority of them.

Road Ahead

The Real Estate Investment Trust (REIT) platform, which will allow all types of investors to invest in the Indian real estate market, has been approved by the Securities and Exchange Board of India (SEBI). In the ensuing years, it would produce a market opportunity in India worth Rs. 1.25 trillion (US\$ 19.65 billion). Indian real estate developers have changed tactics and embraced new challenges in response to a consumer base that is becoming more aware and keeping in mind the impact of globalization. The transition from family-owned to professionally managed firms has been the most obvious change. Real estate developers are hiring qualified experts in fields like project management, architecture, and engineering in order to meet the growing demand for managing multiple projects across cities. They are also investing in centralized processes to source materials and organize labor.

With the ambitious Pradhan Mantri Awas Yojana (PMAY) scheme of the Union Ministry of Housing and Metropolitan Affairs, the central government intends to build 20 million affordable houses in urban areas across the country by 2022, the residential sector is likely to increase dramatically. The demand for commercial and retail office space will rise as more homes are expected to be built in urban areas.

An estimated 10 million housing units are currently needed in urban areas. By 2030, the country would need an additional 25 million affordable dwelling units to accommodate the increase in the urban population.

The amount of FDI in Indian real estate is increasing, which promotes greater openness. Developers have updated their accounting and management systems to meet due diligence standards in order to attract funding. Indian real estate is anticipated to draw a sizable amount of FDI over the next two years, with a capital infusion of \$8 billion by FY22.

Top 10 Real Estate Companies in India

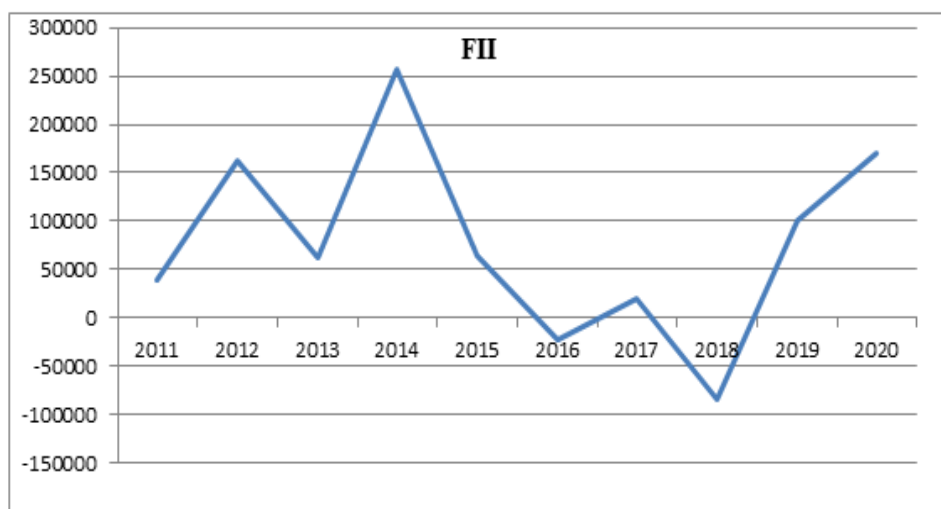
1. Ansal Properties and Infrastructure Ltd.
2. Brigade Enterprises Ltd.
3. DLF Ltd.
4. Godrej Properties Ltd.
5. Indiabulls Real Estate Ltd.
6. L&T Realty Ltd.
7. Oberoi Realty Ltd.
8. Omaxe Ltd.
9. Prestige Estates Projects Ltd.
10. Sobha Ltd

Table: Investment Trend of FII (2011-2020)

Year	FII
2011	39352
2012	163350

2013	62287
2014	256211
2015	63662
2016	-23079
2017	20048
2018	-83254
2019	101122
2020	170261

Investment Trend of FII (2011-2020)



Investment Trend of FII and Nifty Reality (2011-2020)

Year	Nifty Reality	FII (CR)
2011	184.2	39352
2012	281.3	163350
2013	184.6	62287
2014	203.1	256211
2015	172.6	63662
2016	165.35	-23079
2017	346.9	20048
2018	232.35	-83254
2019	298	101122
2020	313	170261

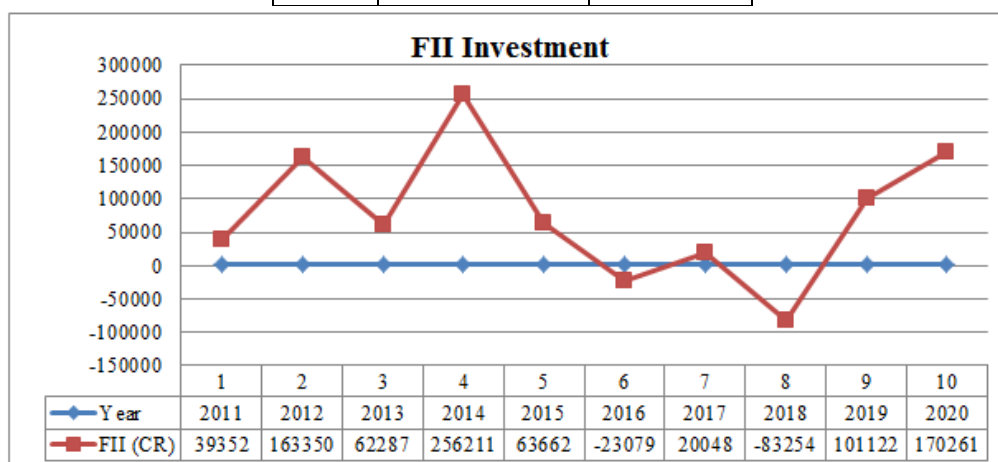


Table and figure indicates the Investment Trends of FII (2011-2020) during the study period in the financial year 2016 and 2108 are found negative whereas in remaining years it was positive. In the financial year 2014 it was very high whereas in year 2018 it is found very adverse.

Correlation Analysis between FII Holdings and Stock Price DLF.

Historical shareholding details of Foreign Portfolio Investors in DLF Analysis of Real Estate sector:

Quarter	Percent Holding	Share Price
Sep-21	17.00%	417
Jun-21	16.99%	281
Mar-21	17.39%	287
Dec-20	18.28%	232
Sep-20	18.33%	152
Jun-20	18.54%	148
Mar-20	18.33%	137
Dec-19	18.40%	230
Sep-19	16.61%	155
Jun-19	16.93%	188
Mar-19	21.27%	201
Dec-18	16.77%	177
Sep-18	16.71%	162
Jun-18	16.69%	188
Mar-18	16.25%	201
Dec-17	16.99%	259
Sep-17	16.67%	164
Jun-17	17.21%	190
Mar-17	18.15%	148
Dec-16	17.38%	111
Sep-16	17.02%	146
Jun-16	16.67%	150
Mar-16	16.38%	114
Dec-15	17.98%	116
DLF	Percent Holding	Share price
Percent Holding	1	
Share price	-0.121689389	1

Table: Analysis of Godrej Properties:

Correlation Analysis between FII Holdings and Stock Price of Godrej Properties:

Historical shareholding details of Foreign Portfolio Investors in Godrej Properties

Quarter	Percent	Holding Share Price
Sep-21	2.99%	2311
Jun-21	3.61%	1396
Mar-21	3.83%	1408
Dec-20	4.40%	1431
Sep-20	4.25%	860
Jun-20	3.92%	869
Mar-20	4.26%	602
Dec-19	4.23%	988
Sep-19	3.31%	1037
Jul-19	2.67%	953
Jun-19	2.67%	1000
Mar-19	1.60%	814
Dec-18	1.22%	850
Sep-18	1.28%	593
Jun-18	1.30%	717
Mar-18	2.46%	725
Dec-17	2.21%	694
Sep-17	2.52%	619
Jun-17	2.19%	519

Mar-17	2.80%	492
Dec-16	1.07%	302
Sep-16	1.03%	346
Jun-16	0.57%	365
Mar-16	0.07%	330
Dec-15	0.19%	337
Godrej	Percent Holding	Share price
Percent Holding	1	
Share price	0.553403726	1

Table Analysis of Oberoi Reality:**Correlation Analysis between FII Holdings and Stock Price Oberoi Reality**

Historical shareholding details of Foreign Portfolio Investors in Oberoi Reality

Quarter	Percent Holding	Share Price
Sep-21	22.21%	963
Jun-21	23.49%	629
Mar-21	24.85%	575
Dec-20	25.61%	583
Sep-20	25.40%	394
Jun-20	26.15%	349
Mar-20	24.91%	334
Dec-19	25.33%	530
Sep-19	25.77%	507
Jun-19	26.07%	607
Mar-19	25.38%	527
Dec-18	25.40%	445
Sep-18	25.54%	403
Jun-18	26.44%	477
Mar-18	21.98%	508
Dec-17	22.58%	479
Sep-17	24.66%	423
Jun-17	24.94%	358
Mar-17	25.35%	367
Dec-16	25.35%	294
Sep-16	24.23%	292
Jun-16	22.07%	271
Mar-16	21.30%	270
Dec-15	21.29%	268
Percent Holding	Share price	
Percent Holding	1	
Share price	-0.180566431	1

Table Analysis of India Bulls**Correlation Analysis between FII Holdings and Stock Price of India bulls:**

Historical shareholding details of Foreign Portfolio Investors in Indiabulls

Quarter	Percent Holding	Share Price
Dec-21	19.88%	151
Sep-21	19.43%	150
Jun-21	16.58%	117
Mar-21	15.90%	81
Dec-20	9.39%	82
Sep-20	14.20%	51
Jun-20	18.10%	48
Mar-20	21.09%	40

Dec-19	22.48%	65
Sep-19	23.14%	45
Jun-19	23.00%	113
Mar-19	28.50%	92
Dec-18	25.60%	87
Sep-18	24.44%	88
Jun-18	23.26%	156
Mar-18	24.81%	181
Dec-17	27.58%	223
Sep-17	35.18%	220
Jun-17	31.70%	200
Mar-17	18.08%	87
Dec-16	18.79%	71
Sep-16	12.14%	92
Jun-16	9.66%	93
Mar-16	8.66%	56
Dec-15	6.07%	63
Indiabulls Realty	Percent Holding	Share Price
Percent Holding	1	
Share Price	0.602094978	1

Table Analysis of Omaxe:**Correlation Analysis between FII Holdings and Stock Price of Omaxe:**

Historical shareholding details of Foreign Portfolio Investors in Omaxe

Quarter	Percent Holding	Share Price
Dec-21	9.45%	76
Sep-21	9.44%	77
Jun-21	9.83%	80
Mar-21	9.88%	67
Dec-20	9.92%	82
Sep-20	10.05%	67
Jun-20	10.20%	141
Mar-20	10.73%	152
Dec-19	10.93%	155
Sep-19	11.29%	191
Jun-19	11.44%	199
Mar-19	11.58%	206
Dec-18	11.67%	213
Sep-18	11.72%	217
Jun-18	12.08%	219
Mar-18	12.56%	220
Dec-17	13.27%	230
Sep-17	13.80%	197
Jun-17	14.02%	202
Mar-17	13.37%	168
Dec-16	13.33%	158
Sep-16	13.72%	171
Jun-16	11.97%	160
Mar-16	11.42%	144
Dec-15	2.03%	135
Omaxe	Percent Holding	Share Price
Percent Holding	1	
Share Price	0.514087673	1

Findings: Correlation Analysis of Real Estate Sector

- There is positive correlation between FII Holdings and Godrej Properties as correlation coefficient is 0.553
- There is negative correlation between FII Holdings and DLF as correlation coefficient is -0.121
- There is positive correlation between FII Holdings and India Bulls as correlation coefficient is 0.6020
- There is negative correlation between FII Holdings and Oberoi Reality as correlation coefficient is -0.1850
- There is positive correlation between FII Holdings and Omaxe as correlation coefficient is 0.514

CONCLUSION

There is a positive Impact of FII's investment on Indian stock market, However the other variables also play an important role such as Interest rate of the country, political stability, exchange rates etc.

REFERENCES

1. Arya, Rachna and Purohit, Ashok (2012) "An Analytical Research on Foreign Institutional Investment in India", International Journal of Computer Science & Management Studies, Vol: 12, Issue 03, pp 111-116
2. Banaji, J. (2000), "Foreign Portfolio Investment in Indian Equity Markets: Has the Economy Benefited?" QEH Working Paper NO.54
3. Bose, Suchismita (2012) "Mutual Fund Investments, FII Investments and Stock Market Returns in India", Money & Finance, ICRA Bulletin, September, 2002, pp: 89-110.
4. Dept. of Economic Affairs, Report of the Expert Group on Encouraging FII Flows and Checking the Vulnerability of Capital Market to Speculative Flows, Ministry of Finance, Government of India, New Delhi, November 2005.
5. Srivastava, Madhuri, (2002) "Foreign Investment Inflows in India and Some Macroeconomic Indicators of Indian Economy". http://shodhganga.inflibnet.ac.in/bitstream/10603/4121/10/10_chapter%202.pdf
6. www.moneycontrol.com
7. www.sebi.gov.in
8. www.nse.com
9. www.rbi.org
10. www.trendlyne.com
11. www.nsdl.com
12. www.bse.com

IMPACT OF TECHNOLOGY ON AGRICULTURE DEVELOPMENT

¹Dr. Vivek Bhagwan Waykar and ²Dr. Kailas Arjunrao Thombre¹Associate Professor, Department of Commerce and Management Deogiri College, Aurangabad²Professor, Deogiri College, Aurangabad**ABSTRACT**

Rural India and agriculture are nearly synonymous, for most people in villages are agriculturists or depend on agriculture for their livelihood. Through 75 percent of India's population lives on agriculture, the latter contributes but 40.9 percent of the country's GNP, which calls for efforts to improve it. Most of the world's food and textiles come from agriculture. A few years ago, the development of agriculture was very slow. Many farmers around the world find it useful in free-range farming, along with traditional farming, such as poultry farming, goat farming, and dairy farming. The biggest challenge facing agriculture is the political challenge. Technology has led to the use of bee vectoring technology, precision farming, indoor vertical farming, livestock farming technology, daily farm automation, real time mechanic technology, technology, etc. Farmers are getting access to new varieties for their production due to changing weather conditions, crop production techniques and improved agricultural practices.

INTRODUCTION

Rural India and agriculture are nearly synonymous, for most people in villages are agriculturists or depend on agriculture for their livelihood. Through 75 percent of India's population lives on agriculture, the latter contributes but 40.9 percent of the country's GNP, which calls for efforts to improve it. An average agriculturist in India is a marginal farmer tilling a plot of land of the size between 0.5 and 1 hectare; about 50 percent of the landholdings are classified as marginal farms whereas only 4 percent are large, that is, over 10 hectares. The smallness of the farm is itself a constraint on rural growth.

After Independence, the Community Development Projects (CDP) was started on a national scale for developing rural society.

Jawaharlal Nehru noted, "Community Development Projects are of vital importance not so much for the material achievements that they would bring about, but much more so, because they seem to build up the community and the individual and to make the latter the builder of his own village center and of India in the larger sense".

In the formulation of the Community Development Projects, a major role was played by the Grow More Food Campaign was started in 1943 with a view to augmenting the level of food production through planning and implementation of short term and long term improvement programmes in agriculture. GMFC was the first organized efforts to increase food production in our country. Even though this campaign was initially started in 1943 in the wake of the Bengal famine, success became prominent only in 1947. The GMFC formed a committee known as the Grow More Food Inquiry. Agriculture is the main vehicle for development in rural areas. Agriculture-based economic development is a strategy for development. Industrial development is also achieved globally, one-third of food is either lost or wasted. To improve food and nutrition security. To meet climate goals. To reduce environmental stress. Measures to reduce environmental stress is necessary.

Most of the world's food and textiles come from agriculture. A few years ago, the development of agriculture was very slow. Many farmers around the world find it useful in free-range farming, along with traditional farming, such as poultry farming, goat farming, and dairy farming. The biggest challenge facing agriculture is the political challenge. The challenge is not food scarcity but the uneven distribution of food supply. The ratio of arable land to population is more favorable than others. Experts believe that this is hindered by government policies in both developed and developing countries. Local food shortages persist due to droughts, floods and other calamities. In the next few years food grain shortage will be very large and the main reason for this will be population growth which is the problem we are currently experiencing in Pakistan. Experts believe that the problem of hunger will be solved in two ways. Citizens must have the ability to preserve or buy their own food. Second, responsible spending habits are essential for all citizens of the country, as is population control. Rural development can be achieved by developing agriculture by using right option i.e. technology on all problems or reasons.

Importance of Technology in Agribusiness

Agricultural technology affects many areas of agriculture. Fertilizers. Pesticides. Seed technology. Knowledge. Annual engineering has increased pest resistance and productivity. Due to mechanization, efficient tillage labor has decreased, the transport system has improved and the irrigation system has improved and its effect is being

seen in all areas. Due to the new technology, block chain technology is having an impact as it focuses on the use of artificial intelligence robotics. Agricultural mechanization has limited the labor and tools used in agriculture in terms of energy and productivity, especially among smallholder farmers. Combine harvesters are increasingly being used to reduce manual labor and speed up processing.

Farming is characterized by small landholdings and the need to partner with others to take advantage of machinery. Empowerment of farmers making the moon available especially to small farms should not leave affordability issues through the policy will lead to greater adoption of mechanization services. Agricultural mechanization has the potential to directly and indirectly affect production by reducing post-harvest losses and increasing harvest profitability. One of the biggest advances in agriculture is that modern equipment and tools enable data collection and help in precision farming and informed decision making. Drone remote sensors and satellites collect data on changes in the weather in and around the farm, providing important information to farmers such as temperature, rainfall, soil moisture, etc. Communication technology has developed rapidly in India and this has opened the possibility of smart farming. A lot of work is needed in the field of digitization in agriculture and rural areas. First, a systematic approach to understanding the digital agricultural transformation is important. Data from urban and rural areas will be of different types. And educational level and educational level influence the adoption of modern agriculture modern agricultural technology and rural small and rural small farmers are disadvantaged as well as face problems of limited access to network and technology. Elaborating on the importance of agricultural technology it can be said that agricultural technology is due to technology and less use of pesticides which keeps food prices low.

Elaborating on the importance of agricultural technology it can be said that agricultural technology is due to technology and less use of pesticides which keeps food prices low. Reduced impact on natural conditions or ecosystems, less flow of chemicals into rivers and groundwater, worker safety, in addition robotic technology enables more reliable monitoring and management of natural resources such as air and water quality. A positive impact of agricultural technology is that the intensification of agriculture through the Second Agricultural Revolution and the Green Revolution has significantly increased agricultural productivity. Along with the increase in production, the availability of food grains has also increased the forest potential of the land. Strengthens rural and marginal farmers' access to financial services through the use of information technology Enables them to find affordable insurance plans and tools to better manage risk and empowers them with information about financial services available to them. Technology can help agricultural development in four ways such as monitoring and controlling crop irrigation systems through smart phones, using ultrasound methods, using mobile technology and cameras, and using crop sensors.

TECHNOLOGICAL CHALLENGES FACING AGRICULTURE

As technology has its benefits and importance, so are the challenges facing technology. In addition to improved communication, there is privacy. Staying connected, working from home and accessing medical services have proven useful in these challenging times.

CONCLUSION

In short it can be said that advances in machinery have increased the leakage and productivity of farm implements, leading to more efficient cultivation of more land. There have been great improvements in seeds, irrigation and fertilizers which have helped farmers to increase production.

Technology has led to the use of bee vectoring technology, precision farming, indoor vertical farming, livestock farming technology, daily farm automation, real time mechanic technology, technology, etc. Farmers are getting access to new varieties for their production due to changing weather conditions, crop production techniques and improved agricultural practices. Three important inventions that improved agriculture were the reaper, the thresher, the steam engine, the automobile, the tractor, and hydraulics. Technology allows farmers to better monitor the health of their livestock and crops, saving documentation time and money.

The challenge is to find ways and means to produce enough to feed it. The challenge of reducing acreage under agriculture and food wastage in production and distribution are having a major impact on the world. The increasing role of technology in highlight these issues are the only way forward to future food-security. Technologies help in saving foreign exchange for countries, increase productivity, and lead to an improvement in the standard of living of farmers. India has a long way to go in accept of modern farming by using technology. The pace is slow and path-breaking efforts need to be made to educate farmers about the benefits to be had with technology. Transcending the barriers of archaic farming practices and medieval mindsets is the challenge that needs to be overcome for a better tomorrow. Technology in agriculture has the potential to truly lead India to be "Atmanirbhar Bharat" in all respects, and be less dependent on extraneous factors.

REFERENCES

1. Vasant Desai, Rural Development Program and Strategies, Vol II, Himalaya Publishing House, Bombay, 1988.
2. Vasant Desai, A Study of Rural Economics, Himalaya Publishing House, Bombay, 1993.
3. Ajit K. Danda, Studies on Rural Development Experiences and Issues, Inter India Publications, Delhi, 1984.
4. Amal Ray and Vinitha Venkata Subbaiah, Studies in Rural Development Administration, World Press, Calcutta, 1984.
5. Archana Gaur, Integrated Rural Area Development, B.R. Publishing Corporation, Delhi, 1985.
6. Nikola m. Trendov, Samuel Varas, and Meng Zeng, Digital technologies in agriculture and rural areas”
7. <https://www.studysmarter.us/explanations/human-geography/agricultural-geography/impact-of-technology-on-agriculture/>
8. <https://education.nationalgeographic.org/resource/impact-technology-agriculture>
9. <https://www.smsfoundation.org/role-of-modern-technology-in-agriculture/>

INDIA AND AGRI-TECH STARTUPS

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ABSTRACT

There are many start-ups which are leading Agritech industry in the World and in India. The top destinations for agritech startups in India are states like Maharashtra, Karnataka, Haryana, Rajasthan and Uttar Pradesh. 2021 was a prime year for startups irrespective of industry but agritech industry topped the list with whopping 300% growth in total funding. The rapid growth in investment in agritech startups can also be seen in a report by Bain and Co., which stated that facilities received approximately \$1 billion between 2017 and 2020. And for the year 2022, agritech startups raised about \$515 Million through 49 deals. According to Fintrackr, Entrackr's data tracking platform, "Nearly 100 agritech startups raised nearly \$1.33 billion in 139 deals between January 2020 and June 2022". According to Fintrackr, Entrackr's data tracking platform, "Nearly 100 agritech startups raised nearly \$1.33 billion in 139 deals between January 2020 and June 2022". For India, the agriculture sector is a very big contributing factor. As we all know India is the growing market and India has the capability of being the provider for the global market. And for India, the agriculture sector is a very big contributing factor. These start-ups' operations are based on technological advancements of agricultural sector and resolving issues in present day agri-environment and achieving sustainable goals.

Keywords: Agritech, Startups, Indian Agriculture Sector

INTRODUCTION

Agritech or Agritech is a technology with the target of enhancing profitability and efficiency of crops cultivated which can be conventional farming, horticulture or aquafarming. Agritech is not only used in the farm produce but also in services and operations relevant to it which are ultimately useful in expansion of agricultural engineering which led to evolution to applied advancements.

These advancements shaped the history of farming and made it what it is today. Many of the historiographers documented the agri revolutions took place till date, which is helpful in identifying the crucial alterations in the practices and productivity. Just for the sake of example, if we consider irrigation, then many different societies developed many different ways to make irrigation most effective. These findings are with reference to time frame of as early as 6th millennium BCE in present day Iran.

The Industrial Revolution which occurred circa 18th Century in Great Britain was also crucial for agricultural technology. The particular reason for circumstances being Industrial Revolution introduced machinery which was helpful in conventional farming but it also helped technology to grow. Weather forecasting and invention of barbed wire pushed the technological developments further. Till 19th century the advancements were mechanical in nature. But the 20th century brought drastic changes in technological advancements like synthetic fertilizers, pesticides and germicides and with the help of assembly line the mass production of machinery was also achievable. In the first decade of 21st century, internet also helped many aspects of agricultural developments. And in recent years, the use of artificial intelligence (AI) and Internet of Things (IoT) is very much anticipated for technological advancements.

There are some tools and technologies which are used in modern agricultural set-up with a sole purpose of advancement in yield of crops cultivated. These tools are management of irrigation, inspection of crops and hydroponics which is cultivation of plants with the help of nutrition solution and without soil. There are some other tools like vertical farming and use of drones, vertical farming can increase the number of plants cultivated per square meter as compared to conventional farming methods and drones are helpful in spraying fertilizers and pesticides on agricultural products. Technologies like Digital Market Intelligence (DMI), climate monitoring with the help of satellite and Geographic Information System (GIS) are also helpful in making conventional farming advance.

In today's technologically advanced world there are some businesses which only focus on agricultural developments and when these businesses are in their early stages of operation they are known as 'Start-up'. These start-

ups' operations are based on technological advancements of agricultural sector and resolving issues in present day agri-environment and achieving sustainable goals.

Agritech Industry and India

There are many start-ups which are leading Agritech industry in the World and in India. Start-ups like Taranis, Hummingbird Technologies, Prospera, Connecterra, iFarm, Vital Fields and Pycno are leading in world and Waycool, NinjaCart, DeHaat, Absolute, Agrostar and Arya are some of the leading fundraising start-ups in India.

As we all know India is the growing market and India has the capability of playing the role or more accurately be the provider for the global market. And for India the agriculture sector is a very big contributing factor. According to reports, Indian agriculture sector employs around 50% of its work force and contribute to around 17-18% in overall GDP of India. Like any other sector, agriculture has been disrupted in recent years by technology companies that have tried to transform it by introducing various technologies. The money flowing into this segment through startups has been a welcoming change from the government support that the sector usually relies on. In fact, until recently, it was precisely this bulging control of officials that kept the industry underinvested relative to its size and influence.

According to Fintrackr, Entrackr's data tracking platform, "Nearly 100 agritech startups raised nearly \$1.33 billion in 139 deals between January 2020 and June 2022". That includes nearly 40 deals worth a little more than \$150 million in 2020, 58 deals worth around

\$640 million in 2021, and deals worth \$539 million in first half of this year. This relatively

high level of interest indicates the enormous size of Indian agriculture and thus the potential for extraordinary change.

Investment in Agritech Startups

2021 was a prime year for startups irrespective of industry but agritech industry topped the list with whopping 300% growth in total funding. In 2020, the funding was \$161 Million wherein in 2021 this figure went to \$636 Million. And for the year 2022, agritech startups raised about \$515 Million through 49 deals. According to Venture Intelligence, Indian startups raised

\$222 million in 2019 and \$89 million in 2018. The rapid growth in investment in agritech startups can also be seen in a report by Bain and Co., which stated that facilities received approximately \$1 billion between 2017 and 2020. Interestingly, in the following years 2021 and 2022 (up to June), nearly \$1.17 billion was raised, with Waycool, Ninjacart, DeHaat, Absolute and AgroStar and Arya emerging as the top fundraisers.

To tackle the issues like supply chain, packaging-warehousing, credit, advisory and payments many startups are using data analytics, artificial intelligence (AI), machine learning (ML), block-chain, software as a service (SaaS) and Internet of Things (IoT) to minimise the void. NinjaCart, a top funded startup which is backed by industry giants like Flipkart, Walmart and Tiger Global helps connect farmers directly to retailers or service providers with just a tap on mobile application. The details of 139 deals can be seen in following image:

TOP 10 FUNDED AGRITECH STARTUPS [JAN 2020 TO JUNE 2022]					
Startup	Biz model	Latest Funding (in \$Mn)	Latest Round	Valuation (in \$Mn)	Revenue (FY21)
Ninjacart	B2B supply chain	145	Series D	815	Rs 755 Cr
WayCool	B2B supply chain	117	Series D	460	Rs 382 Cr
DeHaat	Farm services & products marketplace	115	Series D	500	Rs 358 Cr
Absolute	Agri-bioscience	100	Series B	500	Rs 28.4 Cr
AgroStar	Farm advisory	70	Series D	240	not disclosed
Arya	Farmgate storage	60	Series C	285	Rs 196 Cr
Fraozo	D2C grocery delivery	50	Series B	120	Rs 20.95 Cr
FarMart	SaaS-food supply	32	Series B	135	Rs 0.99 Cr
Otipy	Farm to fork	32	Series B	120	Rs 26.16 Cr
ReshaMandi	B2B silk marketplace	30	Series A	186	Rs 20.5 Cr

Image credit : Shruti Gupta

Source : FINTRACKR

{Source: <https://entrackr-bucket.s3.ap-south-1.amazonaws.com/wp-content/uploads/2022/07/13111651/A33-01.png>}

The data illustrated in the above table is for the period of January 2020 to June 2022. The top destinations for agritech startups in the above mentioned period was states like Maharashtra, Karnataka, Haryana, Rajasthan and Uttar Pradesh. AgroStar Pune-based startup, scooped up \$70 million in its Series D round with valuation of \$240 million, came forward as a full packaged platform which provides services like expert advice and solution regarding issues in a farm to a farmer through either online or offline channels which is very convenient to farmers.

CONCLUSION

Agriculture always has been a key contributor in India's overall development. There was a time when nearly 80% of the Indian population was dependent on agriculture and that's why its share in India's GDP is also crucial. After independence, the condition of agriculture was worst, the sector was mostly reliant on monsoon which ultimately affected the sector. Then around 1960s the Green Revolution took place and the condition of Indian Agriculture started to get better. After Green Revolution the technological advancements started to happen. This is when agritech came into picture. Agritech has the target to enhance profitability and efficiency of crop sown in the field using various tools & technologies like climate monitoring, irrigation management, hydroponics and vertical farming. Some of the startups in the agritech industry are doing really good work in this regard. Startups like NinjaCart and AgroStar are one of the few who are trying to fill the void with solutions like expert advice and digital marketplace with the help of artificial intelligence (AI), machine learning (ML), block-chain etc.

REFERENCES

1. Upadhyay, H. and Tyagi, G. (2022) Exclusive: Agritech startup AgroStar's valuation surges 43% in new tranche, Entrackr. <https://entrackr.com/2022/05/exclusive-agritech-startup-agrostars-valuation-surges-43-in-new-tranche/>.
2. Startuplab, T. (2022) Top 5 Agritech Startups in India disrupting the Indian agriculture sector, TheStartupLab: Compliance[Tech]Funding. <https://thestartuplab.in/top-5-agritech-startups-in-india-disrupting-the-indian-agriculture-sector/>.
3. Startuplab, T. (2022) Top 5 Agritech Startups in India disrupting the Indian agriculture sector, TheStartupLab: Compliance[Tech]Funding. <https://thestartuplab.in/top-5-agritech-startups-in-india-disrupting-the-indian-agriculture-sector/>.
4. Agriculture Technology (2020) Nation Institute of Food and Agriculture. Available at: [https:// www.nifa.usda.gov/ topics/agriculture-technology](https://www.nifa.usda.gov/topics/agriculture-technology).
5. Stewart, R.E. (2020) Agricultural Technology, Encyclopedia Britannica. Encyclopedia Britannica, Inc. [https:// www.britannica.com/technology/agricultural-technology](https://www.britannica.com/technology/agricultural-technology)
6. "Agricultural Technology Center > Agricultural Technology Center". english.busan.go.kr. Retrieved 2020-12-23.
7. "The evolution of agricultural technology". Innovation News Network. 2020-07-08. Retrieved 2020-12-23.
8. Verma, M. (2022) Goodbye 2022: India's Agritech sector in full bloom as valuations shoot up amid continued investor interest, Moneycontrol. [https:// www.moneycontrol.com/news/ business/ startup/ goodbye-2022-indias-agritech-sector-in-full-bloom-as-valuations-shoot-up-amid-continued-investor-interest- 9764971.html](https://www.moneycontrol.com/news/business/startup/goodbye-2022-indias-agritech-sector-in-full-bloom-as-valuations-shoot-up-amid-continued-investor-interest-9764971.html).

MSMES SECTOR BACK-BONE OF INDIAN ECONOMY

¹Dr. Prakash Ratanlal Rodiya and ²Prof. Dr. Sudhir Vaijanathrao Panchagalle¹Assistant Professor Department of Commerce, Rajarshi Shahu Mahavidyalaya, (Autonomous) Latur,²Prof. Department of Commerce, Shri Madhavrao Patil Mahavidyalaya, Murum, Tq. Omerga District Osmanabad**ABSTRACT**

Micro, Small and Medium scale enterprises account for more than 80 % of the private sector industrial workers and hence occupy an important position in the industrial pattern of Japan. The employment generating capacity of the Micro, Small and Medium enterprises in Japan has been seen to be larger than in Germany or United States. Thus, Micro, Small and Medium scale enterprises play very significant role as muscles for overall economic development in the various countries. In the first half of the sixties the Micro, Small and Medium scale enterprises accounted for more than 50 % of Japanese exports. Such business was mostly labour oriented and not dependent on imports of raw materials and hence, its net share to foreign exchange was very high.

Keywords: MSMEs, MSEs, Enterprises, SSI

INTRODUCTION

MSMEs which plays a key role in the industrialization, especially in a developing country like India. In India MSMEs always represented the model of socio-economic policies of Indian government which emphasized rational use of foreign exchange for the import of capital goods and inputs; labour oriented mode of production; employment generation; no concentration of economic power in the hands of a few business enterprises; discouraging monopolistic practices of production and marketing; and finally effective contribution to foreign exchange earning of the nation with low import-oriented operations.

OBJECTIVES OF THE STUDY

1. To study performance of MSMEs in India
2. To study performance of MSMEs in Maharashtra State
3. To study performance of MSMEs in Marathwada Region
4. To study performance of MSMEs in Jalna District
5. To study performance of MSMEs in Latur District
6. To Give suggestion for improvement of performance of MSMEs

METHODOLOGY OF THE STUDY

Analysis of data related with MSMEs performance in India, Maharashtra, and Marathwada Region and in the Jalna and Latur District is analyzed here.

Data for the Study

Mostly secondary data is used for the study which was collected from Govt. offices, Ministry of MSMEs, Website of MSMEs and by the help of various published sources like books, articles, Journals, Research Papers etc. related with this matter.

MSMEs in India

The MSMEs form a leading segment of the Indian Industrial expansion. Indian business owners, with their modern aptitude and extra ordinary work are making the best use of the potential that are made available with the comprehensive changes that are taking place in the performance of enterprises and world trade.

Working Msmes in India**Table No. 1** Working MSMEs in India

Sr. No.	Year	Working MSMEs (In Lakh)	%
1	2002-2003	109.49	3.27
2	2003-2004	113.95	3.40
3	2004-2005	118.59	3.54
4	2005-2006	123.42	3.68
5	2006-2007	361.76	10.79
6	2007-2008	377.36	11.25

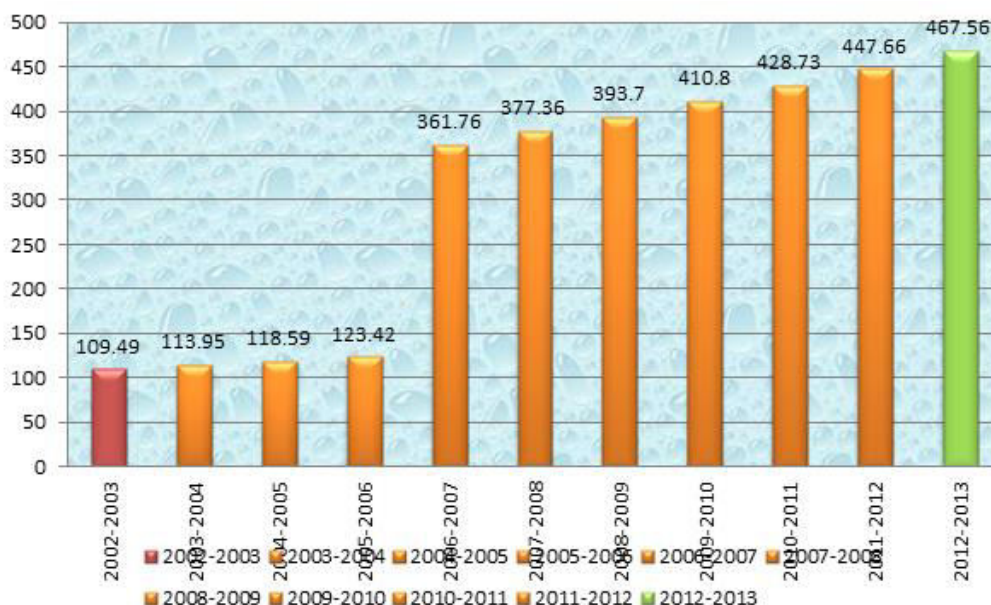
7	2008-2009	393.70	11.74
8	2009-2010	410.80	12.25
9	2010-2011	428.73	12.79
10	2011-2012	447.66	13.35
11	2012-2013	467.56	13.94
Total		3353.02	100.00

(Source: Ministry of MSMEs- Annual Report 2013-14)

From the table No. 1 it can be noted that out of the total 3353.02 Lakh working MSMEs in India, 109.49 Lakh i.e. 3.27% MSMEs were working in the year 2002-2003. Whereas 467.56 Lakh i.e. 13.94% MSMEs were working in the year 2012-2013. The positive growth trend of MSMEs can be noted from the above table in India.

Graph No. 2 Working MSMEs in India (In Lakh)

(Source: Table No. 1)



➤ Employment Generated by Msmes in India (In Lakh)

Table No. 2 Employment generated by MSMEs in India (In Lakh)

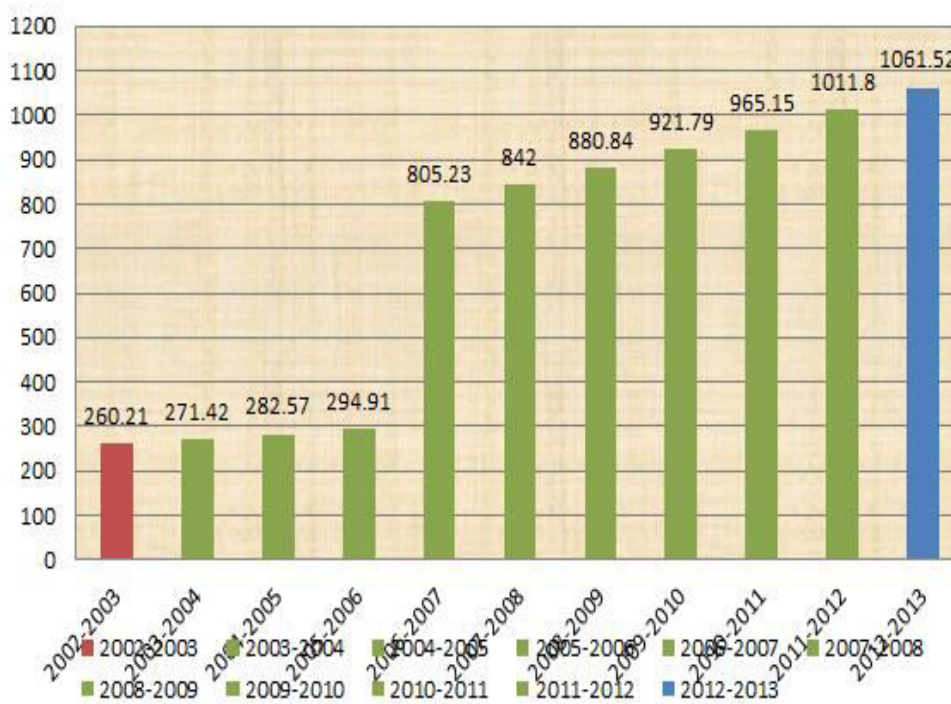
Sr. No.	Year	Employment generated by MSMEs	%
1	2002-2003	260.21	3.42
2	2003-2004	271.42	3.57
3	2004-2005	282.57	3.72
4	2005-2006	294.91	3.88
5	2006-2007	805.23	10.60
6	2007-2008	842.00	11.08
7	2008-2009	880.84	11.59
8	2009-2010	921.79	12.13
9	2010-2011	965.15	12.70
10	2011-2012	1011.80	13.32
11	2012-2013	1061.52	13.97
Total		7597.44	100.00

(Source: Ministry of MSMEs- Annual Report 2013-14)

Central and State Govt. has undertaken number of employment generation in India. Encouragement to the MSMEs is one of the step of Govt. in this view. Table No. 2 incorporates data in this connection. In the year 2002-03 MSMEs sector generated 260.21 Lakh i.e. 3.42% employment in India. Premier employments i.e. 1061.52 Lakh (13.97%) generated in the year 2012-13 in India. Growing trend of employment from MSMEs sector can be seen in India. If sector wise employment generation i.e. manufacturing and service sector is

concerned, the manufacturing sector has generated highest percent of employment in India i.e. 87%. The remaining i.e. 13% employment was generated by service sector in India. If MSMEs sector wise employment generation is concerned, Micro enterprises generated highest percent of employment i.e. 69%. Followed by Micro sector, Small industries generated 24% employment. The Medium scale enterprises generated 7% share of employment in India, as per the report of Micro, Small and Medium scale enterprises in 2013-14.

Graph No. 2 Total Employment Generated by MSMEs in India (In Lakh)



(Source: Table No. 2)

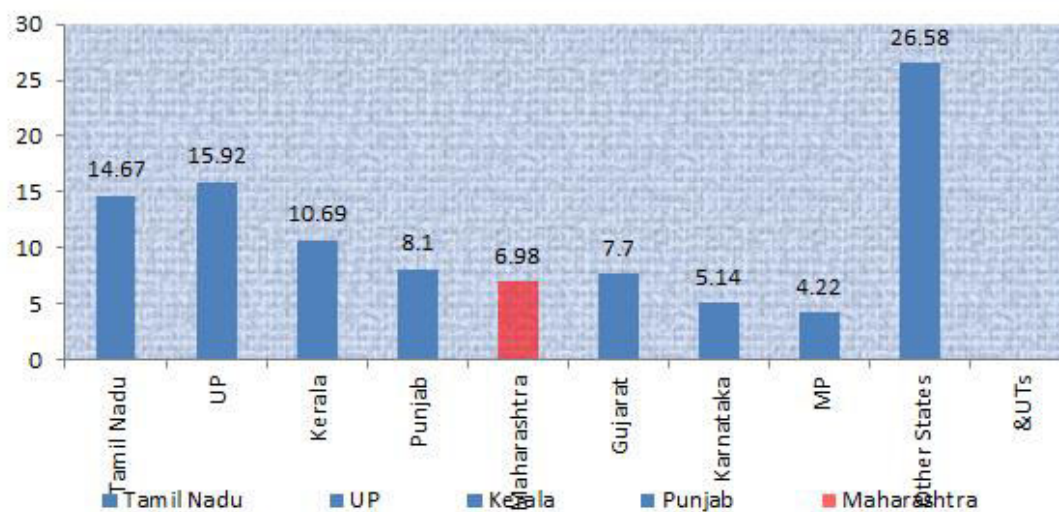
➤ **State Wise Msmes Run by Women Entrepreneurs in India.**

Table No. 3 State-wise MSMEs run by women Entrepreneurs

Sr. No.	State	No. of women Entrepreneurs	(%)	Rank
1	Tamil Nadu	2,930	14.67	III
2	UP	3,180	15.92	II
3	Kerala	2,135	10.69	IV
4	Punjab	1,618	08.10	V
5	Maharashtra	1,394	06.98	VII
6	Gujarat	1,538	07.70	VI
7	Karnataka	1,026	05.14	VIII
8	MP	0,842	06	IX
9	Other States and UTs	5,308	26.58	I
Total		19,971	100.00	

(Source: CMIE, Report 2011)

Graph No. 3 Selected State-wise MSMEs run by women Entrepreneurs in India



(Source: Table No.3)

Women plays very noteworthy role in the economic progress of any nation. The table No.3 shows the information related to the MSMEs run by women Entrepreneurs in India. Only 6.98% women's were participated to run MSMEs in Maharashtra State. Highest number of MSMEs run by women's in the UTs and other States. Whereas, lowest number of MSMEs were run by women's in the Madhya Pradesh State i.e. 6%. From the above table it is also clear that the participation of women Entrepreneurs to run and operate MSMEs is not significant in India and also in Maharashtra State.

➤ All India Market Value of Fixed Assets of Msmes

(In Crore).

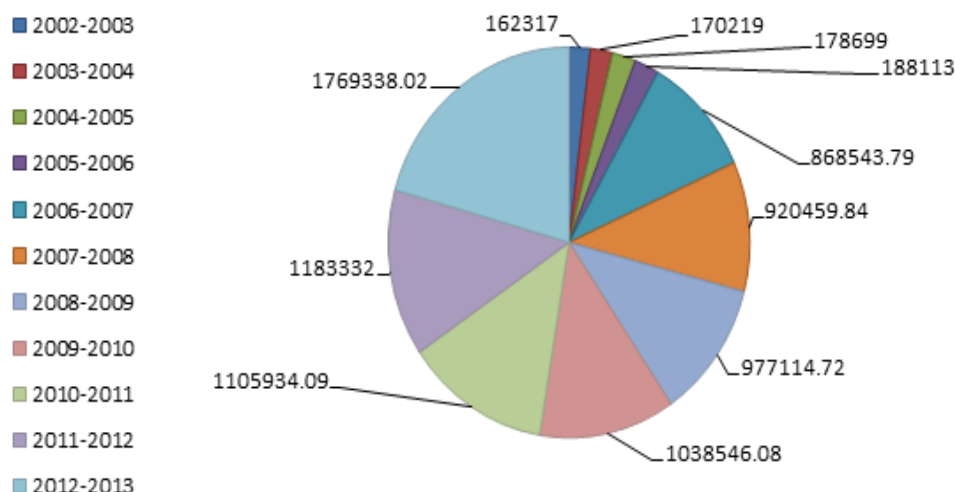
Table No. 4 All India market value of fixed assets of MSMEs

Sr. No.	Year	Market value of fixed assets of MSMEs (In Crore)	%
1	2002-2003	162317.00	1.90
2	2003-2004	170219.00	1.99
3	2004-2005	178699.00	2.09
4	2005-2006	188113.00	2.20
5	2006-2007	868543.79	10.14
6	2007-2008	920459.84	10.75
7	2008-2009	977114.72	11.41
8	2009-2010	1038546.08	12.13
9	2010-2011	1105934.09	12.92
10	2011-2012	1183332.00	13.82
11	2012-2013	1769338.02	20.66
Total		8562616.54	100.00

(Source: Ministry of MSMEs, Annual Report, 2013-14)

Market value of fixed assets of MSMEs supplies information related to wealth of business and asset creation process of Entrepreneurs in the economy. It is revealed from table No. 4 that, in the year 2002-03 the total market value of fixed assets was Rs. 1,62,317 Crore i.e. 1.90% to the aggregate value of fixed assets. In 2012-13 the value of fixed assets of MSMEs was Rs. 1769338.02 Crore i.e., 20.66% to the aggregate value of the same. The notable increase in the value of fixed assets of MSMEs can be seen during the year 2002-2003 to 2012-2013. This information also indicates the significant role of MSMEs in the asset creation process of enterprises in the developing economy like India.

Graph No. 4 All India market value of fixed assets of MSMEs (In Crore)



(Source: Table No. 4)

➤ **Total Production (Gross Output) by Msmes in India**

(In Crore).

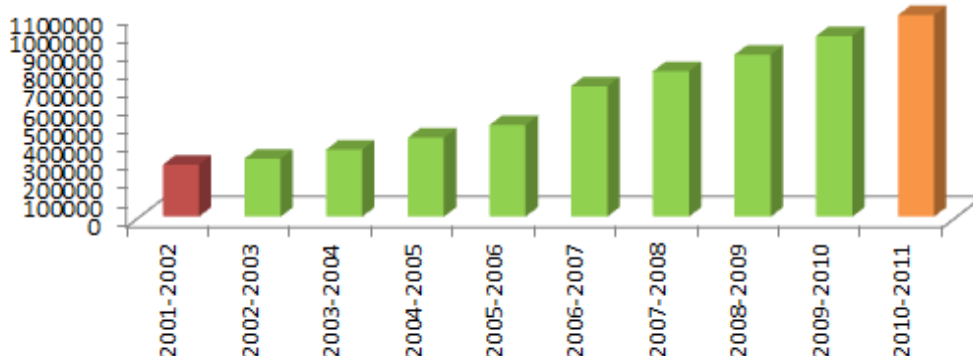
Table No. 5 Total production (gross output) by MSMEs in India (In Crore)

Sr. No.	Year	Production by MSMEs	%
1	2001-2002	282270	04.45
2	2002-2003	314850	04.96
3	2003-2004	364547	05.74
4	2004-2005	429796	06.77
5	2005-2006	497842	07.84
6	2006-2007	709398	11.17
7	2007-2008	790759	12.45
8	2008-2009	880805	13.87
9	2009-2010	982919	15.48
10	2010-2011	1095758	17.26
Total		6348944	100.00

(Source: Ministry of MSMEs, Annual Report, 2013-14)

As far as the total production (gross output) of Indian MSMEs is concerned, highest production by MSMEs can be seen in the year 2010-2011 i.e. Rs.1095758 Crore (17.26%). In the year 2001-02 it was Rs. 282270 Crore i.e. 4.45% of the total production. The increasing trend of production by MSMEs can be observed from the data analyzed in the above table No. 5. The rapid increase in the number of MSMEs in the Indian economy during the recent years is the basic cause behind the increase of total production.

Graph No. 5 Total production by MSMEs in India



(Source: Table No. 5)

➤ **Export by MSMEs in India.**

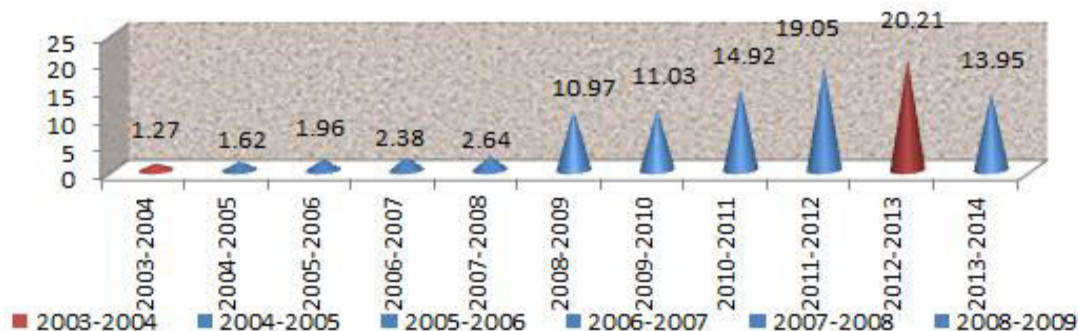
Table No. 6 Export by MSMEs in India (In Crore)

Sr. No.	Year	Export by MSMEs (In Crore)	%
1	2003-2004	97644	1.27
2	2004-2005	124417	1.62
3	2005-2006	150242	1.96
4	2006-2007	182538	2.38
5	2007-2008	202017	2.64
6	2008-2009	839978	10.97
7	2009-2010	845125	11.03
8	2010-2011	1142649	14.92
9	2011-2012	1459280	19.05
10	2012-2013	1546766	20.21
11	2013-2014	1068089	13.95
Total		914115	100.00

(Source: Ministry of MSMEs, Annual Report, 2013-14)

The total amount of export reflects the prosperity of the nation. The table No. 6 displays the information about share of export by Indian MSMEs. In the year 2003-04 the total export of MSMEs was Rs. 97644 Crore i.e. 1.27%. In the year 2012-13 it was highest, i.e. Rs. 1546766 Crore i.e. 20.21% out of the total export, during 2003-04 to 2013-14 in the nation. The rising trend of export by MSMEs since 2003-04 to 2013-14 is the good symbol of economic development through MSMEs and rapid increase in the total production and total export of India.

Graph No. 6 Export by MSMEs in India



(Source: Table No. 6)

➤ **All India Percentage of Distribution of Msmes by Type of Organization.**

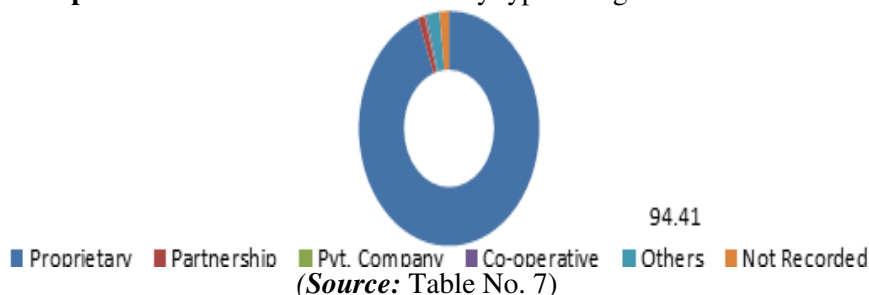
Table No. 7 supplies information about distribution of MSMEs by type of organization in India. The highest number of enterprises can be seen under the category of proprietary ownership i.e. 94.41% in India. It is clear that proprietorship is the most likely form of organization in India. Followed by proprietorship Entrepreneurs prefer other form of organization to set up enterprises i.e. 2.24% in India. The lowest preference was given by Entrepreneurs to the private companies as form of organization i.e. only 0.14% in India. The preference to the partnership firm was given by 1.18% Indian Entrepreneurs. Preference to the co-operative societies was given by just 0.33% Entrepreneurs as per the annual report of ministry of MSMEs, 2012-13 in India.

Table No. 7 All India % of distribution of MSMEs by type of organization
(In Crore) (In %)

Sr. No.	Enterprise	%	Priority rank
1	Proprietary	94.41	I
2	Partnership	01.18	IV
3	Pvt. Company	0.14	VI
4	Co-operative	0.33	V
5	Others	2.24	II
6	Not Recorded	1.7	III
Total		100.00	

(Source: Ministry of MSMEs, Annual Report, 2012-13)

Graph No. 7 Distribution of MSMEs by type of organization in India



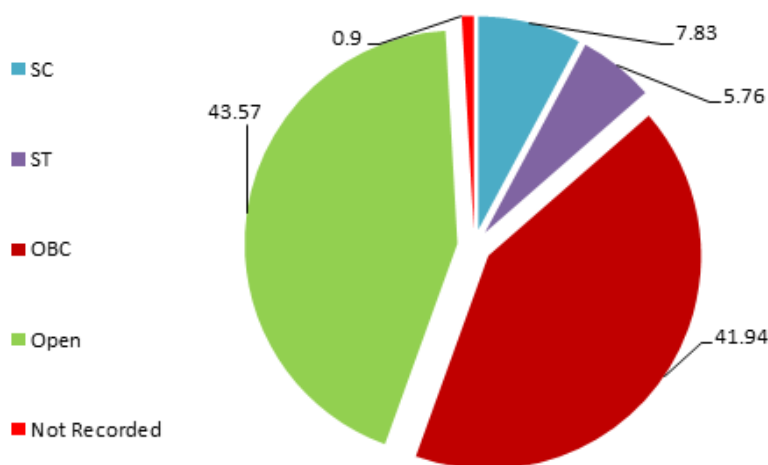
• **Social Class-Wise Distribution of Msmes Ownership In India**

Table No. 8 Social class-wise distribution of MSMEs ownership in India
(In Crore) (In %)

Sr. No.	Social Group	%
1	SC	07.83
2	ST	05.76
3	OBC	41.94
4	Open	43.57
5	Not Recorded	00.9
Total		100.00

(Source: Ministry of MSMEs, Annual Report, 2012-13)

Graph No. 8 Social class-wise distribution of MSMEs ownership in India



(Source: Table No.8)

Social class wise allocation of enterprise ownership analysis is made in the table No.8. Highest number of enterprises owned and run by open categories Entrepreneurs in India i.e. 43.57%. Followed by open categories, 41.94% enterprises were run by the other backward classes (OBC) in India. Lowest participation of enterprises ownership can be seen among SC and ST categories Entrepreneurs i.e. 7.83% and 5.76% respectively.

Profile of Msmes in Maharashtra State.

Maharashtra State is well known leading industrial State in the country. It occupies leading position in the manufacturing and service sector of the country. The State has always remained on the front position of economic progress with the growth in industrial and services sectors as the driving force of the State's economy. Positive investment friendly government activities, opening up of different sectors for private investments in order to bridge demand-supply gap of infrastructure amenities as well as public finance, promising consumer market, productive human resource base, conducive business environment, etc. have contributed in resultant industrial enlargement in the State. For the development of MSME, i.e. Micro and Small Enterprises, the Government has given importance in its MSME Development Act, 2006, for development of skills Entrepreneurs and their employees, management of enterprises, technology up gradation, marketing assistance, infrastructure facilities, cluster development and delayed payment. During the year 2012, Govt. of India, Ministry of MSME has declared Public Procurement Policy in the connection.

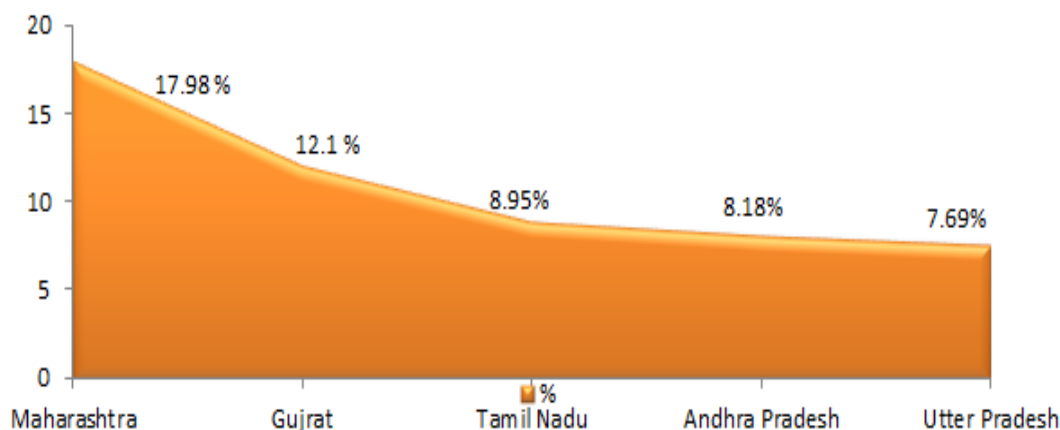
Table No. 9 Approved industrial proposals and investment in selected States
(As on 31st October, 2014)

Sr. No.	Particulars	Leading States					All India
		Maharashtra	Gujarat	Tamil Nadu	Andhra Pradesh	Uttar Pradesh	
1	Proposals (No.)	18,709	12,584	9,307	8,506	8,005	1,04,034
2	%	17.98	12.10	8.95	8.18	7.69	
3	Investment (Rs. Crore)	10,63,342	13,18,050	5,11,983	9,39,766	3,15,172	1,07,80,449
4	%	9.86	12.23	4.75	8.72	2.92	

(Source: Directorate of industries, Govt. of Maharashtra, 2013-2014)

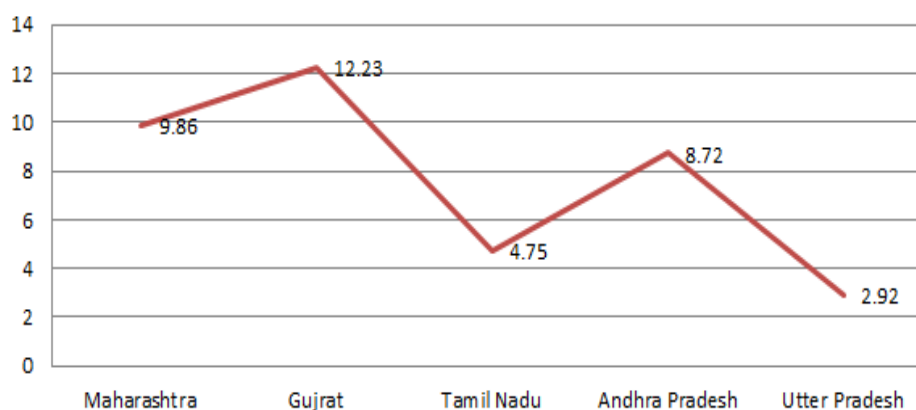
Table No. 4.29 state the information about approved industrial proposals and investment between the top five States in India. The uppermost number of proposals approved in the Maharashtra State i.e. 17.98%. In Gujarat State 12.10% proposals of industries authorized by the director of industries. The lowest number of proposals certified in the Uttar Pradesh i.e. 7.69% only. It is also clear that Maharashtra is the industrially leading State in India. If the total investment in the industries is concerned, highest investment was made in the Gujarat State i.e. Rs.13, 18,050 (12.23%) Crore with compare to other States. In Maharashtra it was 10, 63,342 (9.86%) with compare to other States in India. Lowest investment in the industries was made in the Uttar Pradesh State i.e. 3, 15,172 (2.92%). It's clear from the table No.9 that, though Maharashtra is industrially leading State in India but the more investment in industries can be seen in the Gujarat State. Uttar Pradesh is the industrially backward State in India and Govt. has to undertake urgent steps to increase number of industries in the industrially backward States.

Graph No. 9 Approved industrial proposals in selected States



(Source: Table No.4.29)

Investments in industries in selected States (In %)



(Source: Table No.4.28)

Table No. 10 Year-wise progress of MSMEs in Maharashtra State

S. No.	Year	No. of MSMEs	%
1	2007-2008	10244	10.84
2	2008-2009	11682	12.36
3	2009-2010	11896	12.59
4	2010-2011	14496	15.34
5	2011-2012	15606	16.52
6	2012-2013	16136	17.08
7	2013-2014	14424	15.27
Total		94984	100.00

(Source: Economic Survey of Maharashtra State, 2013-14)

Graph No. 10 Year wise progress of MSMEs in Maharashtra State (In %)



(Source: Table No.10)

Table No. 10 focused on the year wise growth of MSMEs in the Maharashtra State. Highest number of MSMEs were started in the year 2012-13 i.e. 16136 (17.08%) in the State. Lowest numbers of MSMEs were started in the year 2007-08 i.e. 10244 (10.84%) in Maharashtra. Thus, it is clear that the progress of number of MSMEs in the State is positive.

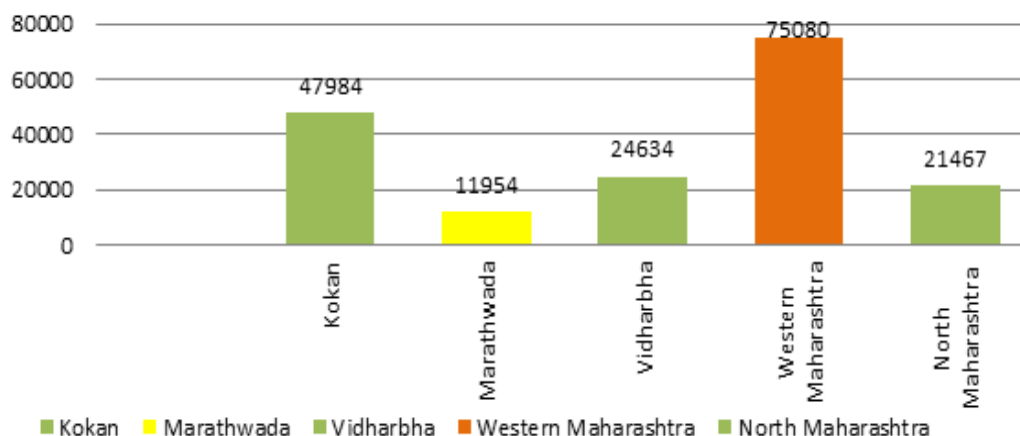
➤ Region-Wise Msme in Maharashtra State

MSMEs plays very noteworthy role in the development of State economy. The data in this connection depicted in the table No. 11. Total 1, 81,119 MSMEs were working in the Maharashtra State as on 31st Dec. 2014. In Maharashtra State highest number of MSMEs was working in the Western Maharashtra Region i.e. 75,080 (41.45%). In Marathwada Region 6.60% i.e. 1, 19,54 MSMEs were functioning, as on date. As far as the progress of MSMEs in the five Regions of the Maharashtra State is concerned, Marathwada Region can be termed as industrially backward Region in the State.

Table No. 11 Region-wise MSMEs in Maharashtra State
(As on 31st Dec.2013)

Sr.No	Region	No. of MSMEs	%	Rank
1	Kokan	47,984	26.49	II
2	Marathwada	11,954	06.60	V
3	Vidharbha	24,634	13.60	III
4	Western Maharashtra	75,080	41.45	I
5	North Maharashtra	21,467	11.85	IV
Total		1,81,119	100.00	

(Source: Economic Survey of Maharashtra State, 2013-14)

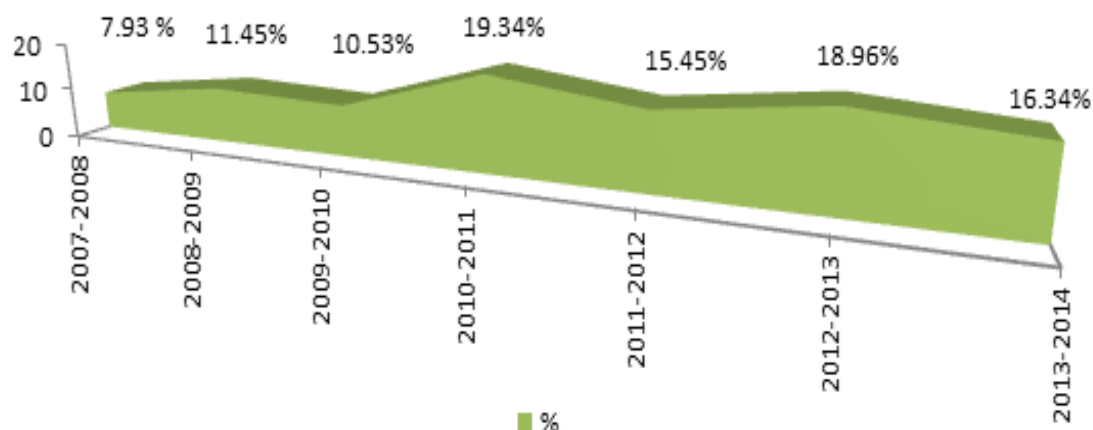
Graph No. 11 Region-wise MSMEs in the Maharashtra State

(Source: Table No.11)

➤ **Investment in Msmes in Maharashtra State (in Crore)****Table No. 12** Investment in MSMEs in Maharashtra State (In Crore)

Sr. No.	Year	Investment in MSMEs	(%)
1	2007-2008	2281	07.93
2	2008-2009	3295	11.45
3	2009-2010	3028	10.53
4	2010-2011	5563	19.34
5	2011-2012	4443	15.45
6	2012-2013	5455	18.96
7	2013-2014	4700	16.34
Total		94984	100.00

(Source: Economic Survey, Maharashtra State, 2013-14)

Graph No. 12 Investment in MSMEs in Maharashtra State (In Crore)

(Source: Table No.12)

As far as the investment made in the MSMEs is concerned, data in this regard presented in the table No. 12. There was Rs.94984 Crore total investments were made in the Maharashtra State. Highest percentage of investment was made in the year 2010-11 i.e. Rs.5563Crore (19.34%). Afterward, investment in the year 2012-13 of Rs. 5455 (18.96%) was made in the MSMEs. Lowest percent of investment in the MSMEs was made in the year 2007-08 i.e. Rs. 2281 Crore (7.93%) in the State.

➤ **Region-Wise Employment Generated by Msmes in Maharashtra State.**

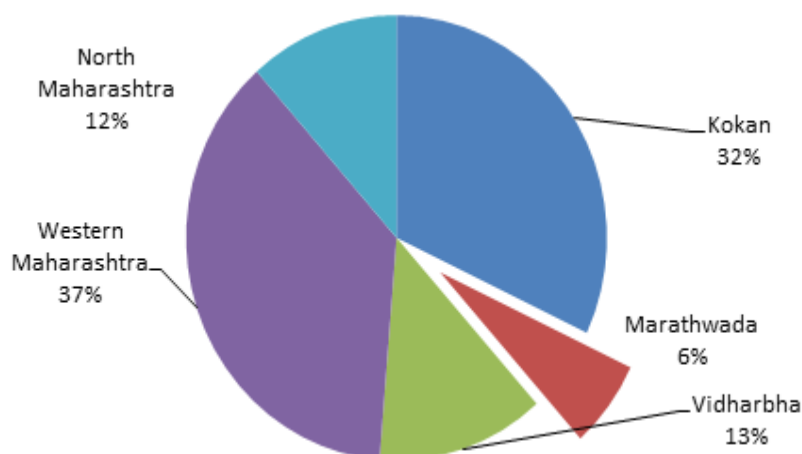
Table No. 13 Region-wise employment generated by MSMEs in Maharashtra State

Sr. No.	Region	Employment generated (In Lakh)	(%)
1	Kokan	7.48	32.02
2	Marathwada	1.49	06.38
3	Vidharbha	3.01	12.89
4	W. Maharashtra	8.68	37.16
5	North Maharashtra	2.70	11.56
Total		23.36	100.00

(Source: Economic Survey of Maharashtra State 2013-14)

It is revealed from table No. 13 that, 23.36 Lakh employment generated by MSMEs in Maharashtra State. Highest percent of employment generated in the western Maharashtra Region i.e. 8.68 Lakh (37.16%). Kokan Region followed it with 7.48 Lakh (32.02%) of employments. Lowest number of employment generated in the Marathwada Region i.e. 1.49 Lakh (6.38%) in Maharashtra State. Following table states the urgent step has to undertaken by Maharashtra Govt. to increase number of MSMEs and employment opportunities in the Marathwada Region.

Graph No. 13 Region-wise employment generated by MSMEs in Maharashtra State



(Source: Table No.13)

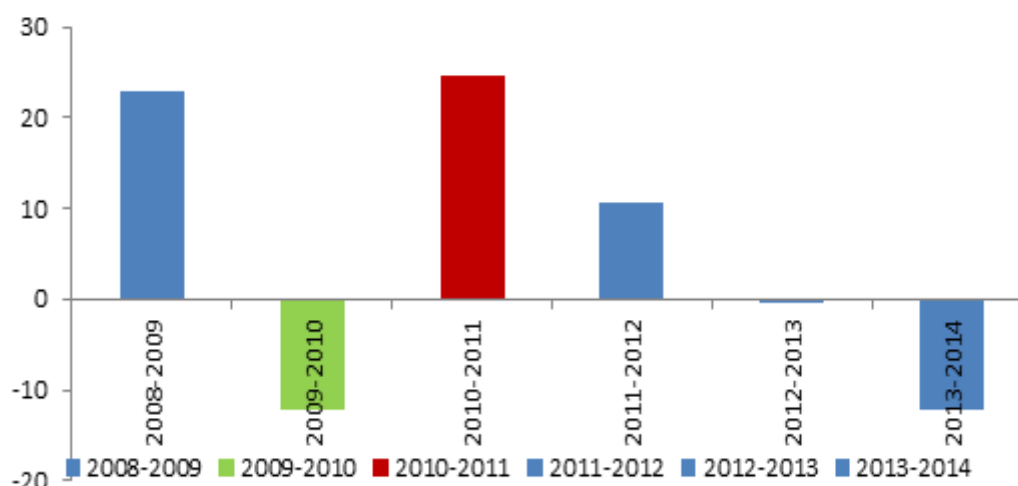
➤ **Year-Wise Employment Generated by Msmes in Maharashtra State.**

Table No. 14 Year-wise employment generated by MSMEs in Maharashtra State (In Lakh)

Sr. No.	Year	Employment Generated by MSMEs	%	Growth trend
1	2007-2008	1.39	11.20	-----
2	2008-2009	1.71	13.78	23.02
3	2009-2010	1.50	12.09	-12.28
4	2010-2011	1.87	15.07	24.67
5	2011-2012	2.07	16.68	10.70
6	2012-2013	2.06	16.60	-0.48
7	2013-2014	1.81	14.59	-12.14
Total		12.41	100.00	

(Source: Economic Survey of Maharashtra State, 2013-14)

Graph No. 14Year-wise employment generated by MSMEs in Maharashtra State



(Source: Table No.34)

Table No.14 shows the total 12.41 Lakh employments were generated in the Maharashtra State since 2007-08 to 2013-14. Highest percent of employment was generated in the year 2011-12 i.e. 2.07 Lakh (16.68%). Lowest percent of employment was generated i.e. 1.39 Lakh 11.20% in the year 2007-08.If the growth trend of employment is concerned highest growth of employment by MSMEs can be seen in the year 2010-11 i.e. 24.67.

➤ **Performance of Mssidc in Maharashtra State.**

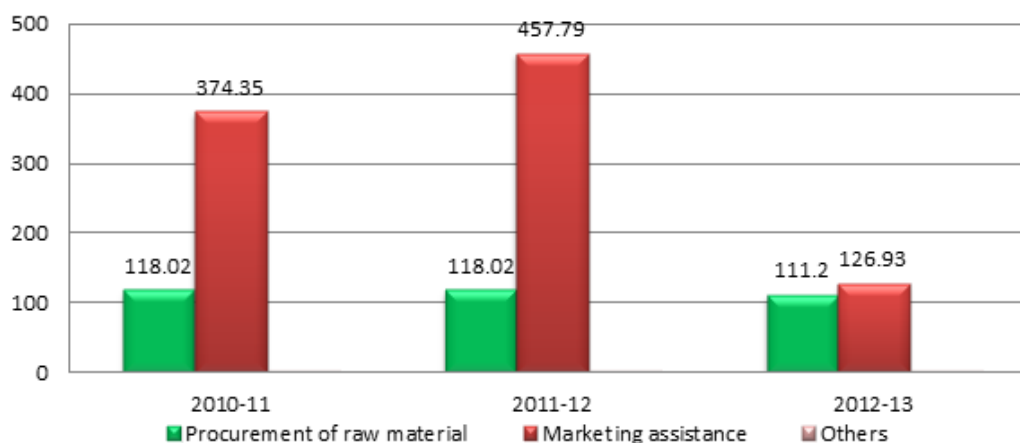
Table No. 15Performance of MSSIDC in Maharashtra State

Sr. No.	Particulars	Turnover (In Crore)		
		2010-2011	2011-2012	2012-2013
1	Procurement of raw material	118.02	118.02	111.20
2	Marketing assistance	3715	457.79	126.93
3	Others	002.13	00.54	002.44
Total		494.50	553.82	130.57

(Source-MSSIDC Report, Dec. 2013)

The Maharashtra Small Scale Industries Development Corporation is playing very significant role in the development of Small scale industries in the State. These organization chains Small industries for procurement of raw material, it also helps to sale goods and services produced by Micro and Small industries in the market. The data in this regard analyzed and interpreted in the table No.17. Fluctuating trend related to procurement of raw material, marketing assistance, and other supports can be observed.

Graph No. 15Performance of MSSIDC in Maharashtra State
Turnover (In Crore)



(Source: Table No.17)

Working SSI/Msme in Marathwada Region.

It is clear from the table No.18 that, in the year 1978-79 there were 822 units were functioning in the Region. Where the total investment was Rs. 13.46 Crore and they generated 2250 employments in the Region. In the year 2003-04 there were 9129 SSI were running in the Region. They generated 109485 employments and made Rs. 2646.68 Crore investments. It also indicates the growth in business units, investments and employments since 1978 to 2004 in the Region.

Table No.16 Working SSI/ MSMEs in Marathwada Region
(1978-79 to 2003-2004)

Sr. No.	Year	Units	Investments (Crore)	Employments (Person)
1	1978-79	822	13.46	2250
2	1979-80	985	16.66	2850
3	1980-81	1302	24.28	4300
4	1981-82	1137	25.07	5750
5	1982-83	1106	28.06	8555
6	1983-84	1085	38.40	9705
7	1984-85	1940	60.81	10135
8	1985-86	1706	65.10	8805
9	1986-87	1360	141.50	9765
10	1987-88	2049	98.47	14355
11	1988-89	2003	108.88	13005
12	1989-90	2517	119.16	16060
13	1990-91	3635	99.17	18150
14	1991-92	4690	109.14	22220
15	1992-93	5878	143.24	29599
16	1993-94	6260	168.84	34320
17	1994-95	6991	244.10	37575
18	1995-96	7999	358.38	32510
19	1996-97	8448	435.18	53219
20	1997-98	9321	807.07	58883
21	1998-99	10267	868.38	68952
22	1999-2000	11116	1188.47	79269
23	2000-2001	9240	1263.75	80287
24	2001-2002	12408	1884.60	89671
25	2002-2003	6906	2509.38	61562
26	2003-2004	9129	2646.68	109485

(Source: Joint Director of Industries, Aurangabad, Statistics of SSI, 2012)

➤ **District-wise working MSEs in Marathwada Region.**

Table No.17 District-wise working MSEs in Marathwada Region

Sr. No.	Year	Marathwada Region								Total
		Jalna	Latur	Aurangabad	Hingoli	Nanded	Osmanabad	Parbhani	Beed	
1	2005-2006	372 (8.65)	453 (10.53)	2504 (58.22)	6 (0.14)	432 (10.04)	NA ----	166 (3.86)	368 (8.56)	4301 (100.00)
2	2006-2007	1083 (19.25)	595 (10.58)	2785 (49.51)	25 (0.44)	488 (8.68)	NA ----	201 (3.57)	448 (7.96)	5625 (100.00)
3	2007-2008	696 (11.77)	688 (11.64)	3059 (51.73)	33 (0.56)	621 (10.50)	35 (0.59)	251 (4.24)	530 (8.96)	5913 (100.00)
4	2008-2009	682 (10.37)	770 (11.70)	3233 (49.14)	76 (1.16)	814 (12.37)	75 (1.14)	309 (4.70)	620 (9.42)	6579 (100.00)

5	2009-2010	785 (10.91)	827 (11.50)	3405 (47.33)	93 (1.29)	928 (12.90)	119 (1.65)	343 (4.77)	694 (9.65)	7194 (100.00)
6	2010-2011	1023 (13.06)	879 (11.22)	3448 (44.03)	108 (1.38)	1040 (13.28)	181 (2.31)	388 (4.95)	764 (9.76)	7831 (100.00)
7	2011-2012	2879 (28.18)	1017 (9.95)	3586 (35.10)	122 (1.19)	1103 (10.80)	210 (2.06)	446 (17)	854 (8.36)	10217 (100.00)

(Source: Compiled from MSMEs Reports of concerned districts, 2012-13)

(NA: Not Available) (Note: The figures in the brackets indicate percentage to total)

It is clear from table No. 19 that, in 8 districts of the Marathwada Region, in Aurangabad the growth of MSMEs found very well. There were 2504 units were functioning in the year 2005-06 and in the year 2011-12 the number increased up to 3586. In Hingoli district the slow growth of MSMEs can be noted since 2005-06. In Jalna and Latur there were 372 and 453 MSMEs were functioning in 2005-06 and it increased up to 2879 and 1017 in the year 2011-12. In the rest districts progressive growth of MSMEs can be observed from the above table.

➤ Working MSMEs in Marathwada Region.

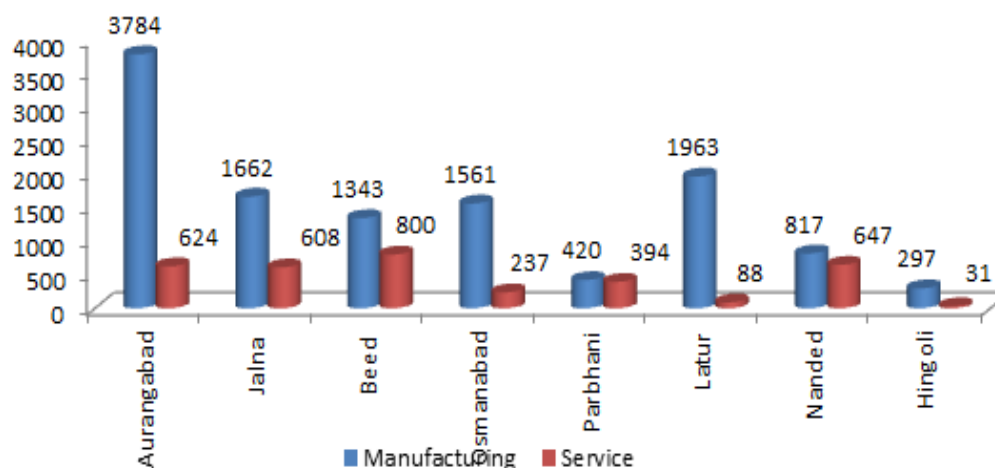
Table No. 18 Working MSMEs in Marathwada Region (As on 31st Mar 2012)

Sr. No.	District	No. of enterprises		Total	%	Rank
		Manufacturing Sector	Service sector			
1	Aurangabad	3784	624	4408	22.85%	I
2	Jalna	1662	608	2270	14.86%	II
3	Beed	1343	800	2143	14.03%	III
4	Osmanabad	1561	237	1798	11.77%	V
5	Parbhani	420	394	814	05.33%	VII
6	Latur	1963	88	2051	13.43%	IV
7	Nanded	817	647	1464	09.58%	VI
8	Hingoli	297	31	328	02.15%	VIII
Total		11847	3429	15276	100.00	

(Source: Annual report of MSMEs, Marathwada Region, 2013)

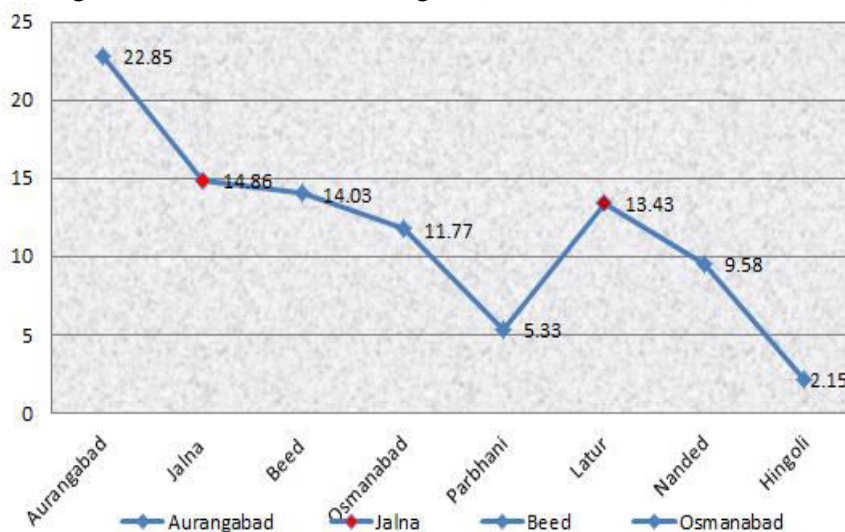
Table No. 18 indicates that total 15276 **enterprises** were working in the Marathwada Region as on 31st March 2012. Out of which in Jalna District 2270 i.e. 14.86% and 2051 i.e. 13.43 % units were working in the Latur District as on date. Highest number of the **enterprises** was working in the Aurangabad District i.e. 4408(22.85%). Lowest number of **enterprises** were working in the Hingoli District i.e. 328 units (02.15%) in this Region.

Graph No.18 Working MSMEs in Marathwada Region (As on 31st Mar 2012)
(Manufacturing and service sector industries)



(Source: Table No.18)

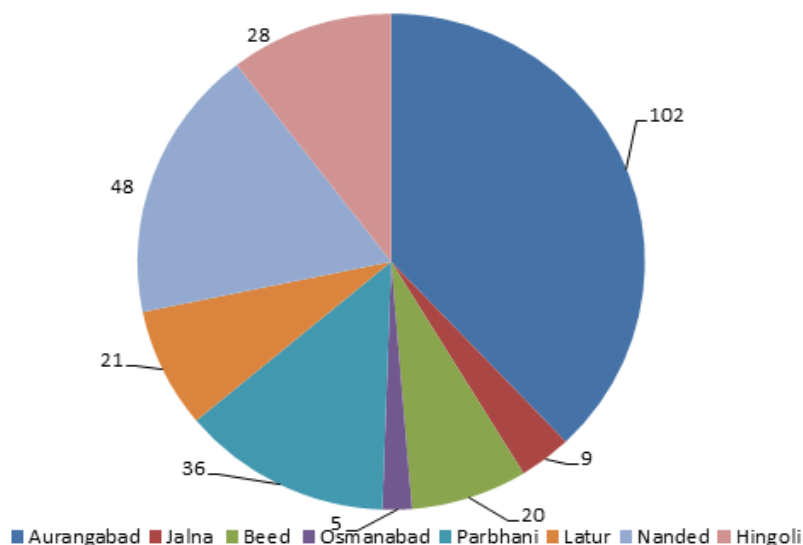
Graph No.19 Working MSMEs in Marathwada Region (As on 31st Mar 2012)(Number of MSMEs in %)



(Source: Table No.4.40)

➤ **Entrepreneurs Memorandum (Part II) Filed for Small Industries in Marathwada Region (2-10-2012 To 2-9-2013)**

Graph No. 20 Entrepreneurs' memorandum filed for small industries in Marathwada Region (2-10-2012 to 2-9-2013)



(Source: Table No. 20)

Graph No.20 indicates that, out of total Entrepreneur's memorandum part II filed by Entrepreneurs for Small industries, highest number memorandum filled in the Aurangabad District i.e. 102. Lowest number of memorandums filled in Osmanabad District i.e. 5. Between Jalna and Latur Districts, highest number of Entrepreneurs filled memorandum for Micro industries in Latur District i.e.21. In Jalna District 9 Entrepreneurs filled the memorandums for Small industries.

Profile of Mses in Jalna and Latur Districts.

Enterprises have been recognized as one of the key sectors income, employment and overall economic development of any country. The enterprises have often been termed as the 'Engine of Growth' for developing economies. The Small and Medium Enterprises Development Act, 2006, was enacted to expand our focus to the entire gamut of enterprises both in manufacturing and service enterprises. Here the progress of MSEs in Jalna and Latur Districts along with the investment, employment generation etc. is discussed.

Year-Wise Progress of Mses in Jalna and Latur Districts.

Table No.21 Year-wise progress of MSEs in Jalna and Latur Districts

Sr. No.	Year	Jalna District			Latur District			Total Units
		Units	* % Increase/ Decrease	** % Increase/ Decrease	Units	* % Increase/ Decrease	** % Increase/ Decrease	
1	2003-04	788	----	100	134	----	100	922
2	2004-05	650	-17.51	82.49	265	97.76	197.76	915
3	2005-06	372	-42.77	47.21	453	70.94	338.06	825
4	2006-07	1083	191.13	137.44	595	31.35	444.03	1678
5	2007-08	696	-35.73	88.32	688	15.63	513.43	1384
6	2008-09	682	-2.01	86.55	770	11.92	574.63	1452
7	2009-10	785	15.10	99.62	827	7.40	617.16	1612
8	2010-11	1023	30.32	129.82	879	6.29	655.97	1902
9	2011-12	2879	181.43	365.36	1017	15.70	758.96	3896
10	2012-13	2270	-21.15	288.07	2051	101.67	1530.60	4321
Total		11228 (59.39%)			7679 (40.61%)			18907

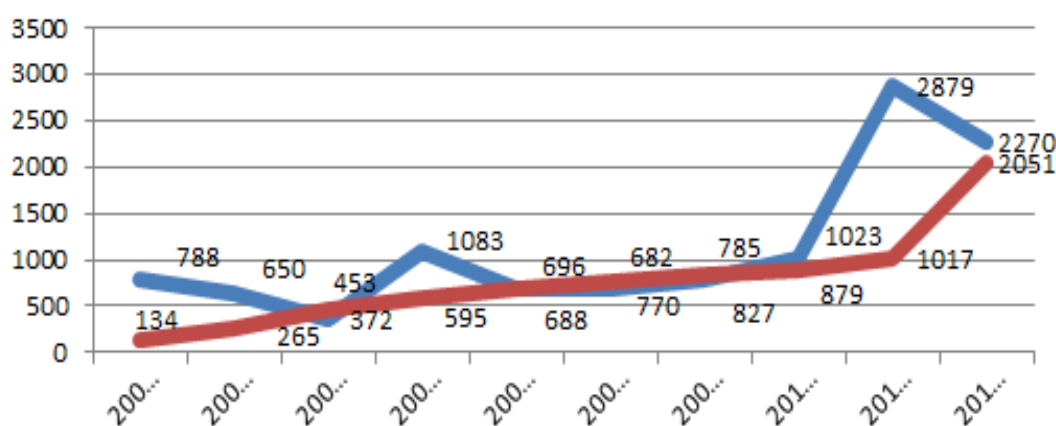
(Source: The data for the period up to 2005-06 is for Small Scale Industries (SSI) and subsequent to 2005-06 data is with reference to Micro and Small Scale Enterprises which is compiled from reports of MSEs, Jalna and Latur Districts of respective years)

Note: * Represents growth over the previous year.

** Represents growth over the base year.

Table No.4.42 depicts information related to progress of enterprises in the Jalna and Latur Districts. In Jalna District, highest number of enterprises was registered in the year 2012-13 i.e. 2270. Lowest number of enterprises was registered in the year 2005-2006 i.e. 372. In Latur District, highest number of enterprises was registered in the year 2012-13 i.e. 2051. While, lowest number of enterprises was registered in the year 2003-2004 i.e. 134.

Graph No. 21 Year-wise progress of enterprises in Jalna and Latur Districts



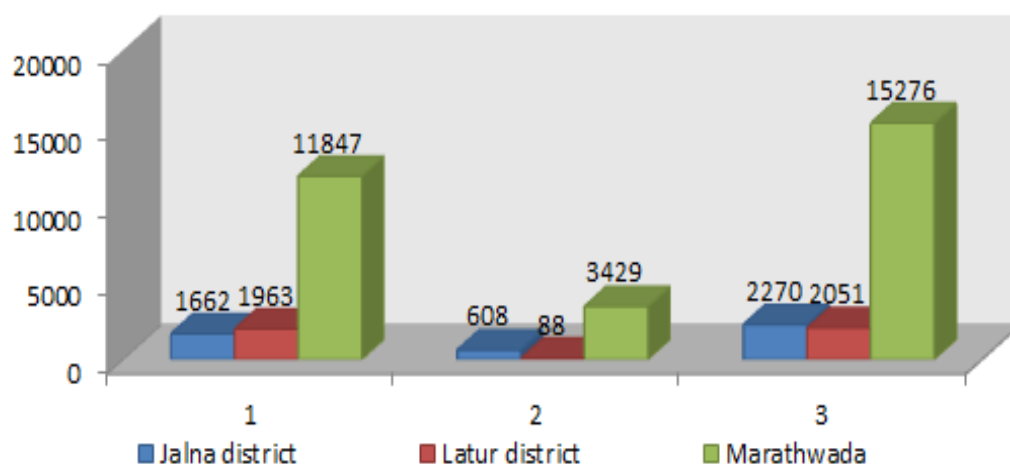
(Source: Table No.21)

Total Number of Manufacturing and Service Enterprises in Jalna and Latur Districts.

Table No. 22 Total number of enterprises in Jalna and Latur Districts (As on 31st Mar. 2012)

Sr. No	Particulars	Enterprises		Total	%	Rank
		Manu.	Service			
1	Jalna District	1,662	608	2,270	14.86	I
2	Latur District	1,963	88	2,051	13.43	II
3	Marathwada	11,847	3429	15,276		

(Source: Annual Reports of MSMEs, Marathwada Region, 2013)

Graph No. 22Total number of MSEs in Jalna and Latur Districts

(Source: Table No.22)

Total number of MSEs functioning in any District generates the opportunities related to income and employment of the District. The information related to the total number of MSMEs up to 31st Mar. 2012 with compare to Marathwada Region is recorded in the table No.22. Total 2270 units were working in Jalna District as on 31st Mar.2012, i.e. 1662 of manufacturing sector and 608 of service sector (14.86%). In Latur District total 2051 units were working as on date, out of which 1963 are of manufacturing sector and 88 are of service sector (13.43%). In the Marathwada Region, between Jalna and Latur Districts, Jalna District is on top position with having 14.86% enterprises than Latur having 13.43 % enterprises.

CONCLUSION

MSMEs plays very key role in the development of economy. MSMEs working in the economy in Maharashtra State, in Marathwada Region and in the Jalna and Latur district played very significant role in the development of income and employment sources. It is to be suggested that the Govt. has to take initiatives to increase the number of MSMEs throughout the nation.

REFERENCES

- Tiwari, Sarita, Inter Regional Patterns of Industrialization in U.P., Giri Institute of Development Studies, Lucknow, 1992.
- Varinder Kumar. 2002, Marketing Practices in Small scale industries, "A study of engineering industry of Punjab, Gurunanak Dev University, Amritsar.
- Vasant Desai, 1995, Dynamics of Entrepreneurial Development and Management, Himalaya Publishing House, Mumbai.
- Vasanth Desai, (2005) Dynamics of Entrepreneurial Development and Management, Himalaya Publishing House, Girgaon, Mumbai 400 004.

NEW BUSINESS IDEAS IN AGRICULTURE SECTOR

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ABSTRACT

The present paper revisits the concept of agribusiness or new trends in agribusinesses. Agriculture is one of the most growing and demanding sectors in today's era. There are more than hundred agriculture businesses that are growing rapidly these days. It is a difficult task and required a lot of hard work to start agribusiness. Before starting any business, you must do complete research on the specific market. This study includes with suggested business ideas in agriculture field.

INTRODUCTION

India is one of the major players in the agriculture sector worldwide and it is the primary source of livelihood for about 58% of India's population. India's demand for food and agricultural product is likely to increase day by day. So Agri base business has wide scope in today's era. Agribusiness is a combination of the words "agriculture" and "business" and refers to any business related to farming and farming-related commercial activities. Agribusiness involves all the steps required to send an agricultural good to market, namely production, processing, and distribution. there are various types of businesses relating to agriculture sector, but we can categorise in following manner.

- Productive Resources include seed, fertilizer, energy, machines, and many more.
- Agriculture commodities include processed and raw commodities of fibre and food.
- Important services include insurance, storage, credit, transportation and many more.

OBJECTIVE OF STUDY

- 1 To know the concept of agribusiness
- 2 To study types of agribusinesses
- 3 To know new idea in agriculture sector

RESEARCH METHODOLOGY

To conduct the research study descriptive research method has been used. For the purpose of the study secondary data is used. It is collected from the published books, research papers in journals, annual reports and website.

TYPES OF AGRIBUSINESSES

Beekeeping

The science and art of managing honey bees called beekeeping or apiculture is a centuries-old tradition. The first beekeepers were hunters, seeking out wild nests of honey bees, which often were destroyed to obtain the sweet reward, called honey, for which these insects are named. As many people today have become health-conscious, the demand for honey is also increasing. Thus Beekeeping Business in India is emerging as a profitable Agri business. However, to start beekeeping you will have to undergo training.

Mushroom Farming

One of the most profitable agricultural businesses that you can start with little capital and little space is mushroom growing. In India, mushroom farming is increasingly becoming more popular as a secondary source of income for many people. Fungiculture is the cultivation of fungi such as mushrooms. Cultivating fungi can yield foods medicine, construction materials and other products.

Azolla Production

Azolla can be used as an animal feed, a human food, a medicine, and a water purifier. Azolla is good for fish, cattle, pigs, and poultry. It is also used as a bio-fertilizer for wetland paddy. If you have some space in your backyard then you can start Azolla production.

Green House Flower Production

Green house system is to shield for crops from excess cold or heat and unwanted pests. It is a technique of favourable environmental or growth condition to the flowering plant. It provides valuable cash flow throughout the year. Green house reduces water requirement, labour requirement, reduces crop duration due to such benefits it is become popular in India.

Production of Potato Chips

Now a days the demand for French fries and potato chips is constantly increasing all over the world hence you can think of starting a potato chips business. It is a very profitable business that can be started with low capital investment.

Cultivation of Medicinal Herbs

Cultivation of medicinal plants in a commercial mode is one of the most profitable agri-businesses for farmers in India. If you have basic knowledge of medicinal plants and you have enough land, then you can earn good profits from its cultivation. At the same time, the government also offers subsidies for cultivating medicinal plants.

Willows Farming

Willow bark has been used throughout the centuries in China and Europe, and continues to be used today for the treatment of pain (particularly low back pain and osteoarthritis), headache, and inflammatory conditions, such as bursitis and tendinitis. it grows in many parts of south and southeaster Asia, including India, Pakistan, Bangladesh, Nepal, Laos, and Thailand, In Maharashtra, this tree is called walunj.

Bamboo Farming

Bamboo is considered a part of the grass family and has long been a landscaping ideal, as landscapers can pick a species of bamboo covering from low Sasa bamboo that is barely a foot tall to large timber bamboo that can reach 75 feet in height. By growing vessel bamboo for landscapers and homeowners, digging is reduced, and the plants have less space.

REFERENCES

1. <https://krishijagran.com/agripedia/20-most-demanding-profitable-agriculture-business-ideas-in-india/>
2. <https://www.ibef.org/industry/agriculture-india>
3. https://en.wikipedia.org/wiki/Agriculture_in_India
4. <https://www.hortibiz.com/newsitem/news/top-20-indian-profitable-agri-business-ideas-to-start-in-2021/>

NEW HORIZON WITH KRISHI VIGYAN KENDRAS(KVKS) (WITH REFERENCE TO AGRICULTURE IN HIMACHALPRADESH)

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ABSTRACT

In the current era of networking, the Indian Council of Agricultural Research (ICAR) is developing close and fruitful partnerships and collaboration between subject matter experts of KVKS and research scientists, extensionists, and farmers. By adopting best practises, innovative ideas, and experiences, these parties are sharing and scaling up appropriate technologies. For the KVKS to carry out their work effectively, E-Linkage and an interface have been given. Out of 575 KVKS, 192 KVKS and 8 regional directorates were not properly linked during the first phase. Through e-linkage, the KVK is able to tell people about climate change, its programmes, and other agricultural support. vKVK, or "Voice Krishi Vigyan Kendra," is a cutting-edge multimodal agricultural advisory system that runs on the web and mobile devices.

Keywords: KrishiVigyanKendras, E-LinkageofKVKS

INTRODUCTION

Knowledge of agriculture is maybe as old as agriculture itself. Clay tablets from Babylonia contain information on agriculture. According to Blanchard (1997), "the vast library of Alexandria definitely housed several agricultural treatises written on papyrus." European agricultural libraries were established in the middle of the 18th century. India gave infrastructure for agricultural research top priority after gaining independence. ICAR covers a wide variety of fields, including agriculture, fisheries, agricultural extension, agricultural education, , agricultural communication etc. To increase the human resources in agricultural science, various agricultural universities have been founded nationwide. The purpose of Krishi Vigyan Kendras (KVKS), which are created under ICAR's technology intervention programmes, is to educate, research, and showcase new technologies. Krishi Vigyan Kendra (KVK) offers assistance to farmers with their ongoing agricultural problems. These KVKS provide farmers, researchers, and scientists with need-based, useful solutions. These facilities facilitate the exchange of agricultural information between farmers and the Indian Council of Agricultural Research (ICAR). This network is also used by a number of governmental and non-governmental organisations to notify farmers of their successes. These facilities aid in extending agricultural research so that users can take use of laboratory findings. Naturally, these organisations assist farmers in the use of cutting-edge agricultural methods and act as nodal agencies for the ICAR. Every district and town in our nation needs KVK. These KVKS are governed by the ICAR, as well as Central and other agricultural institutions, deemed universities, non-governmental organisations, state agricultural agencies, and the public sector.

Genesis of KVKS

Because of the scientists' persistent efforts to boost output, a great deal of technological progress has been made in this area. It has been noted that the high adoption costs of several technologies and the lack of interest from extension organisations have prevented them from reaching farmers. As a result, the transfer of technology was incomplete and ineffective. Later, K.V.Ks were created to facilitate farmers' simple and active involvement in front-line demonstration and on-farm testing. KVKS are performing outstanding work in Himachal Pradesh. Today, it is acknowledged that there is a need to connect agricultural information sources found in universities and research institutions with extension centres. Now, focus will be placed on the acquisition, application, and dissemination of information as well as how the qualities of novel concepts and technological advancements affect the rate of adoption by farmers. The global agricultural digital library network's design and structure must incorporate the end user. Progressive farmers willing to make use of this digital resource will surely benefit from such an approach. Farmers will be able to make more informed decisions when provided with timely data, leading to greater harvests.

Development History of KVKS

Presently 630 KVKS in the country



Table.1. Historical background of Krishi Vigyan Kendras

Objectives of KVKs.

These KVKs were created with a number of objectives in mind. By carefully examining the current state of agriculture, we can quickly pinpoint these objectives. In conclusion, the KVK assesses agricultural practices, makes the necessary adjustments, and presents the newest products and techniques. In communities, KVKs also exhibit cutting-edge farming techniques. These positions also entail demonstrating to farmers the new techniques and crop yields. Farmers receive knowledge and supplies from these facilities. By instructing farmers in their areas, the KVKs urge them to embrace cutting-edge agricultural technologies. All around the country, farmers are urged to adopt model farms.

E-Linkage to Provide Information to Farmers

KVKs are adjusting to quickly evolving technology. Agricultural R&D may quickly and effectively reach end users because to these KVKs' online connections to ICAR, New Delhi, their district offices, and each other. KVKs can operate more effectively thanks to e-Linkage and interface. In the first phase, 192 of the 630 KVKs and 8 regional directorates were linked. Farmers and agriculture specialists gain from KVK E-linkage. Websites increase KVKs. The website would include information on agricultural subsidies, KVK programmes, and climate change. Modern E-Linkage facilities would be available. Farmers can learn techniques by watching programme videos. The majority of farmers would have access to information via mobile.

Krishi Vigyan Knowledge –Network (<http://agropedialabs.iitk.ac.in/extension/>)

KVK experts can exchange agricultural information and experiences on KVK-Net. It has features for blogs, message boards, events, communities, chat, and private messages. Information sharing between agricultural experts and extension staff is facilitated through seven agriculture and related groups. This platform is being pilot-tested by Zone IV KVKs. The KVKs in the nation ought to be included soon. Journal articles, conference papers, monographs, book chapters, proceedings, preprints, and multimedia materials are all accepted by Openagri. When a document is added to this repository, Agrotags automatically assigns keywords to it.



Fig1: KrishiVigyanKnowledgeNetwork

KrishiVigyan Kendras in HimachalPradesh

His Highness's Himachal Pradesh is home to 12 KVKs. State agricultural colleges oversee all KVKs. The CSK Himachal Pradesh Krishi Vishvavidyalaya is located in Palampur, and four are affiliated with the Dr. Y. S. Parmar University of Horticulture and Forestry in Solan. The Punjab Agricultural University donated its Farm Advisory Service Scheme and Agro-vocational School to the Directorate of Extension Education when the Palampur College of Agriculture was established in 1966. The Directorate of Extension Education was started by Himachal Pradesh Krishi Vishvavidyalaya in 1978. Since then, eight Krishi Vigyan Kendras located in eight districts have been added to the Directorate of Extension Education. All state extension programmes are coordinated by the Directorate of Extension Education. The Directorate works closely with constituent college departments, State Government agencies, ICAR, and other extension organisations to design, organise, and oversee all University extension programmes.

AgriculturalTechnologyinformation Centre (ATIC),HP

Single-door inputs, services, technology, and information are offered by ATIC. Farmer/Visitor Touch Screen Facility and Kissan Call Center Installed. Campus of Extension Education Directorate. News about agritech is thus limited. However, there are various ways for farmers to obtain laboratory data. Knowledge sharing is made simple by multidisciplinary information for integrated agricultural development and technology-based multimedia information systems. Most farmers in impoverished countries don't have access to the Internet or know how to use it. Although most rural public libraries lack essential information, farmers utilise them to unwind. Information must be shared by libraries. By bridging the technology gap, libraries assist farmers in getting access to information. For this, digital library technologies are essential. Libraries can assist in disseminating information on farmers thanks to the Indian National Information Centre Network (NICNET).

CONCLUSION

In the domains of agriculture, horticulture, animal husbandry, floriculture, beekeeping, mushroom cultivation, broiler farming, and related fields, the ICAR's Krishi Vigyan Kendra (KVK) is a fantastic idea for transferring technology from the lab to the farmer's field. To boost production, scientists continuously created new technology. Many inventions never make it to farmers due to cost and disinterest on the part of extension agencies. Thus, there was not enough technical transfer. Later, K.V.Ks were developed to make it simple for farmers to take part in on-farm testing and Front Line Demonstration. Those in Himachal Pradesh fare well. Extension centres today need to be connected to agricultural data from universities and research organisations. We'll look at how information is gathered, used, and utilised as well as how farmers adopt new concepts and technologies. Users must be included in the global agricultural digital library network. India is unable to use IT due to lack of infrastructure, inadequate infrastructure, a lack of information necessary to create a database, a lack of regulatory framework, fiscal constraints, and a lack of training for extension and agriculture research personnel. Extension personnel, farmers, cooperative societies, governmental organisations, researchers, students, and policymakers will all gain from an integrated agricultural digital library system. The utilisation of this digital resource will help progressive farmers. They will be equipped with the appropriate information at the appropriate moment to make the best decisions, boosting agricultural output.

REFERENCES

1. <http://vkvk.iitk.ac.in/>
2. <http://agropedia.iitk.ac.in/>
3. <http://www.yspuniversity.ac.in/>
4. <http://www.hillagric.ac.in>

OPPORTUNITIES AND CHALLENGES IN AGRISTART-UPS IN INDIA

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ABSTRACT

India is the second largest agricultural landowner, and about 50% of Indians make their living from agriculture, so the role of agri-startups in creating opportunities for people is so important. Public institutions across India are constantly trying to improve the lives of farmers through their policies. This is because it is important to note that the Indian economy relies on agriculture for 50% of people's shops. As agricultural exports have grown at a CAGR of 6.72% from 2011-12 to 2015-16, it has been shown that an increase in technology adoption leads to an increase in productivity.

Keywords: Agri.start-ups, export, policies, progressive, technology

INTRODUCTION

India is an emerging country in terms of startup growth. The Indian environment has tremendous growth potential to create innovative startups and make India the third fastest growing centre for technology startups (CNBC, 2019). In addition, India came third in the startup ecosystem race as India seeks to improve its rank in terms of ease of doing business. In 2019, it was ranked 77th and now, in 2020, according to the World Bank's Ease of Doing Business Report 2020, it has improved by 14 ranks and is now ranked 63rd among 190 countries (World Bank, 2020). In addition, other sectors such as agriculture, education, healthcare, fintech, space, food, and urban services are also benefiting from this emerging and supportive environment in India. Startups have been encouraged by government support and corporate connectivity, which has helped raise around \$63 billion over the past six years (Start-up Talky, 2020). By the end of 2018, there were around 50,000 startups in India with an India's GDP growth should be such that a \$5 trillion economy can be achieved, and without 9% to 10% annual growth, this is impossible. Agricultural revolution can help to achieve this imaginary goal, and without agricultural revolution it is like a dream (Economics Time, 2019).

OBJECTIVES

1. To gain insight into the opportunities and challenges of Agri Startups.

CHALLENGES & PROBLEMS IN AGRICULTURE FOR START-UPS

1. Inadequate supply chain: the availability of resources such as seeds, chemicals and distribution depends on an efficient supply chain. An inadequate supply chain is therefore a major challenge for startups.
2. Mediators and agents: Farmers' needs are guarded by an intermediary that owns the fragmented supply. Organized retailers purchase an estimated 20% of their products directly from farmers and products from mandis. However, mandis are not an ideal market for farmers; traders need a license to operate in mandis.
3. Lack of funding: domestic subsidies and policy investments hardly reach farmers - the end users.
4. Inadequate irrigation: most of the Indian region is still dependent on rainfall. Second, the water table is dropping from an average depth of 1000 feet per year.
5. Farm size vs. productivity: Indian farms are disparate and small, with 70% of farms having less than 1 hectare, resulting in remarkably low yields.

OPPORTUNITIES FOR AGRICULTURE-TECH

1. Maximizing resources: reducing the use of water, fertilizers, pesticides, and other resources in agriculture is a major business opportunity, as 80% of freshwater is used in agriculture. (NAASCOM Agri-tech in India: Emerging Trends in 2019).
2. Processing and Export: The Indian food processing industry is one of the largest industries in the country. It ranks fifth in terms of production, consumption, and exports. Traceability can improve farmers' income and exports.
3. Supply chain rationalisation: Indian farmers suffer post-harvest losses of Rs. 92,651/- crore rupees annually. Increasing demand for cold chains, warehouses and comprehensive supply chain can increase farmers' income.

CONCLUSION

Indian startups in agriculture are taking up the challenge of transforming this sector into a technology-driven and smart sector. The telecom sector has played an important role in this. The easy and cost-effective availability of the Internet to farmers has been brought up to date, allowing access to market information on every aspect of agriculture at the right time, whenever it is needed. Looking ahead, GOI, plans to support start-ups in agriculture to boost farm revenues. It will also help farmers to become agri-entrepreneurs and provide valuable opportunities to existing agri-entrepreneurs to expand their business. Start-up India is an innovative approach that includes various central and state programmes to provide technical expertise and financial support to agri-entrepreneurs.

REFERENCE

1. Agritech in India: Emerging Trends in 2019 (2019) NAASCOM. Retrieved from <https://nasscom.in/knowledge-center/publications/agritech-india-emerging-trends2019>
2. Biotechnology Industry Research Assistance Council (BIRAC). (2020). Biotechnology Ignition Grant scheme guideline. Birac.nic. Retrieved from https://birac.nic.in/webcontent/1578921225_big_guidelines_7_jan_2020.pdf
3. Chandra Shekara, P. (2020). NIAM yearly newsletter. CCSNIAM. Retrieved from <https://www.ccsniam.gov.in/images/pdfs/RKVY-Newsletter-September-2019-to-March-2020.pdf>
4. Jha, B. Employment, Wages and Productivity in Indian Agriculture. Iegindia. Retrieved from <http://iegindia.org/upload/publication/Workpap/wp266.pdf>

OVERVIEW AND PERFORMANCE OF THE MSME SECTOR

¹Dr. Jawale Dnyaneshwar Vinayakrao and ²Dr. Dhotre Avinash Changdeo¹Assistant Professor, ²Assistant Professor, Department of Commerce and Management Science, Deogiri College, Aurangabad**ABSTRACT**

The Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. It contributes significantly in the economic and social development of the country by fostering entrepreneurship and generating large employment opportunities at comparatively lower capital cost, next only to agriculture. MSMEs are complementary to large industries as ancillary units and this sector contributes significantly in the inclusive industrial development of the country. The MSMEs are widening their domain across sectors of the economy, producing diverse range of products and services to meet demands of domestic as well as global markets. An overview and performance of MSME Sector in the country

Keywords: Micro, small and medium enterprises (MSME), Indian economy, entrepreneurship

INTRODUCTION

Micro Small and Medium Enterprises (MSME) have been accepting driving force in the development strategy of the Government of India. The Nehruvian philosophy of industrialization has given significance and it is understood the significance of small and medium enterprises in the national advancement. The underdeveloped and developing countries are for the most part ruled by the agrarian economy and portrayed by underemployment and rising joblessness. The industrialization in these economies is required to fill the double need of making roads for the retention of overabundance work and expansion of occupation. SMEs must broaden the important help and compliment the advantageous impacts of Industrialization. The industrialization in these economies is required to fill the double need of making roads for the retention of overabundance work and expansion of occupation. SMEs must broaden the important help and compliment the advantageous impacts of Industrialization. The SMEs makes more proficient utilization of capital and work for creating economies. They can deliver a unit of yield with the lesser cost of creation. By and large, SMEs units are work escalated and require littler measures of capital. In the capital rare and work surplus economy like India the two angles, i.e. more yield and greater work are similarly critical and in this setting small and medium ventures turn out to be exceptionally huge. The SMEs makes more effective utilization of capital and work of building up the economy and they can create a unit of yield with lesser capital yet more work than the bigger units. In the capital rare and work surplus economy like India the two viewpoints, i.e. more yield and greater work are similarly imperative.

REVIEW OF LITERATURE

De, Sankar (2009) in his article has viewed that SME's in India face many challenges, but perhaps none are as difficult as the challenge of financing, both short term and long term.

K,Vasanth,Majumdar M., K. Krishna (2012) in their paper have stated that since several successful models of the sustainable SME are gradually evolving, networks of SMEs would become essential for addressing the systemic problems under lying the industrial ecology, enterprise resilience, and global supply chain sustainability.

Subrahmanya (2004) highlighted the impact of globalization and domestic reforms on small scale industries sector by emphasizing that small industry had suffered in terms of growth of units, employment, output and exports. He also suggested that the focus must be turned to technology development and strengthening of financial infrastructure in order to make Indian small industry internationally competitive and contribute to national income and employment.

Srinivas (2013) analyzed about the performance of MSMEs, their contribution in India's economic growth, identified the number of enterprises, employment in MSMEs and concluded that MSMEs play a significant role in inclusive growth of Indian economy.

Yogesh C. Joshi and Kaushal Kishore (2018) found in their research that considerable proportion of MSMEs are practicing energy conservation but a lot of efforts are required to increase the number of units practicing the Data Collection model of energy conservation.

Nihar Ranjan Jena and Lina R Thatte (2018) analyzed that the difference in performance of the MSME sector in different states existed due to the differences in presence or absence of adequate enabling factors like labor force, economic infrastructure, and regulatory national level. Present research is mainly based on the framework, size of GSDP and density of MSME clusters etc. and found that Maharashtra was the leader in terms of performance of the MSME sector which was closely followed by Gujarat, Tamilnadu, Andhra Pradesh, Uttar Pradesh, West Bengal and Kerala.

Papiya Manna and Dr. Tapas Mistri (2017) analyzed in their research that MSMEs are increasing year by year and its share in national or state GDP.

OBJECTIVES OF THE STUDY

1. To understand the overview and performance of MSME sector of India.
2. To study the present status of Micro, Small and Medium enterprises in India
3. To study the role of MSME sector in economic development of India

Data Collection

This study based on secondary data. Several reports from authentic sources have been studied by researcher to know the present scenario of Small, and Medium Enterprises (MSME) sector. Other secondary data have been collected by researcher from various published research papers which related to MSME field. This research is based on annual report of MSME 2020-21 which is published by Government of India. Facts and figures given in this study have been considered for analysis purpose.

Data Analysis: shown increasing trend with some fluctuations.

A) Estimated number of MSMEs in country

Table No: 1 Estimated Number of MSMEs (Activity Wise)

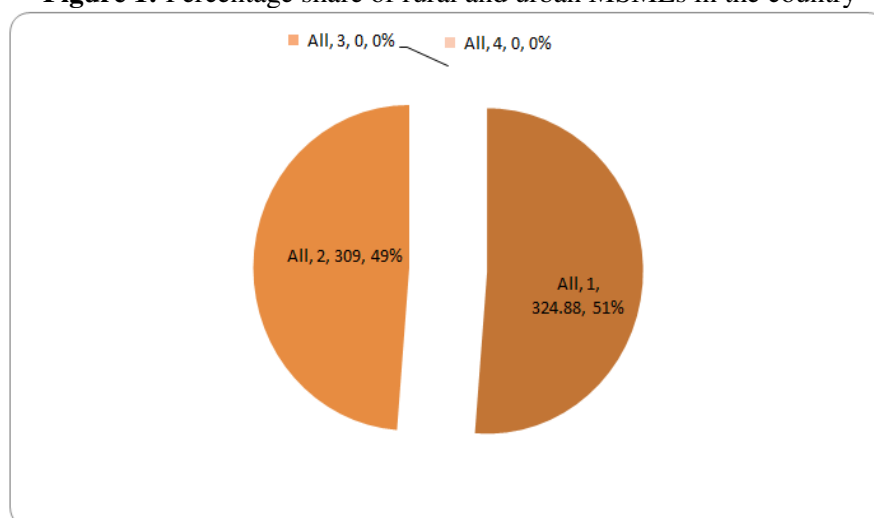
Activity Category it	Estimated Number of MSMEs (Activity Wise of Enterprises (in			Share (%)
	Rural	Urban	Total	
Manufacturing	114.14	82.50	196.65	31
Electricity	0.03	0.01	0.03	0
Trade	108.71	121.64	230.35	36
Other Services	102.00	104.85	206.85	33
All	324.88	309.00	633.88	100

(Source: -Annual Report 2021-2022)

Above table No. 1 indicate Estimated Number of MSME activity wise i.e. Manufacturing, Electricity, Trade and Other Services Micro sector with 630.52 lakh estimated enterprises accounts for more than 99% of total estimated number of MSMEs. Small sector with 3.31 lakh and Medium sector with 0.05 lakh

Estimated MSMEs accounted for 0.52% and 0.01% of total estimated MSMEs, respectively. Out of 633.88 estimated numbers of MSMEs, 324.88 lakh MSMEs (51.25%) are in rural area and 309 lakh MSMEs (48.75%) are in the urban areas.

Figure 1: Percentage share of rural and urban MSMEs in the country



B) Employment

Table No. 2 shows the distribution of employment Sector wise in Rural and Urban Areas. State-wise distribution of employment is given in

Table No. 2 Distribution of employment by type of Enterprises in Rural and Urban Areas (Numbers in lakh)

Sector	Micro	Small	Medium	Total	Share (%)
Rural	489.30	7.88	0.60	497.78	45
Urban	586.88	24.06	1.16	612.10	55
All	1076.19	31.95	1.75	1109.89	100

Out of 1109.89 lakh employees in MSME sector, 844.68 (76%) are male employees and Remaining 264.92 lakh (24%)

Achievements of Msmes

The primary responsibility of promotion and development of the micro, small and medium enterprises sector lies with the State Governments. However, Government of India recognized the importance and potential of the Micro, Small and Medium Enterprises sector for the growth and development of the national economy and for generation of employment. It also perceived the need for all- India framework for policies and measures for the development and promotion of Micro, Small and Medium Enterprises and has taken keen interest in supplementing the efforts of State Governments in different ways. The Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 is a result of the same.

After the enactment of this Act, a separate Ministry of Micro, Small and Medium Enterprises (MSME) was formed on 9.5.2007 by the merger of erstwhile Ministry of Small Scale Industry (SSI) and Ministry of Agro & Rural Industries (ARI).

CONCLUSION

The present research concludes that the MSME's is growing rapidly in India and giving huge contribution towards the economic growth of India. In nutshell MSME's is performed best in all activity and influenced to overall development of country. The study found that the increasing trend of MSME's in trade, manufacturing and other services during the year 2021-2022. It is seen that the highest share of trade is 36% in MSME's rather than manufacturing and other services. It is noticed that the maximum unit of MSME's are in rural areas than the urban areas of India. MSME's also have good contribution towards generation of the employment. The more employment is generated in urban areas compare to rural areas of India due to MSME's.

REFERENCES

- 1) Kiran, V.U. Dealer Network Strategy for MSMEs - A Case Study of Growth Strength, Small Enterprises Development, Management & Extension Journal
- 2) Dey, S.K. Msmes in India: It is Growth and Prospects, Abhinav National Monthly Refereed Journal of Research in Commerce & Management
- 3) Das P. Micro, Small and Medium Enterprises (MSME) in India: Opportunities, Issues and Challenges
- 4) Garge S, Agarwal P. Micro, Small and Medium Enterprises in India: A Review of Growth and Challenges in the Present Scenario International Journal of Applied Business and Economic Research.
- 5) Saini P. Study of Micro, Small and Medium Enterprises. Centre for Civil Society, Researching Reality Summer Internship
- 6) Baptiste-Cornelis, T. and Long, W. (2008). The Impact of Small Business Enterprises on the Economy of Trinidad & Tobago, Economic Impact of SBEs on the Economy of Paper. pdf.
- 7) Sharma, A., Dua, S. and Hatwal, V. Micro enterprise development and rural women entrepreneurship: way for economic empowerment, Arth Prabhand: A Journal of Economics and Management
- 8) Lahiri, R.(2012). Problems and Prospects of Micro, Small and Medium Enterprises (MSME) In India In The Era of Globalization
- 9) Khanka, S.S. IPR Powering MSMEs, Small Enterprises Development, Management & Extension Journal
- 10) Moore, S.B. and Manring, S.L. Strategy development in small and medium sized enterprises for sustainability and increased value creation, Journal of Cleaner Production

PROBLEMS OF AGRICULTURAL MARKETS IN INDIA

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ABSTRACT

Indian agriculture can be balanced and effective through good and best management practises. This report highlights historical and current scenarios, obstacles, and potential guidelines for agricultural marketing in India. In addition, marketers can take advantage of the opportunities that agricultural marketing offers.

Keywords: Commercialization, Agricultural marketing, foreign direct investment (FDI, marketing cooperatives, contract farming.

INTRODUCTION

The Department of Agricultural Marketing & Agri Business aims to ensure fair pricing for farmers, and its mission is to achieve this by enforcing current laws and regulations as effectively as possible and by introducing new techniques aimed at reducing pre- and post-harvest losses through appropriate methods. Green Revolution programmes have also gained autonomy through increased food processing. At the same time, a number of measures have been taken to promote state agricultural marketing. To promote and sustain economic growth in rural areas, agricultural marketing infrastructure plays a key role. Marketing is as important as agriculture itself in improving agricultural efficiency.

Agri-business begins with the determination to produce a saleable agricultural crop and encompasses all facets of pre- and post-harvest activities, including grading, value-added, packaging, finishing, and transportation. This gives additional meaning to agricultural products. The Agricultural Marketing Division, which had operated since 1977, was renamed the Agricultural Marketing and Agri Division in 2001.

PROBLEMS OF AGRICULTURAL MARKETS**1. Illiteracy and Lack of Unity among Farmers**

The Indian farmers are illiterate, and their simple disposition makes them more easily deceived by the moneylenders, traders, and middlemen. The lack of solidarity among farmers is also due to the fact that local farmers settle in far-flung rural areas. They never meet to settle their problems and therefore don't get a good price for their products.

2. Lack of Financial Resources

In rural areas, there is a shortage of financial services that cannot meet even the most urgent needs. Farmers would then market their products until they matured. Also, for financing equipment such as pumps, trucks, threshing machines, etc., loan payments must be made monthly or quarterly, so the goods must be sold as soon as possible. So, since farmers do not receive financial support, it is also a matter of obtaining credit.

3. Lack of Organised Marketing System

In India, agricultural marketing is also very poor due to the lack of structured marketing, e.g., cooperatives, government marketing agencies, daily markets, etc. As a result, the farmer is left to fend for himself. The lack of a coordinated marketing system is also detrimental to farmers. Therefore, the farmer sells his goods directly to different people. The centre favours the unorganised farmers to their greatest advantage.

4. Lack of Transport Facilities

The roads between the towns and villages are usually unpaved and impassable during the rainy season. Only a small field can be used by ox carts. With a lack of transportation, the farmer cannot get his produce to the proper market and cannot get a fair price for his goods.

5. Lack of Store Houses

The lack of warehouses is a critical shortcoming of Indian agricultural marketing. The farmer cannot safely purchase his goods unless he receives a reasonable offer and must sell his goods at a low price. In the absence of adequate and unscientific facilities, substantial quantities of grain are wasted. About 20 to 30% of yields are destroyed by mice, mosquitoes, etc. Due to the lack of such services, farmers have to suffer from decay.

6. Lack of Standardization

In Indian agricultural marketing, the lack of standardisation and classification is readily apparent, making it impossible to conclude an agreement on these commodities. Consumers have difficulty buying the commodity because there is no proper standardisation and classification.

7. Lack of Awareness of the Market

The Indian farmer has little experience with marketing. He relies on the information he receives from the village traders and moneylenders. The Indian farmers are mostly illiterate and cannot read newspapers. They may also lack business acumen. Now the government is transferring retail prices to a ratio that is certainly beneficial to them.

8. Problems in Transportation

Most Indian villages don't have adequate highways. As a result, farmers have to transport their agricultural produce mainly by oxen and other traditional means of transportation. This causes delays in marketing the produce. Although more and more trucks are being used to transport migrations, transportation costs are generally very high. As a result, farmers have very low yields.

CONCLUSION

In India, there are four agricultural marketing networks: village sales, mandi sales, market sales, and cooperative marketing. Transportation costs, inadequate retail facilities, lack of market knowledge, lack of production facilities, storage facilities, and price fluctuations are the main problems in agricultural marketing. For satisfactory agricultural marketing, it would be essential to eliminate middlemen, sufficient storage facilities, free money lenders, sufficient transportation facilities, availability of credit and training facilities, etc. Some people suggested improving agricultural marketing in India through crop insurance and technological extension. Among all these, transportation cost is a major problem for the many farmers.

REFERENCES

1. Hota, S. K., Kishor, B., & Sharma, V. (2002). Agribusiness cooperatives in 21st century-challenges and opportunities. *Agricultural Marketing-A National Level Quarterly Journal of Agricultural Marketing* July-Sep., 65(2), pp. 33-38.
2. Reardon, T., & Barret, C. B. (2000). Agro Industrialization, Globalization and International Development: An Overview of Issues, Patterns and Determinants. *Agricultural Economics*, 23(3), pp. 195-205.
3. Reardon, T., Timmer, P. C., Barret, C., & Berdegue, J. (2003). The rise of super market chains in Africa, Asia and Latin America. *American Journal of Agricultural Economics*, 85, pp. 1140-1146.
4. Royce, F. (2004). Agricultural production cooperatives: the future of Cuban agriculture?. *Transnational Law and Contemporary Problems*, 14, pp. 19-53.
5. Sivanappan, R. K. (2000). Agri-business development in India. *Kisan World*, 27(5), pp. 55-57.
6. Tripathi, A., & Prasad, A. R. (2009). Agricultural development in India since in determinants: a study on progress, progress, performance and determinants. *Journal of Emerging Knowledge on Emerging Markets*, 1(1), pp. 63-92
7. Acharya, S.S. and N.L. Agarwal (2011). *Agricultural Marketing in India*, Oxford & IBH publishing Company Pvt. Ltd., Fifth edition.
8. Singh, Hardeep, M.K. Goel, and A.K. Singhal (2012). Challenges in Rural and Agriculture Market, *VSRD International Journal of Business & Management Research*, Vol. 2 (6), pp. 299-304.

PROMOTIONAL AND DEVELOPMENTAL ROLE OF NATIONAL COOPERATIVE DEVELOPMENT CORPORATION IN AGRICULTURAL SECTOR OF MAHARASHTRA

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ABSTRACT

India is an agricultural country', the phrase was as true in 1947 as it is same in 2022. Urbanization today has crossed the 30 %. The share of service industry sector in GDP is close to 55 %. If the construction sector is also included in the service industry, this share directly increases to 63%. Despite of all these pictures our country's economy is still depending on agriculture sector. Almost half of the total main workers are still engaged in agriculture and agriculture-related industries. 40 percent of the total raw materials required for industries are obtained from agriculture. Present study is attempted to find the promotional and developmental functions of NCDC which are the projects has adopted to pave the way for successful conceptualization and implementation of developmental schemes and projects in the cooperative sector. The present paper is highlight the various Agriculture sector wise disbursement of funds and various promotional and Developmental Schemes implemented for women Empowerment in cooperatives in Maharashtra in the year of 2021-22.

Keywords: Development, Agriculture sector

Abbreviations—NCDC (National cooperative Development Corporation), FPO (Farmers Producers Organization) SDF (Sugar Development Fund)

I. INTRODUCTION

The National Cooperative Development Corporation (NCDC) was established in 1963 by an Act of Parliament as a statutory corporation under the Ministry of Cooperatives. Planning, promotion and financing program for production, processing, marketing, storage, export and import of agricultural produce, food articles, certain other notified commodities such as fertilizers, pesticides, agricultural machinery, soap, kerosene, textiles, rubber etc. Supply of consumer goods and collection, processing, marketing, storage and export of minor forest produce through cooperatives, besides income generation streams of activities like poultry, dairy, fisheries, sericulture, handloom etc. Further amendments have been made in the NCDC Act which will widen the area of operation of the corporation to assist different types of cooperatives and also to expand its financial base. NCDC will now be able to finance projects in rural industrial co-operative areas and for certain notified services in rural areas like water conservation, irrigation and micro-irrigation, Agri-insurance, Agri-credit, rural sanitation, animal health, etc.⁽¹⁾

1.1. Promotional and Developmental role of National cooperative Development

Corporation⁽²⁾

Corporate promotions and the developmental role are clearly reflected in the following areas of its operation:

- (i) To help in planning the co-operative development and thus, helping in central and state government Formulation of annual plans.
- (ii) Specific and Integrated Sponsorship Projects for Cooperative Development in country.
- (iii) To provide consultancy support for Formulation of Development Projects in the co-operatives sector.
- (iv) Coordinating the activities of cooperation with various Government offices, institutions, etc.
- (v) Training to Cooperative personnel for their upgradation operational skills to succeed Implementation of Funded Projects by the corporation.
- (vi) Holding of All India and Regional Conferences Facilitated Conferences/Workshops Exchange and review of information.
- (vii) Recognizing the performance of the best performing cooperatives promotional and developmental role by way of cash award and citation certificate for The Corporation has established "NCDC" Award for Cooperative Excellence".

1.2 Initiatives by NCDC to promote women

In cooperatives^[3]

NCDC initiative to promote women co-operatives societies in recent years, NCDC has started three plans that adapt Women in Cooperatives.

Yuva Sahakar

Cooperative Enterprise Support and Innovation Plan: The goal of the plan is enable start-up in co-operative sector, covering all types of activities. Any kind of co-operative society with new, Innovation and Value Chain growth is the intent project eligible for assistance, subject to fulfillment of terms and conditions of the plan. Funding pattern more suited to cooperatives with 100% women members. Debt equity ratio projects Eligible for 80:20 Funds.

Ayushman Sahakar

Scheme to help cooperatives (A) To provide affordable and holistic Health care through hospitals / health care/education facilities; (B) To promote AYUSH facilities; (c) to meet national objectives health insurance; (d) to attend National Digital Health Mission and (e) to provide comprehensive health including education, Services, insurance and activities concerned that. Have help provided for the creation of infrastructure, Margin money and working capital. As incentive, NCDC provides 1% less than its applicable rate interest for the entire tenure of Loan for timely repayment oftenure Loan by a Lending Cooperative society with maximum number of women Member.

Nandini Sahakar

Scheme target introduced in February 2021 improve the socio-economic condition of woman. It supports entrepreneurship women's mobility through women Cooperative Societies. It converges significantly inputs of women enterprise, Business plan preparation, capability Development, Credit and Subsidy and interest subvention of other Schemes. Any female co-operative Societies registered under any state or Multi State Cooperative Societies Act eligible in the country. Any co-operative society with minimum 50% women members in primary is also eligible. In the matter of new or related projects Innovative Activities, Women co-operative societies, which are running for at least three months.

II. Research Objectives

- ☐ To study the promotional and developmental role of NCDC (National cooperative Development Corporation) in agricultural sector in Maharashtra.
- ☐ To assess the importance of NCDC (National cooperative Development Corporation) for Empowering women in Agriculture sector.
- ☐ To study the various Agriculture sector wise disbursements in Maharashtra.

III. RESEARCH METHODOLOGY

Source of Data

The present study is based on secondary data which was collected using websites, articles, Research report.

Data Collection

The data was collected using newspaper articles and opinion of experts.

IV. LITERATURE REVIEW

Alok K. Sahoo

Conducted study on Critical Review on Cooperative Societies in Agricultural Development in India Cooperative societies have potential to act as not only financing credit in short term and medium term loan rather these can provide technical and vocational service to the small and marginal farmer to transform agriculture into agribusiness enterprise by pooling of the resource for realizing economies of scale. Infrastructural development, good governance, professionalism, policy legislatures, strict guidelines, members' education, assured quality, market linkage, processing of produce, skilled staffing and fair policies can be pivotal in transforming the rural cooperatives into vibrant successful models for farmers' socio-economic prosperity in the rural India.^[4]

Deepak Shah

The study, carried out in the state of Maharashtra of India during 2003-04, is based on a case of cooperative dealing with the marketing of mainly fruit with its spectrum spread over various other marketing activities. The study has evaluated the performance of Nahvi Cooperative Fruit Sale Society (NCFSS) which is located about 20 km from Yavataluka of the Jalgaon district in Maharashtra. Though it mainly deals with the marketing of banana, its functional dimensions also encompass input marketing and various other welfare activities. The evaluation of NCFSS has revealed several reasons for its efficient functioning. The major reasons that weighed in favor of the functioning of the society were timely delivery of inputs to the farmer members, reasonable rates of fertilizer, remunerative prices for the farmers' produce, fair weighing practices followed by the society, provision of finance to the members for meeting expenses toward electricity bill, labor payment, purchase of land, illness, marriage, etc. In addition to these reasons, the existence of interest-cum-entrepreneurial groups in extending dedicated and efficient leadership was the main factor that weighed in favor of efficient functioning of the society.^[5]

KC Badatya Ananthi S. Sethi

An Exploratory Study on Farmer Producer Organizations (FPOs) in Maharashtra study is an attempt to understand the current status of functioning of FPOs, analyze their governance and management practices and examine their performance and constraints in future growth. The State of Maharashtra was purposively selected for conducting the study. Similarly, three districts, i.e., Pune, Nasik and Ahmednagar were purposively selected based on their significance in number of FPOs/FPCs, production of major horticultural crops. Thirteen FPOs were selected for study based on different criteria like commodities/crops, activity and services they offer, age profile, nature of promoting institutions (PIs), etc.

The study observed that the group dynamics and the governance aspects of sample FPCs were quite encouraging. In all sample FPCs, farmers were mobilized at the primary village level coming together as members of farmers' interest groups (FIGs) of different kinds with an average of 25 to 30 members per FIG. Rigorous meetings by the PIs in each FIG was done before formation of FPOs.

All FPOs had received grant and handholding support during the early stages. Majority of sample FPOs (69%) were promoted/formed under MACP, a project by Govt. of Maharashtra with fund support from World Bank. Five (38%) FPCs had utilized the grant support for developing different types of primary processing facilities and other related infrastructure. A few sample FPCs (23%) had availed grant support from PRODUCE

Fund implemented by NABARD. The major objective of integrating farmers into FPOs is to make agriculture profitable by involving farmers along the entire agricultural value chain. Majority FPOs (62%) had involved in procurement of inputs for members. However, only a few (23%) FPOs had sales outlets conceptualized as complete Agro-service Centre.^[6]

Dr. Saroj Kumar Singh

This paper intends to analyze the problems and prospects of cooperative sector in India under free market. It is now, increasingly recognized that the co-operative system in India has the capacity and potentiality to neutralize the adverse effect emerging from the process of globalization. After economic liberalization under the new economic environment, cooperatives at all levels are making efforts to reorient their functions according to the market demands. The failure of the public sector in several cases is a worrisome trend. Privatization has also failed to make an impact in the rural areas. Therefore, there is great hope on the cooperative sector. The paper examines the causes of slow progress and highlights the emerging role and challenges of the cooperative sector. In comparison to the step-motherly treatment of the past, cooperatives are now considered an important plank of development. The government is committed to cooperative development. The cooperatives have inherent advantages in tackling the problems of poverty alleviation, food security, and employment generation. Cooperatives are also considered to have immense potential to deliver goods and services in areas where both the state and the private sector have failed. The paper focuses on several pitfalls and shortcomings like: poor infrastructure, lack of quality management, over-dependence on government, dormant membership, non-conduct of elections, lack of strong human resources policy, absence of professionalism.^[7]

Virendra Kumar I, K.G. Wankhede, H.C. Gena

Cooperatives are present in all the countries and in almost all the sectors, including agriculture, food, finance, healthcare, marketing, insurance & credit. A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. Agriculture continues to be the engine of economic growth in most developing countries. Strong cooperatives are able to overcome many of the difficulties faced by the farmers; wherein

in a country like India 85% are small and marginal farmers. Cooperatives work on the set seven principles, among these principles the seventh principle - Concern for the community derives cooperatives to work for the sustainable development of the community. There are a number of successful cooperatives in India itself like IFFCO (Indian Farmers Fertiliser Cooperative Ltd.) and KRIBHCO (Krishak Bharti Fertiliser Cooperative Ltd.) in the fertiliser sector, the Institution like AMUL in Dairy Sector and Self Help Groups (SHGs) formed by various Institutions have immensely benefited farmer members in increasing crop productivity and overall income by generating support in various Programmes related with agriculture.^[8]

Rajani Kumari Choudhary

role of cooperative in income generating activities for rural development a Case Study of Haripur Municipality, Sarlahi District. Cooperatives are regarded as one of the pillars of economic development of the country. They

through accumulating the scattered money of small businessman, craftman and general public and mobilize that to the needy person of lower-middle class in the society. It also invests the accumulated money to uplift the standard of living and to improve the living standard of people. It helps to reduce the poverty prevailing in the middle class group of people in rural area and help in the capital formation process. Cooperatives have the responsibility of providing financial as well as technical assistance to the poor people for income generation and socio-economic empowerment. So, cooperative is considered as a device to fill the gap between haves and have not in economic activities. It always tries to develop the economic, social and mental empowerment of members. Cooperatives are based on the value of self-help, mutual help, self-responsibilities, democracy, equality and solidarity value of honesty, owner, social responsibility and caring of others. Cooperative plays an important role in poverty reduction, facilitating job creation, economic growth and social development.^[9]

K.K. Tripathy, Manisha Paliwal

, Nishita Nistala

Cooperatives play an important role in rural development and financing. Primary Agricultural Credit Societies (PACS) the bottom tier of cooperative credit structure, form the largest number of cooperative institutions in India. Bringing good governance into operating system leads to competitiveness in cooperatives. The performance of PACS depends upon how it is being governed and how the size of PACS acts as an indicator of competitive enhancement. The study examines various business activities of select PACS in India's southern State of Kerala and provides insight into their governance practices and its relationship with competitiveness. The study adopts a descriptive-analytical approach with a blend of primary as well as secondary data. The research study concludes that participation, accountability, and transparency are the effective pillars of cooperative governance in the presence of diversification strategy which further leads to improved competitive performance of Kerala's PACS.^[10]

V. DATA ANALYSIS AND INTERPRETATION

This sector-wise sanction of financial assistance for FY 2021-22 and the number of beneficiary societies and members are given below:

Table-1

Sr.No	Sector	Amount Disbursed in (Crore)
1	Marketing and Inputs	26779.65
2	Service, Credit & Yuva Sahakar	4894.20
3	Agro Processing (Sugar, Textile, Oilseed Plantation Crop, Food grains, Fruit and Vegetables and other processing)	1343.84
	Weaker Sections (Dairy, Livestock, Fishery, Tribal Development, Handloom, Coir, Jute, Sericulture, SC/ST and Women Cooperatives)	870.38
5	Integrated Cooperative Development Projects (ICDP)	283.05

7	Computerization of Cooperatives	25.06
8	Others (FPO (for CBBO) Storage, Cold Chain, Consumer, Promotional and Developmental activities)	24.90
	Total	34221.08

Source: Annual Report of NCDC

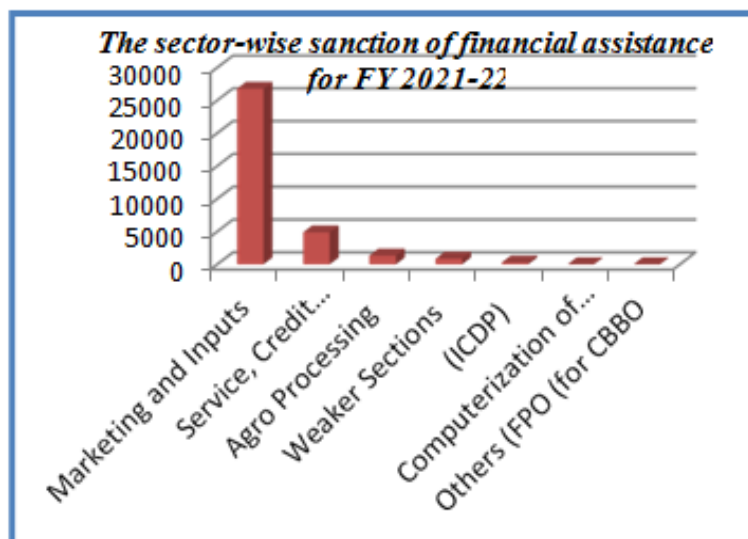


Figure-1

As per the above bar chart, it shows that during FY 2021-22, the Corporation disbursed 34221.08 crore (comprising loan of A 33939.09 crore and subsidy of A 281.99 crore including A 6.97 crore from NCDC's own corpus). Sector-wise disbursements for FY 2021-22.

Implementation of NCDC Programmes in Maharashtra

NCDC has provided total disbursement of Rs.18017.75 crore benefiting various cooperative projects/units as follows.

Table-2

Sr. No.	Scheme/Activity	Cumulative Disbursement as on
		31-03-2021 (Rs. in crore)
1	Marketing & Inputs	73.3
2	ICDP	0.02
3	Agro-Processing:	
	a) Sugar Factories, by-product etc.	14770.77
	b) Ginning & Pressing and Spinning	1731.99
	c) Powerlooms	291.48
	d) Other processing:	
	i. Food grains	124.98
	ii. Plantation Crop	55.34
	iii. Fruit & Vegetable	58.48
	iv. Oilseed	5.64
	Sub-total (d)	244.44
4	Storage & Cold Storage	108.12
5	Consumer Cooperatives	5.51
6	Weaker Section Cooperatives	678.1
7	Industrial & Service Cooperatives	108.2

8	Assistance for Computerization	2.63
9	Prom. & Development Role (including CSR)	3.19
	Total	18017.75

Source: <https://www.ncdc.in/index.jsp?page=pune>

Cumulative Disbursement as on date of 31 March 2022 in Maharashtra

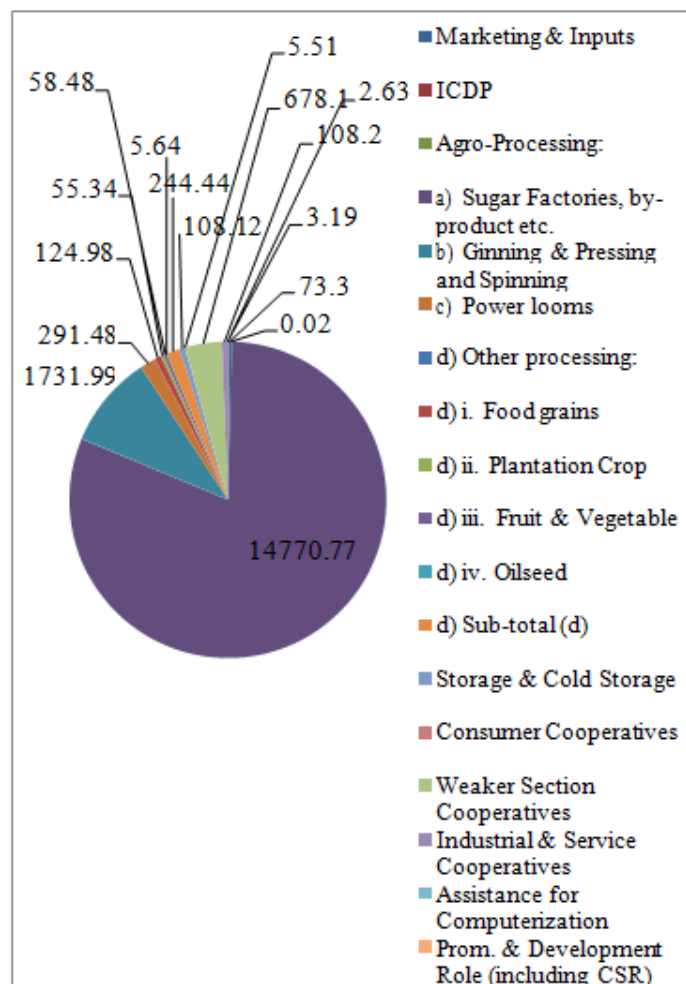


Figure-2

VI. CONCLUSION

After this study it indicates that the National Cooperative Development Corporation has a great implication in Agriculture economy in India. Number of Schemes has implemented for financing different sectors of Agriculture. It is very easy and convenient for farmers to avail the benefits of scheme and it helps to promote, strengthen and develop farmer cooperatives in Agriculture sector. In Maharashtra near about 14770.77 crore has distributed in the sector of sugar factories till the 31 March 2022.

VII. REFERENCES

1. Annual Report of 2021-22 National Cooperative Development Corporation
2. Annual Report of 2021-22 National Cooperative Development Corporation Chapter-4 Promotional & Developmental role
3. Annual Report of 2021-22 National Cooperative Development Corporation chapter-15 Gender in Cooperatives
4. Alok K. Sahoo^{1*}, Sanat K. Meher¹, Tarak C. Panda¹, Susrita Sahu¹, Rukeya Begum¹ and N. C. Barik¹
1. Krishi Vigyan Kendra, Baragarh, OUAT, India. "Critical Review on Cooperative Societies in Agricultural Development in India". Current Journal of Applied Science and Technology 39(22):114-121, 2020; Article no. CJAST.59935 ISSN:2457-1024 (Past name: British Journal of Applied Science & Technology, Past ISSN:2231-0843, NLM ID:101664541)

5. Deepak Shah Reasons for Success of Co-operative Marketing in Maharashtra: A Case As per the above pie chart we can see that 14770.77 crore has distributed in the sector of sugar factories till the 31 March 2022 in Maharashtra. NCDChas provided total disbursement of Rs. 18017.75 crore benefiting various cooperative projects/units. Study of F&V Society SSRN Electronic Journal · December 2016 DOI: 10.2139/ssrn.2885228.
6. KC Badatya Ananthi S Y. Sethi An Exploratory Study on Farmer Producer Organizations (FPOs) in Maharashtra. College of Agricultural Banking Reserve Bank of India 2018.
7. Dr. Saroj Kumar Singh Problems and Prospects of the Cooperative Movement in India under the Globalization Regime The International Journal of Indian Psychology ISSN 2348-5396 (e) | ISSN: 2349-3429 (p) Volume 3, Issue 4, No. 59, DIP: 18.01.073/20160304 ISBN: 978-1-365-26307-1 <http://www.ijip.in> | July-September, 2016
8. Virendra Kumar, K.G. Wankhede, H.C. Gena Role of Cooperatives in Improving Livelihood of Farmers on Sustainable Basis American Journal of Educational Research, 2015, Vol. 3, No. 10, 1258-1266 Available online at <http://pubs.sciepub.com/education/3/10/8> © Science and Education Publishing DOI: 10.12691/education-3-10-8.
9. Rajni Kumari Choudhary Role of Cooperative in income generating activities for rural development A Case Study of Haripur Municipality, Sarlahi District A Thesis Submitted to The Central Department of Rural Development, Tribhuvan University, Faculty of Humanities and Social Sciences In partial fulfillment of the requirements for the Degree of the Master of Arts (M.A.) in Rural Development
10. K.K. Tripathy, Manisha Paliwal, Nishita Nistala Good Governance Practices and Competitiveness in Cooperatives: An Analytical Study of Kerala Primary Agricultural Credit Societies International Journal of Global Business and Competitiveness <https://doi.org/10.1007/s42943-021-00020-0>

ROLE OF AGRICULTURAL MARKETING: OPPORTUNITIES AND CHALLENGES

¹Varsha Dhondiram Bansode and ²Dr. Sandeep B. Gaikwad¹Research Scholar, Department of CommerceDR. Babasaheb Ambedkar Marathwada University, Aurangabad - 431001, Maharashtra, India²Research Guide, Department of CommerceShree Muktanand College, GangapurAurangabad -431001, Maharashtra, India**ABSTRACT**

The increasing development of agriculture production has brought in its significance. Agriculture sector should face new challenges in terms of finding a market for the increased production. In some rural areas they don't find a market to sell their product. There is inadequate information regarding the price for their product. The issue of Agriculture and Agricultural Marketing is dealt with both by the state as well as the central government in the country. Challenges and Opportunities that the Global market of the liberalized trade regime are also to be addressed. For the farming community to benefit from the new global market access opportunities the internal agriculture and marketing system in the country needs to be integrated and strengthened. Agriculture marketing reforms and the creation of marketing infrastructure has therefore been a prime concern of the government. There is a need to expand all the services that will develop agricultural marketing, relating to the Marketing system improvement straightening of marketing infrastructure investment needs, possible sources of funds including that the private sector, improvement in Marketing information system using ICT human resource development in agricultural marketing and measures needed for promotion of export.

Keywords: Agriculture marketing, global market, Marketing infrastructure, liberalized opportunities and Challenges.

INTRODUCTION

India is an agricultural country. Agriculture is the backbone of Indian economy. Agriculture is an important sector in contributing more revenue to Indian economy.

Agricultural Marketing was Defined by the National Commission on farmers 2004 as a Process which start with a decision to produce saleable farm commodity and it involves all aspect of market Structure of system Both functional and institutional based on technical and economic consideration and includes pre and post harvest operations viz assembling, grading, storage transportation and distribution. This definition emphasizes the essential point that the farmers' products must be delivered physically or electronically to the final consumer who may be a person or a business like a processor for exporter.

Role of Agricultural Marketing

The role of agricultural marketing in economic development classified as a way to increase farm income broaden the horizontal reach of the market support and fuel the expansion of agro based industries create job Boost economic growth and raise living standards.

Thus agricultural marketing become important to meet the Nations need for a food and nutrition as well as to support the growth of the economic as a whole(Acharya and Agrawal 2011)

Objectives of the Study

1. To know the role of agricultural marketing.
2. To study the opportunities and challenges of agricultural marketing.

RESEARCH METHODOLOGY**Data Collection**

All the data used for the study will be collected from primary and secondary sources but most of the data will be generated through.

A. Primary Data

Major part of the study is based on the survey method for which interview schedule will be prepared to generate the information from the respondents. Interview is the couple with observation technique.

B. Secondary Data

Various reference books, Journals, Reports related websites and other related printed materials will be used for proposed research work.

REVIEW OF LITERATURE

Ramkishen (2004) in his research paper argued that because of the lack of food processing and storage, the grower is deprived of a good price for his produce during the peak marketing season while the consumer needlessly pay a higher price during lean season

Godara (2006) in his study described that the positive trend of economic liberalization and associated opening up of Indian economy have significantly reduced the structural rigidities in the system, this trend should be premise of India's future agricultural reform. Agricultural business has come under strong and direct influence of international market. Indian farmers have to produce quality goods to meet the international standards.

Challenges of Agricultural Marketing**1. High level of Competition**

The option for customer to purchase agriculture goods are fast this can make it very difficult for farmer to know into new market or independently establish themselves.

2. Making the Move to Selling Online

It is the biggest challenge of agricultural marketing for lots of farmers after the pandemic. It was not easy to move online to sell their goods and they were not comfortable using a cashless method.

3. Inadequate storage facility of food grains,

4. Lack of transportation

5. Lack of agricultural education

6. Lack of Packaging facility problem,

7. Lack of Cold storage facility problem etc,

8. Lack of financial problems.

Opportunities Agricultural Marketing

1. There is growing demand for agriculture inputs like feeds and fodder inorganic fertilizers bio fertilizer.

2. Biotechnology applications in agriculture have vast scope in production of seed bio control agents industrial harnessing of microbes for bakery product

3. India is endowed with varied ago climate which facilities production of temperate sub tropical and tropical agricultural commodities.

4. At present processing is done at primary level only the Rising standard of living expand opportunities for secondary and tertiary processing of agriculture and commodities

The livestock When wealth gives enormous scope for production of meat milk and milk product poultry product etc .

5. The vast coastal line and internal water courses provide enormous opportunity for production of marine and inland fish and ornamental fish culture raining popularly with increase the aesthetic volume among the citizens of India.

6. Export can be harnessed as a source of economic growth as a signatory of World Trade Organisation, India has a vast potential to improve its present position in the world trade of agriculture commodities both raw and processed form. the product line include cereals, pulses oil seeds, oils, oil Meal, spices and condiments, Fruit and Vegetables flowers medicinal plant and Essential oils, agriculture advisory services, agriculture tools and implement meat, milk and Milk products fish and fish product ornamental fish forest by products etc.

7. The forest resources can be utilized for production of by-product of forestry.

8. Beekeeping and apiary can be taken up on large scale in India

CONCLUSION

India is an agricultural country. Agriculture is first priority in our country. Today farmer is not uneducated person but in computer era how can former left behind they keeps updated by agriculture app in this way the they always alert by taking prediction forecast whether and market price seeds. Indian agricultural marketing is poor and defective. Farmers not getting reasonable price for their produce. Mostly Indian farmers are illiterate or can easily fooled by money lenders, middle-man, traders etc. Most of the margin of farmers taken by

middleman results in loss of farmers and customers getting product at high price. Also, there is lack of processing machinery and storage facilities so they have to sell their produce immediately after harvesting. In Indian agriculture market there is no proper grading and standardization system for agriculture produce and lack of infrastructure like roads and transportation system made available.

REFERENCES

- Acharya, S. S., and Agarwal, N. L. (2011). *Agricultural Marketing in India* (Fifth), New Delhi: Oxford & IBH Publishing Company Pvt. Ltd. Federation of Indian Chambers of Commerce and Industry (FICCI), (2020). *Agriculture Marketing: An Overview and Way Forward*, A Knowledge paper on Agricultural Marketing.
- Kumar, S., M.L. Roy, and Mukherjee, A. (2018). Marketing behaviour of vegetable growers in Uttarakhand hills. *Journal of Community Mobilization and Sustainable Development* 13 (1): 68-74.
- Verma, A. & Singh, K. P. (2004). Post harvest loss of vegetables: a study. *Haryana Journal of Horticultural Sciences*; 33(1/2):152-153.
- Urs, A. (2012). How DEMIC helps farmers sow, sell crops. Online: [http:// www. thehindubusinessline. com/ economy/agribusiness/article3935697.ece](http://www.thehindubusinessline.com/economy/agribusiness/article3935697.ece)
- Gauraha, A.K. & Thakur B.S. (2008). Comparative economic analysis of postharvest losses in vegetables and foodgrains crops in Chhattisgarh. *Indian Journal of Agricultural Economics*, 63(3): 376
- Kumar, U., Mukherjee, A., Singh, D. K., Koley, T., Shubha, K., Ray, R. K., & Sarkar, S. (2022). Yield loss in major food crops of Eastern India: A Review: Yield loss in major food crops. *Journal of Agri Search*, 9(2), 123-128. Yadav, V. K., Mukherjee, A., Kumar, U., Pan, R. S., Chakrabarti, A., & Sarkar, P. K. (2020). Farmers Producer Organizations: Boon for Small and Marginal Farmers. *AGRICULTURE & FOOD: e-NEWSLETTER*.
- Godara, R. (2006). Rural job opportunities agribusiness centres – some realities. *Kurukshetra*, March, 14-17.
- Ramkishen, Y. (2004). *New Perspectives in Rural and Agricultural marketing*. 2 nd ed., Jaico Publications, Mumbai, India.
- https://www.researchgate.net/publication/329182376_Indian_Agricultural_Marketing-A_Review
- https://www.ripublication.com/gjfm-spl/gjfmv6n8_03.pdf
- <http://www.jiwaji.edu/pdf/ecourse/management/overview%20of%20agricultural%20marketing.pdf>
- [https://www.worldwidejournals.com/indian-journal-of-applied-research-\(IJAR\)/recent_issues_pdf/2013/August/August_2013_1375968341_f4c88_209.pdf](https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/recent_issues_pdf/2013/August/August_2013_1375968341_f4c88_209.pdf)
- <http://www.eagri.org/eagri50/AECO242/pdf/lec01.pdf>
- https://www.researchgate.net/publication/363257754_Frontiers_in_Agricultural_Marketing_Role_Challenges_and_a_Way_forward
- <https://www.jotform.com/blog/problems-of-agricultural-marketing/>
- https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3649012

ROLE OF AGRICULTURE SECTOR IN IMPORT AND EXPORT OF INDIA

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ABSTRACT

Agriculture sector plays an important role in Indian economy as more 58% of population relying on agriculture as their main source of livelihood. Agricultural trade helps to answer possible food production shortages due to climatic or other reasons. Ultimately, it contributes to the prosperity of farmers, industries and consumers. In recent years, global agriculture markets faced an increased volatility, directly impacting stakeholders of the food chain. Economy's overall health is impacted due to country's balance of trade. Exports and imports are important factor because they together make up a country's balance of trade. In a healthy economy, both imports and exports see continual growth. This usually represents a sustainable and strong economy. The agriculture Trade Policy, Promotion and Logistics Development Department is shoulder the responsibility of policy recommendations on export, import and logistics development of agriculture sector. It also formulates the strategy for boosting international trade for agriculture commodities. India has constantly maintained trade surplus in the agricultural products over the years. India's agricultural and allied exports during 2019-20 were Rs. 2.52 lacs Crores and imports were Rs. 1.47 lacs Crores. Even, during the difficult time of Pandemic, India took care not to disturb the world food supply chain and continued to export. Imports are important for the economy because they allow a country to supply nonexistent, scarce, high cost, or low-quality certain products or services, to its market with products from other countries. India's agri-exports and agri imports have grew at a much higher CAGR of 10.41 per cent and 12.74 per cent, respectively as compared to 6.28 per cent and 6.14 per cent of world agri-exports and agri-imports.

Keywords: Agriculture Export, Agriculture Imports, Trade Policy, Indian Economy.

INTRODUCTION

Agriculture sector plays an important role in Indian economy as more 58% of population relying on agriculture as their main source of livelihood. Agricultural trade helps to answer possible food production shortages due to climatic or other reasons. Ultimately, it contributes to the prosperity of farmers, industries and consumers. In recent years, global agriculture markets faced an increased volatility, directly impacting stakeholders of the food chain. Economy's overall health is impacted due to country's balance of trade. Exports and imports are important factor because they together make up a country's balance of trade. In a healthy economy, both imports and exports see continual growth. This usually represents a sustainable and strong economy. The agriculture Trade Policy, Promotion and Logistics Development Department is shoulder the responsibility of policy recommendations on export, import and logistics development of agriculture sector. It also formulates the strategy for boosting international trade for agriculture commodities. This department of ministry of Indian Government worked as a nodal division of the department for coordinating/formulating responses on World Trade Organization's (WTO) Agreement on Agriculture (AOA), matters relating to Preferential Trade Agreement (PTAs)/Free Trade Agreements (FTAs) and agro logistics with the Department of Commerce (DOC) and also looking forward the matters relating to the modification in the Custom Duty and Goods and Services Tax(GST) on agricultural commodities with the Department of Revenue (DOR). Despite the pandemic export of Agri and allied commodities during Apr, 2020 - Feb, 2021 shows an increase of 18.49%. India has witnessed tremendous growth of 727% for Wheat export and 132% for (Non-Basmati) Rice export during 2020-21. This paper focused on the export and import of agricultural products of Indian economy.

OBJECTIVES

To study the importance of export and import in nations economy.

To study the Agricultural Export and Import of India.

Importance of Export and Import in Indian Economy

Development of nation's economy is depending upon National Income, GDP, its exchange rate and its level of inflation and interest rates. Import and export are the important factor for influencing these points and contribute a large in the economy. An increasing level of imports and a rising trade deficit can have a negative effect on a country's exchange rate. A weaker domestic currency stimulates exports and makes imports more expensive; on the other hand, a strong domestic currency hampers exports and makes imports cheaper. Higher inflation can also impact exports by having a direct impact on input costs such as materials and labor. The agriculture sector plays an important role in the Indian Economy. Agriculture provides employment opportunities to rural agricultural and non-agricultural labourers. It also plays a significant role in the international trade and import and export activities.

India has constantly maintained trade surplus in the agricultural products over the years. India's agricultural and allied exports during 2019-20 were Rs. 2.52 lacs Crores and imports were Rs. 1.47 lacs Crores. Even, during the difficult time of Pandemic, India took care not to disturb the world food supply chain and continued to export. The export of Agri and allied commodities during Apr, 2020 - Feb, 2021 were Rs. 2.74 lacs Crore as compared to Rs. 2.31 Crore in the same period last year indicating an increase of 18.49%.

Despite the pandemic export of Agri and allied commodities during Apr, 2020 - Feb, 2021 shows an increase of 18.49%. India has witnessed tremendous growth of 727% for Wheat export and 132% for (Non-Basmati) Rice export during 2020-21

AGRICULTURAL EXPORT AND IMPORT

Agricultural Export

Exports make easy international trade and stimulate domestic economic activity by creating employment, production, and revenues. It enables farmers to get benefit of export opportunities in a foreign country market. Harness export potential of Indian agriculture, through suitable policy instruments, to make India global power in agriculture and raise farmer's income. Promotion of farm exports is extremely important not only for earning precious foreign exchange for the country but also for achieving the goal of an 'Aatmanirbhar Bharat,' for which self-reliant agriculture is critical. India is an agrarian economy and is a major contributor to the global food basket, thanks to the favorable agro-climatic. During 2021-22, the country recorded US\$ 49.6 billion in total agriculture exports with a 20% increase from US\$ 41.3 billion in 2020-21. India's agriculture sector mainly exports agri & allied products, marine products, plantation, and textile & allied products. Export of agricultural commodities has helped producers to take advantage of wider international market which, in turn, has incentivized their domestic production. Crops exported in large quantities viz. rice, sugar, and spices have witnessed significant increase in area coverage and growth rate of production. Following tables shows India's top 10 Agricultural commodities Exports for the last six years.

Table No. 1. Table Showing India's Exports of Top -10 Agricultural Commodities
(Value in Rs. Crores, Qty. in '000' Tonnes)

Sr. No.	Commodity	2016-17		2017-18		2018-19		2019-20		2020-21		2021-22 till Nov. 2021	
		Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1	Marine Products	1185	39594	1432	47646	1672	47665	1329	47618	1168	44176	922	40033
2	Rice (Other than Basmati)	6771	16930	8819	23437	7648	21171	5056	14400	13149	35557	10882	28932
3	Rice-Basmati	3985	21513	4057	26871	4415	32804	4455	31026	4630	29848	2402	15305
4	Spices	1014	19111	1096	20085	1134	23218	1193	25642	1607	29529	996	19731
5	Buffalo Meat	1324	26161	1350	26035	1233	25091	1152	22661	1086	23460	764	16431
6	Sugar	2544	8660	1758	5226	3990	9523	5799	13982	7518	20669	5409	16800
7	Cotton Raw Incl. Waste	996	10907	1101	12200	1143	14628	658	7540	1214	13968	765	11339
8	Oil Meals	2632	5410	3571	7043	4493	10557	2656	5861	4367	11689	1909	4661
9	Castor Oil	599	4522	697	6730	619	6170	594	6324	734	6802	513	6019
10	Wheat	265	447	322	624	226	424	219	444	2154	4173	4114	8547
	Total Agri&Allied Exports		226652		251564		274571		252976		310811		230981

(Annual Report: DA&FW Govt. of India 2021-22)

The export Agri-allied sector during last 5 years is as follows:



(Source: DA&FW Govt. of India 2021-22)

The above table no. 1 and fig. no. 1 state India's Exports of Top -10 Agricultural Commodities. India has emerge as a significant Agri-exporter in crops like rice, spices, cotton, oil meal cake, castor oil, coffee, cashew, tea, fresh vegetables and sugar. As per available WTO's Trade Statistical Review (2021), the share of India's agricultural exports and imports in the world agriculture trade in 2020 were 2.2% and 1.4%, respectively. India was in the top 10 ranking of the global Agri exporters. Share of agricultural exports as a percentage of agricultural GVA has increased from 7.45% in 2019-20 to 8.59% in 2020-21 (at current prices).

The share of agricultural exports in India's total merchandise exports has increased from 11.40% in 2019-20, to 14.40% in 2020-21. As compared to previous year (2019-20), the Agri and Allied exports in the year 2020-21 increased by 22.86% to Rs. 3,10,811.44 crores. The increase in Agri and Allied exports during 2020-21 was primarily on account of increased exports of commodities like Wheat (839.46%), Vegetable Oils (268.44%), Other Cereals (257.37%), Mollases (154.34%), Rice-other than Basmati (146.92%), Oil meals (99.42%), Cotton Raw Incl. waste (85.27), Sugar (47.83%), Ayush and Herbal Products (31.78%) and Spices (15.16%), which witnessed high growth in the year 2020-21 as compared to previous same period. Major destinations of exports for India's Agri and Allied commodities were United States of America, China, Bangladesh, United Arab Emirates, Saudi Arabia, Iran, Vietnam, Malaysia, Nepal, Indonesia, Hong Kong, Iraq, Netherlands, United Kingdom, Japan, Sri Lanka and Thailand.

Agriculture Import

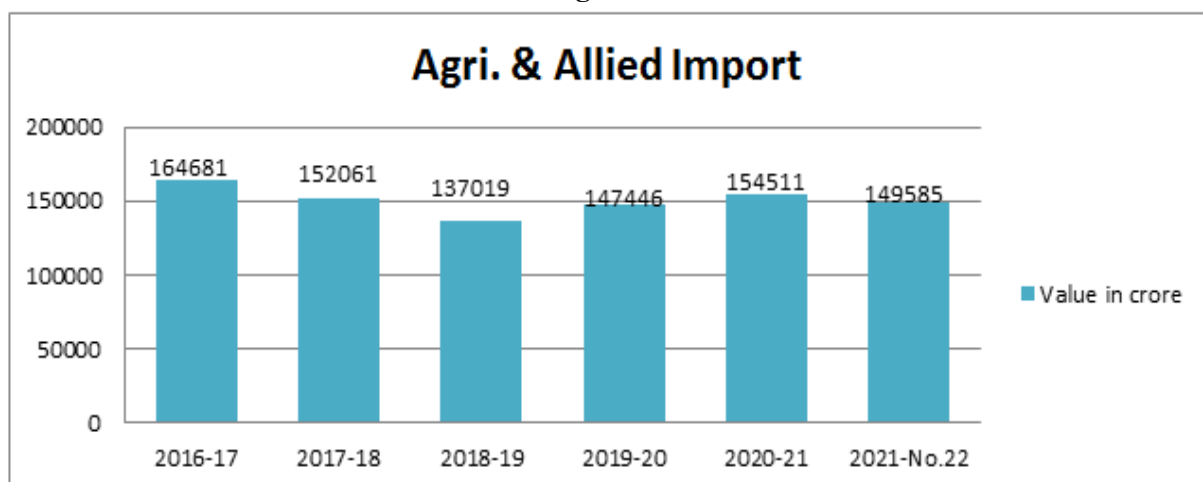
Imports are important for the economy because they allow a country to supply nonexistent, scarce, high cost, or low-quality certain products or services, to its market with products from other countries. India's main imports are: mineral fuels, oils and waxes and bituminous substances (27 percent of total imports); pearls, precious and semi-precious stones and jewelry (14 percent); electrical machinery and equipment (10 percent); nuclear reactors, boilers, machinery and mechanical appliances (8 percent); and organic. The following table shows the agricultural import of India for the last six years.

Table No. 2 Showing India's Imports of Top -10 Agricultural Commodities
(Value in Rs. Crores, Qty. in '000' Tonnes)

Sr. No.	Commodity	2016-17		2017-18		2018-19		2019-20		2020-21		2021-22 till Nov. 2021	
		Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1	Vegetable oils	14010	73048	15361	74996	15019	69024	14722	68558	13540	82123	9618	90531
2	Fresh Fruits	1040	11241	995	12525	1124	13932	994	14137	1212	15765	938	11557
3	Pulses	6609	28524	5608	18749	2528	8035	2898	10221	2466	11938	1808	11070
4	Spices	240	5758	222	6385	241	7933	321	10187	344	8071	239	6150
5	Cashew	774	9027	654	9134	840	11162	941	9026	834	7491	703	6681
6	Sugar	2146	6869	2403	6036	1491	3175	1118	2473	1964	4720	282	955
7	Alcoholic Beverages	-	3581	-	3876	-	4679	-	4644	-	4037	-	2786
8	Cotton Raw Incl. Waste	499	6337	469	6307	299	4383	744	9371	231	2861	158	2674
9	Misc Processed Items	-	2116	-	2250	-	2560	-	2636	-	2266	-	2044
10	Other Oil Seeds	117	395	127	365	220	745	411	1528	507	2165	504	3131
	Total Agri & Allied Imports		164681		152061		137019		147446		154511		149585

(Source: DA&FW Govt. of India 2021-22)

Fig. No. 2



(Source: DA&FW Govt. of India 2021-22)

The above table no. 2 and fig. no. 2 states India's Imports of Top -10 Agricultural Commodities As compared to the year (2019-20), the Agri and allied imports in the year 2020-21 increased by 4.79% to Rs 154511.21 crore. Increase in value of Agri and Allied imports during 2020-21 were primarily on account of increase in imports of Vegetables Oil (19.79%), Fresh Fruits (11.51%), Pulses (16.79%), Sugar (90.84%), Other Oil Seeds (41.73%), Cocoa Products (10.21%), Marine Products (29.35%), Cereal Preparations(20.29%),Fruits/Vegetable Seeds (24.47%) , Ayush and Herbal Products(33.18%), Tea (60.29%),, etc. Similarly, the total merchandise imports increased more significantly, therefore the share of Agri and Allied imports increased from 4.39 % in 2019-20 to 5.30% in 2020-21. Major sources of import of India's Agri and Allied commodities are Indonesia, Argentina, Ukraine, Malaysia, United States of America, Brazil, Canada, Afghanistan, Myanmar, Russian Federation, Nepal, Tanzania, China, Singapore, Vietnam, United Arab Emirates, Benin, Thailand, Sri Lanka and Bangladesh.

CONCLUSION

Agriculture sector is one of the important contributors in the Indian Economy, as the Indian Economy is an agro-economy and depends highly on the agricultural sector. Agriculture sector also supports the industrial sector and international trade in imports and exports. Agriculture is the sector where the most number of people working in it around the country. To promote the export of agricultural commodities the government of India has been providing several export incentives, despite the restrictions imposed by the WTO regime and other regional trade agreement. Growth trend analysis of agri-imports and agri-exports suggest that almost all the commodities/products showed the positive trend during 2016-17 to 2021-22. The study also revealed that despite COVID-19 pandemic, agri exports registered an impressive growth of 20.75%. India's agri-exports and agri imports have grown at a much higher CAGR of 10.41 per cent and 12.74 per cent, respectively as compared to 6.28 per cent and 6.14 per cent of world agri-exports and agri-imports.

REFERENCES

- ✚ Kumar Vinod, July-September 2021, "Trends and Performance of India's Agricultural Trade in the Midst of COVID-19 Pandemic", Indian Journal of Agricultural Economics Volume 76, pp3.
- ✚ Damodharan Harsh, Nov.14 2022, "Importance of agri exports — and what Govt can do to boost India's farm trade surplus" The Indian Express.
- ✚ Annual Report 2021-2022, Department of Agriculture and Farmers Welfare, Ministry of Agriculture and Farmers Welfare.
- ✚ Annual Report 2021-2022, Ministry of MSME.

ROLE OF ICT AND THE GOVERNMENT: AGRICULTURAL INDUSTRY IN INDIA

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ABSTRACT

India is known as Farmers Country. Indian agricultural field are the big and first choice of occupation of the Indians. Indian Government always has the priority for the famers and mission for development in the agricultural sector. . In agriculture field Information and Communication Technology (ICT), Remote Sensing and various geographic based systems wildly used in the farms for Planning, controlling, monitoring and identification of weather, farm and the Market. The technology also helps framers to take right decision about seed plantation, planting techniques, pesticides and fertilizers, weather information and market strategies and government schemes etc. M.S. Swaminathan is known for the Indian Green Revolution, had started in 1965 which lead to increased food grain production of the country. In India, Government announces various schemes to improve and boost the agricultural field of the country. All the schemes were introduced to improve the income and beneficial for the farmers across the country.

Keywords: ICT, Government, Farming, Crop, Farmers

INTRODUCTION

India is known as Farmers Country. Indian agricultural field are the big and first choice of occupation of the Indians, near about 70% of land in India are under farming. Near about 17 to 20 % GDP share are comes from Agricultural occupation. Information and communication Technology (ICT) is the technology which includes the Mobile, laptop, network and the data relevant to the subject that they know. ICT includesany device which can store, process, transforms, send and receive the data. Now in 21st century, Information and Communication Technology (ICT) is used excessively which includes information about climate and weather prediction, market strategies, various crop information, agricultural products and their usage etc.

Indian Government always has the priority for the famers and mission for development in the agricultural sector. Indian economy always has the highest benefits by the agricultural business. In 2014 Prime Minister Modiji announced the Atmanirbhar Bharat Abhiyan which is focusing on Self Reliant business. This Self-reliance and the government of India has announced many mission empowering the farmers in the following way.

Sr. No	Mission	Details
1	Aatmanirbhar Kisan	1. Pradhan Mantri Fasal Bima Yojna have insured 1.46 crore farmers. 2. Over 22.90 crore Soil health cards dispatched
2.	Transform Agricultural Sector	1. Largest farming sector reform 2. Farmers have freedom of choices of sale and Purchase 3. Protect farmers , to help for large buyers, exporters & retailers 4. New opportunities
3	PM KISAN	1. Dedicated to farmers welfare & rural Prosperity 2. Total Rs. 6,000income support, 11.60 crore farmers benefited and Rs. 1.60 lakh crore released funds.
4	PM Matsya Sampanda Yojana	For Blue Revolution in Aquaculture Rs. 20,000 crores approved, 6,400 hectares under aquaculture, and 1033 Bio floc Units aqua culture systems.
5	Agri Exports	1. Raja Mircha from Nagaland to London

		2. Jackfruits from Tripura to Germany & London 3. Red Rice Assam to USA 4. Jamun from Kanpur to UK
6	Marine Exports	Seafood Exports increase from Rs.33,442Crore to Rs. 46,663 in 2020 - 2021
7	Empowering Farmers for prosperous India	Oilseeds increased by 59% from 2013-14 to 2020-21
8	Wheat Procurement	From 390 lakh metric tonnes in2020-2021 TO 433 Lakh metric tonnes which benefiting 49 lakh farmers
9	Kharif Procurement	Worth Rs. 1.68 lakh crore which benefiting 1.3 crore farmers.
10.	e-NAM	Through this mission empowerment of framers and Empowerment of Nation can focused. Under this mission total 1.74 crore Traders, service Providers, farmers, agents registered. Total 2.1 crore new Kisan Credit Cards issued with total Rs. 2,04,292 crore.

Table 1.1 Various Mission Conducting at Present in Indian Agricultural Industry**Use of Technology**

Recent few years the use of technology in every sector increase rapidly, thus the technology paly vital role in the growing nation's capability in different interventions. In agriculture field Information and Communication Technology (ICT), Remote Sensing and various geographic based systems wildly used in the farms for Planning, controlling, monitoring and identification of weather, farm and the Market. Use of Mobile Phones for the networking and Internet information and the easy access is one of the most demanding choices of urban and rural area people now a days. At the tip of your finger mobile phones gives accurate information of weather forecast, market prices and the other social information. Use of various technology in the farming gives higher crop productivity with the decreased use of fertilizers and water, less runoff water. Following are the list of latest technology is used in agricultural sector increasingly.

1. Satellite imaging
2. GIS and GPS tracking
3. DRONE Technology
4. Solar energy
5. Climate prediction through the artificial Technology
6. Genetic Crops developing using Biotechnology
7. Use of Sensor Technology
8. Use of Big Data, Livestock Monitoring

Role of ICT in Agricultural

In following figure1.1 all the components shown are the basic entity which is commonly used as a communication tool in the ICT programs run in the country. To dissemination of Information and technology usage to get the desired result towards the devolved nation one has to reform and make efforts to develop the facility because majority of farmers in the nation have small lands, poor financial support, illiteracy, undeveloped rural facility and poor network and awareness in the peoples. ICT has to be delivered required information to the farmers of the country.

1. **SMS**-Increasing Use of Mobile phones were introduced in 2010 onwards in India. The Use of SMS (Short Message Service) for instant messaging is demanding and popular on those days. Using SMS one can instantly give information in some charges which is very affordable than the call. SMS in Agriculture field are



Figure 1: Components used in ICT programmes in India

Source: Singh S, Ahlawat S, Sanwal S. Role of ICT in Agriculture: Policy Implications.: <http://www.computerscijournal.org/?p=6704>[3]

2. **Voice Messages** -Through the voice messages instant expert opinion can be taken on various agricultural issues.
3. **Mobile Application** –Now a days everyone using a smartphone and through this mobile phone various service based and practical based applications are used to get instant result which is easily available at the finger click.
4. **Kiosks**- Kiosks are the one stop shop for the agricultural needs which include the agricultural services like Soil management, seed quality, proper use of fertilization and use of pesticides
5. **Videos and Video Conferencing**- Video conferencing is the best way of platform independent and free communication. Via these video conferencing farmers get direct expert opinion from around the world at any time and any place.
6. **Web portals**- Web Portals are the supporting farmers though online information regarding the documentation,
7. **Farming**-Necessary insurance, quality checking information and market research for marketing and pricing of the product.
8. **Experts**-Experts in agricultural sector can be the best mentor for all the activity done in the farm. The technology also helps framers to take right decision about seed plantation, planting techniques, pesticides and fertilizers, weather information and market strategies and government schemes etc.

Government of India Initiatives forAgricultural Sector

M.S. Swaminathan is known for the Indian Green Revolution, had started in 1965 which lead to increased food grain production of the country like Punjab, Haryana and utter Pradesh etc. Indian Government will purchases the products from the farmers at the same minimum price known as Minimum Support Price (MSP) ,if for some reason farmers did not get the correct price the MSP announced by the government and thus framers prevent from the loss.

Indian Government introduced many programs to relief from poverty like -

- National Rural Employment Program (NREP)
- Marginal Farmers and Agricultural Labour Development Agency (MFAL)

- Small Farmers Development Agency (SFDA)
- Rural Landless Employment Guarantee Program (RLECP)
- Jawahar Rojgar Yojna (JRY)
- National Banner Programs of DA on rice, corn ,other high value crops
- Promotions of Organic agriculture
- Sustainable growth programs through the farm income and food security.
- Provision of various educational exhibition , financial assistance
- Facility of good transportation and effective network
- Provision of new technology and agricultural machineries.

In India, Government announces various schemes to improve and boost the agricultural field of the country. All the schemes were introduced to improve the income and beneficial for the farmers across the country. Some of the main government schemes are discussed below

1. **Pradhan Mantri Fasal Bima Yojana**– This Bima Yojna means one of the financial support to the farmers suffering from crop loss due to some natural disasters. This scheme's also encourage farmers to adopt the new innovation and techniques in agricultural field. It was introduced by 2016.
2. **Agricultural Infrastructure Fund**- This is the long term finance facility for the agricultural infrastructure, ecosystem and various agro Projects for the famers, Organizations, stakeholders Cooperative societies etc.
3. **Soil Health Card Scheme**- This Scheme helps farmers to improve the quality and fertility of the soil in a proper manner. Farmers get the recommendations for improving soil health
4. **ATMA**- (Agricultural Technology Management Agency) –This Agency at the districts level to support and manage the schemes of state Extension reforms to make famer driven technological support.
5. **AGMARKNET** – This is the abbreviation of Agricultural Marketing which is used to start a national level Information network system for market research, information, and data for the prices and its use for farmers.
6. **Horticulture**- Mission for integrated Development of Horticulture is the central Sponsored scheme for the Fruits, vegetables, various crops, flowers, coconut, spices bamboo etc. This schemes mainly focuses on the enhancement of horticulture production through-out the nation, improve the income from this and strengthen the nutritious farming. Use of horticulture improves the productivity through micro irrigation , support and create no of employment in local areas
7. **Pradhan Mantri Krishi Sinchayee Yojna (PMSKY)** - This Scheme launches with the aim that every farming land get the water. To fulfil this government considering the linkage of all the rivers, rain harvesting, micro irrigation and ensures the optimal use of water.
8. **Organic Farming** –Organic farming uses organic or ecological materials to produce and developed crops. They do not use chemicals and pesticides rather they focus to use compost, bone meal, green manure. Organicfarming is internationallyregulated and acclaimed by many nations, they all follow the standards set by the International Federation of Organic Agriculture Movements (IFOAM) established in the year 1972. Organic framing comprises crop diversity, soil management, weed controlling etc.

Panchayati Raj Institutions and Agriculturein Rural Areas

Panchayati Raj Institutions (PRI) is involved in implementing the appropriate programme with their expertise available and the infrastructure. They have animplementing Mission for Integrated Development of Horticulture (MIDH) with regard to District Planning Committee(DAC) and gram sabhas as follows-

- a) Identification of various breeds of crops/species.
- b) Identify the correct beneficiaries.
- c) To have training, various awareness program, extension activities etc. through the gram sabhas for rural area.
- d) To maintain the quality of seed with the minimum stock of seeds.

In Indian society, there are government, private sector, service provider'svarious NGO, Co-operative companies are functional and participated in agro business, agro-tourism, and agricultural events in the country. All these entities are only one motto to have increase productivity

Mission Mode Projects for Agriculture

Mission Mode Projects are the projects designed under the National e-Governance Plan (NeGP) to focus on the individual area development such as Agriculture, Education, Land records etc. In India there are Central Government and State Government sponsored projects. To achieve this, following is the key factors to achieve this-

- Service facility and the orientation to the farmers
- Bringing farmer centricity,
- Improving access of technology and mechanism for the farmers
- Make more effective efforts to manage the schemes of DAC
- Promote a common farmer who did extra ordinary work across the nation.
- Make sure all agricultural programs run more effective and more efficient.

From the State and central Mission Mode Projects farmer can get the Multiple Delivery channels with the help of advent technology, Farmer can get up to date information of Local and personal Information. Delivery of various services related to agriculture sector includes various government offices, Kiosks, Krishi Vigyan Kendra's (KVK), Kisan call centres, Common service centres, Agriculture Portals etc.

Agriculture Business in India

In India , Agricultural business mainly deal with the agriculture and agricultural products, like crops, vegetable farming, fruits, flowers, fishery products, dairy, food for pet animals, poultry farms, Reshim udyog and the seed and pesticides, fertilizers company and Agro chemicals . Etc.

Eventually all the businesses are basically depend upon the farming and it is not easily acceptable and farmers did not get their rights and fair prices for their valuable work.

There are so many Government, non-government and private business in the country following is the list of few.

1. DuPont India
2. Rallis India Limited
3. Nuziveedu Seeds Limited
4. Lemken India Agro Equipment's Private Limited
5. Advanta Limited
6. Monsanto India
7. Poabs Organic Estates
8. National Agro-Industry
9. Godrej Agrovet Limited
10. Rasi Seeds

CONCLUSION

Agriculture is very crucial business in world, it is totally dependent on the climate. Now a days farmers and the government taken care to having various practical implementation in their farms of Organic farming , Use of lesser fertilizers, biotechnology, new mechanism in the farming , use of natural resources etc. Many of the youth of the country who is highly educated and know the importance of the future of the agriculture is also taking part in this sector and succeed very well. They know how to use of proper technique, new technology, natural resources and the important of proper management of finance opportunity.

REFERENCES

1. Wikipedia
2. <https://www.computerscijournal.org/vol11no3/role-of-ict-in-agriculture-policy-implications/>
3. https://www.devalit.org/newsletter/dec16/of_4.htm
4. https://agricoop.nic.in/Documents/midh_Guidelines.pdf
5. <https://www.jaivikkheti.in/>

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6. <https://agricoop.nic.in/en/Major#gsc.tab=0>
 7. <https://www.smsfoundation.org/role-of-modern-technology-in-agriculture/>
 8. <https://www.competitionreview.in/blogs/>
 9. <https://news.agropages.com/News/NewsDetail---38394.htm>
 10. The Farmers (Empowerment And Protection) Agreement On Price Assurance And Farm Services Act, 2020 Guidelines For Farming Agreement

ROLE OF TECHNOLOGY IN AGRICULTURE

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ABSTRACT

Computer technology plays a vital role in the development of agricultural industry. ICT has put a positive impact in the field of agriculture. The use of latest technology helps in reducing the efforts made by human to improve the agriculture. It helps in predicting weather, storing valuable information regarding animals in a structured manner. Prediction regarding crops can be made using drones. GPS technology can also be used to determine the location with precision. It can be used in tractors, drones so as to improve the performance of tasks including seed placement, spraying on crops, monitor livestock and many more. Farming can also be done using automatic machines. The latest technology helps the farmers to make predictions which helps in improving the productivity and making better informed decisions and thus results in increased profit. ICT has become a major part of agriculture as it acts as a decision support system to the farmers. The integration of Technology in farming helps the farmers to get updated information regarding weather crops and other advancements. The use of e-agriculture has also helped in adoption of advanced techniques and production of higher yields. These advanced techniques can be considered as a vital part used in transforming the agricultural sector in a positive aspect.

Keywords: Agriculture, ICT, drones, decision-making, farming.

INTRODUCTION

Computers have changed the face of agricultural sector nowadays. The growth of this sector is gradually incrementing with the use of digitization, especially after the Covid-19. The usage and adoption of latest technology has helped this sector to grow at a fast speed. In India, the government has taken initiatives for increasing the adoption of latest technology in the agricultural sector. The Ministry of Agriculture and Farmers' Welfare released a paper for consultation on the topic **India Digital Ecosystem of Agriculture (IDEA)** in the year 2021 which informed people regarding the digital revolution occurring in the agricultural sector. Technology can provide benefits to the agricultural field in many ways as it can increase the productivity, help in preventing the problem of soil degradation, reduction in use of chemicals for production of crops, efficiently using the water resources, reduction in the cost of production and many more [1]. These days agricultural sector makes use of advanced and sophisticated technologies in daily routines and these includes use of robots, sensors for monitoring the temperature and humidity, GPS, automatic machines. The use of these latest devices and precise agriculture allow the agriculture sector to become a lot more productive, profitable, safer, environmentally friendly and efficient. The use of robots enable the farmers to monitor and manage the use of natural resources including quality and quantity of water, pesticides and chemicals more efficiently and reliably. It helps the producers to control the production, storage distribution of crops [2]. This helps in providing greater efficiency at a lower cost, safe environmental friendly conditions for growing crops by reducing the harmful impact of climate and nature.

Latest Technology Used in Agriculture

Technology can provide benefits to the agricultural field in many ways as it can increase the productivity, help in preventing the problem of soil degradation, reduction in use of chemicals for production of crops, efficiently using the water resources, reduction in the cost of production and many more. The latest technologies used in agricultural sector are explained below:

- 1. Artificial Intelligence (AI):** The use of AI in the field of agriculture has about a revolution in this sector. AI provides assistance to the farmers so that they can automate the operations performed for growing crops and also helps in changing the process of precise cultivation in order to obtain high quality crop output while making use of less number of resources [3,4]. It helps in yielding more healthy crops, controlling the use of pests, monitoring the soil, and organizing the data for farmers for enhancing wide variety of tasks. It helps in yielding more healthy crops, controlling the use of pests, monitoring the soil, and organizing the data for farmers for enhancing wide variety of tasks.
- 2. Internet of Things (IoT):** IoT provides incredible benefits to the agricultural sector. It provides sensors that helps in gathering data related to climate, moisture in soil and health of crops that help in taking informed decisions with more accuracy and precision. These sensors can also provide information regarding the quantity of water required by crops and thus helps in reducing wastage of water. It also helps in smart

irrigation, forecasting weather and this helps in preventing failure of crops. So, it helps in improving the productivity and efficiency of crops [5-7].

3. **Drones:** Drones can be used as an important tool for use by farmers as it helps in monitoring tiny sections of the crop field remotely. This aerial unmanned vehicle can easily and quickly move around and reach the destinations. It can be used for spraying fertilizers, insecticides and pesticides on crops to prevent them from crop failure by nourishing them and providing the suitable nutrients that are required by the crops. Drones can be used to analyse the soil health so as to provide the needed nutrients needed to improve the health [8]. The fertilization process is time consuming when it is done manually but use of drones helps in simplifying this process.
4. **Robots:** Robotics helps in enhancing the working conditions for the farmers and productivity of crops. Agricultural robots help in automating the repetitive and boring tasks done manually by farmers. Thus it allows the farmers to focus on the overall improvement of production yields. One of the most potential applications of robots in agricultural sector is harvesting and picking as it provides high speed and accuracy for enhancing the yield size and reducing the waste from crop field. The robots make use of advanced technology of machine vision that helps in avoiding hazards, identifying crops and determining if the crops are ready for being harvested [9,10].

CONCLUSION

The agricultural sector makes use of advanced and sophisticated technologies in daily routines and these include use of robots, sensors for monitoring the temperature and humidity, GPS, automatic machines. The use of these latest devices and precise agriculture allow the agriculture sector to become a lot more productive, profitable, safer, environmentally friendly and efficient. The use of robots enable the farmers to monitor and manage the use of natural resources including quality and quantity of water, pesticides and chemicals more efficiently and reliably. It helps the producers to control the production, storage distribution of crops. This helps in providing greater efficiency at a lower cost, safe environmental friendly conditions for growing crops by reducing the harmful impact of climate and nature.

REFERENCES

1. Upendra, R. S., Umesh, I. M., Verma, R. B. R. & Benchamardimath, B. (2020). Technology in Indian agriculture-a review. Indonesian Journal of Electrical Engineering and Computer Science, 20(2):1070-1077.
2. Xu, J., Gu, B. & Tian, G. (2022). Review of agricultural IoT technology. Artificial Intelligence in agriculture, 6: 10-22.
3. Zha, J. (2020). Artificial Intelligence in agriculture. Journal of Physics Conference Series, 1693(1):012058.
4. Liu, S. Y. (2020). Artificial Intelligence (AI) in Agriculture. IT Professional, 22(03): 14-15.
5. Ayaz, M., Uddin, M. A., Sharif, Z., Mansour, A. & Aggoune, E. H. M. Internet-of-Things (IoT)-Based Smart Agriculture: Toward Making the Fields Talk. IEEE Access, 7: 129551-129583.
6. Srivastava, R., Sharma, V., Jaiswal, V. & Raj, S. (2020). A Research Paper on Smart Agriculture using IoT. International Research Journal of Engineering and Technology (IRJET), 07(07).
7. Dhanaraju, M., Chenniappan, P., Ramalingam, K., Pazhanivelan, S. & Kaliaperumal, R. (2022). Smart Farming: Internet of Things (IoT)-Based Sustainable Agriculture. Agriculture, 12, 1745.
8. Refaai, M. R. A., Dattu, V. S., Gireesh, N., Dixit, E., Sandeep, C. & Christopher, D. (2022). Application of IoT-Based Drones in Precision Agriculture for Pest Control. Advances in Materials Science and Engineering, 2022.
9. Oliveira, L.F.P., Moreira, A.P. & Silva, M.F. (2021). Advances in Agriculture Robotics: A State-of-the-Art Review and Challenges Ahead. Robotics, 10(52).
10. Krishnan, A., Swarna, S. & B. H. S. (2020). Robotics, IoT, and AI in the Automation of Agricultural Industry: A Review. 2020 IEEE Bangalore Humanitarian Technology Conference (B-HTC), Vijayapur, India, 1-6.

RURAL ECONOMIC DEVELOPMENT: A STUDY OF MICRO, SMALL, AND MEDIUM ENTERPRISES IN INDIA

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ABSTRACT

The MSME Sector plays a crucial role in the nation's financial development and is a key conduit for establishing work opportunities with little overhead. The State Government has successfully simplified the SSI enlistment process and reduced archives properly to facilitate the quick development of SSI. The State Government amended the SSI unit plan, increasing it for the small sector up to ₹. 1 crore and increasing the venture ceiling from ₹. 50,000 to ₹. 2 lakh. In the State as of March 2000, there were 1,35,350 perpetually enrolled SSI units. These units had a creation limit of 7,50,744 lakhs and an absolute interest of 10,73,943 lakhs. Approximately 1011954 people have used all of these units. The organization offers a range of initiatives to support independent businesses with big ideas. If anyone is interested in starting a business, they should get in touch with the National Institute for Entrepreneurship and Independent Venture Advancement (NIESBUD), National Institute for Micro, Little and Medium Enterprises (NI-MSME), Indian Institute of Entrepreneurship (IIE), or the Development Chief (DC-MSME) for information on their plans. In light of the aforementioned information, this study aimed to understand the most recent developments in the MSME mechanical sector and how they affected the neighborhood's economic and environmental growth.

Keywords: Entrepreneurship, regional development, Rural Development, MSME, and economic development.

I. INTRODUCTION

The majority of nations in the world have economic development as their top priority. Almost without exception, this truth is accepted. Due to India's economy's rapid expansion, the industrial For planners and policymakers, development has grown to be a major worry. Due to the ability to address issues like general poverty, unemployment, backwardness, poor production, low productivity, and a low standard of life, industrialization is crucial to the development of emerging nations. For industrialized nations, it is equally crucial to prevent cyclical swings because it not only enables them to sustain their current growth but also to enjoy even greater standards of living. Therefore, a key goal of planning in India has been the country's rapid industrial growth. India's post-independence development plans placed a strong emphasis on industrialization as a crucial tool for long-term progress. Industrial development is thought to be important for achieving high rates of economic growth, meeting the basic needs of the population, creating a more diversified economy, and bringing about institutional and social reforms. (Dangayach, G.S. and Deshmukh, S.G, 2005)

Indian Sector of Micro, Small, and Medium-Sized Businesses

The MSME industry is important to the Indian economy. An economic and social catalyst. The MSME industry is important to the Indian economy. The sector, which acts as a catalyst for the nation's socioeconomic transition, is essential to achieving the national goals of increasing employment, lowering poverty, and preventing rural-to-urban migration. These businesses encourage the adoption of indigenous technologies while also contributing to the development of a vibrant entrepreneurial eco-system. Over the past few years, the sector has consistently grown. The sector has consistently grown over the past few years, but it has done so in a limited context that frequently leads to wasteful resource allocation. Inadequate access to financial resources is one of the main obstacles preventing MSMEs from expanding and developing, especially during economic downturns.

In the private sector, tiny firms are frequently referred to as "MSMEs." Regulators and financial institutions all throughout the world define the sector in the context of finance using criteria including staff strength, yearly sales, fixed asset value, and loan size proxies. For instance, in Mexico, companies with fewer than 500 employees (OECD) are regarded as MSMEs. According to the World Bank definition, a company is deemed an MSME if it satisfies two of the three requirements for classification: employee strength, asset size, or annual sales. The MSME sector is defined by the Government of India's Micro, Small and Medium Enterprise Development Act 2006 (MSMED Act). This categorization, which builds on the previous Small Scale Industry (SSI) definition, employs the investment metric to identify MSMEs because investments in machinery and equipment can be quantified and validated.

Definitions and Financial Institutions for Msme

Although investments in plant and machinery are observable and quantifiable, the existing definition offers little insight into an enterprise's financial appetite and performance. As a result, many financial institutions prefer to use yearly sales/revenue (turnover) as a major indicator for product development and risk management, as well as to segment and target MSMEs, as shown in the chart below.

Table No.1: Internal Definition Used by Banks for MSME

Enterprise Size	Micro		Small		Medium	
Institution Type	Turnover (INR Million)	Credit Size (INR Million)	Turnover (INR Million)	Credit Size (INR Million)	Turnover (INR Million)	Credit Size (INR Million)
Private Commercial Bank	1.5-50	0.2-1	50-200	5-150	200-2000	50-200
Non-Banking Finance Companies	0.05-1	1-5	5-25	0.3-5	10-1000	2.5-50

Source: MSMED Act

The micro, small, and medium-sized enterprises (MSME) sector of the Indian economy is very large, with the most businesses and employees, and it is highly dynamic, with many businesses entering and leaving the market each year. By 2001, this sector of the Indian economy employed 24.932 million people across 10.521 enterprises, of which 5.808 were rural and the remaining urban, primarily in nonmetropolitan towns and semi-urban areas. The manufacturing sector accounted for close to 40% of all MSME enterprises, while the repairing and maintenance sector accounted for another 16%, with the total MSME gross output for 2001-02 coming in at ₹. 2,822 billion and export coming in at ₹. 141.79 billion. (Saleh, A.S. and Ndubisi, N.O, 2006)

The Micro, Small and Medium Enterprises (MSMEs) in India have evolved considerably Since India's independence, Micro, Small, and Medium-Sized Enterprises (MSMEs) have undergone significant development. The MSME sector has evolved in scale and in the breadth of business activities throughout the years from being known to simply as the Small Scale Industries (SSI) sector in the 1960s and 1970s. MSMEs are widespread in India today across industries (manufacturing, trade, and services), contributing significantly to the remarkable economic progress of the nation. MSMEs have excelled at using domestic resources to produce high-quality goods and services over time, but they have also established themselves throughout India's core industries and in significant export markets. MSMEs have influenced a variety of topics, including entrepreneurship, industrial advancement, employment creation, and economic empowerment. The fact that almost 50.0% of MSMEs in India are held by underprivileged groups emphasizes the sector's inclusivity. Due to its low capital structure and strong labour absorption power, the industry has made a significant contribution to the industrialization of rural areas as well. The total transformation of India's economy from an agrarian one to an industrialised one continues to be largely fueled by the MSME sector. Governments all around India have since given MSMEs a variety of incentives. Other private and nonprofit groups have also helped MSMEs stay competitive in an increasingly globalised economic environment. The need for MSMEs to have access to capital, technological know-how, and training facilities to close the skill gap is expected to remain in the upcoming decade. (Baptiste-Cornelis, T. and Long, W., 2008)

Msme's Impact on the Development of the Rural Sector

The growth of small and medium-sized manufacturing businesses is largely responsible for the development of the rural sector. Rural residents face a number of difficulties, including unemployment, low income, a low standard of living, inadequate educational opportunities, and a lack of markets for their products. Although they have a variety of resources as raw materials, they lack the capital to transform those resources into finished commodities, which is why their society's ability to generate money is declining. Despite having a lot of raw materials, water resources, talent, and knowledge, educated and skilled youth moved to another district since there were no job facilities there. However, the MSME face numerous difficulties that make them ineffective and inefficient. Some MSMEs also bemoan the lengthy banking processes and challenges in obtaining bank loans. Others also voiced their displeasure with the banks' exorbitant interest rates. The majority of MSMEs also lack formal training in their fields of endeavour. High information asymmetry caused by MSMEs' lack of accounting records and inadequate financial statements, which makes it difficult for creditors and investors to access the credit worthiness of potential MSME proposals, is foremost among these issues, along with vulnerability to market fluctuations and high fold-up rates. Additionally, it is the cause of the ill units and MSME manufacturing sustainability problems. Additionally, as a result, there can be a significant funding blockage in the different fixed (capital) assets. These issues still exist in the MSME manufacturing sector,

particularly rural MSMEs. It is important to consider the role of DIC in the growth of MSMEs in the context of the federal government's "Make in India" initiative, as well as the resource limitations that MSMEs have faced for decades.

Inputs to these segments as demonstrated by data from the economy's somewhat out-of-date Input-Output tables, at factor costs, appear to show: low or declining use of machine tools and other industrial machinery; steep rise in energy consumption, especially of petroleum products; rise in other inputs from industry; and stagnation or moderate rise or in some cases even decline of inputs from agriculture. Rising energy costs coupled with a drop in the use of machine tools point to a slowdown in these industries' overall technological advancements. Reduced input consumption, as seen by a reduced value of factor inputs from agriculture, may signify a general deterioration of the materials-flow network between MSME and agricultural and is cause for considerable concern. This might also point to decreased relative prices, a sign of slower technological advancements in the agricultural and related industries. The agricultural input could then be obtained through non-price transactions from local unorganised markets or from networks of wholesalers and large dealers who supply input. Parallel to this, the proportional increase in prices of a variety of industrial inputs and feedstocks reflects both growing industrialization (in contrast to inputs from the agrarian system) and relative technological stagnation in comparison to major enterprises. (Moore, S.B. and Manring, S.L, 2009)

II. REVIEW OF LITERATURE

A good literature review necessitates knowledge of the use of indexes and abstracts, the capacity to carry out thorough bibliographic searches, the capacity to organise the gathered data meaningfully, describe, critique, and relate each source to the topic of the enquiry, and present the organised review logically. Last but not least, but undoubtedly, is the capacity to correctly cite all sources mentioned. The literature review is provided below.

Dangayach and Deshmukh (2005) reported the findings of an exploratory survey on advanced manufacturing technologies (AMTs) administered in Indian small and medium enterprises (SMEs) of automobile, electronics, machinery, and process sectors. The objective of the survey is to assess the status of AMT, identify AMTs relevant to Indian SMEs, identify competitive priorities, AMT implementation criteria, and assess the degree of investment in AMTs. Responses from 122 companies are analyzed and presented. It is observed that Indian SMEs are giving the highest priority to quality and the least priority to flexibility. "Post-implementation evaluation" and "requirement analysis" AMT implementation steps have attracted least attention from Indian SMEs. This study is useful to others implementing AMT. Small and medium enterprises (SMEs) play a vital role in Malaysian economy, and is considered to be the backbone of industrial development in the country. However, few studies examined their development, challenges and future prospects. **Saleh and Ndubisi (2006)** examined and analyzed the role of SMEs in different sectors as well as their major contribution to the economy (**Dangayach, G.S. and Deshmukh, S.G, 2005**) (**Saleh, A.S. and Ndubisi, N.O, 2006**)

"There appears to be growing consensus that Small Business Enterprises (SBEs) exert a major influence on the economy of Trinidad and Tobago. Baptiste-Cornelis and Long (2008) investigated how and to what extent small businesses influenced macroeconomic variables such as employment, growth and productivity in the important sectors of manufacturing and services. The study used a methodology that traverses the reader through a combination of various literatures, and theories coupled with relevant statistics on small business (**Baptiste-Cornelis, T. and Long, W., 2008**)

"**Moore and Manring (2009)**, discussed several different incentives for SMEs to optimize sustainability- (1) becoming valuable sustainable investment targets for larger firms; (2) creating highly competitive networks of sustainable SMEs in market spaces where large enterprises are less successful; (3) becoming highly efficient suppliers in global supply chains through sustainable practices. While, several successful models of the sustainable SME are evolving, it may be that networks of SMEs will become essential for addressing the systemic problems that underlie industrial ecology, enterprise resilience, and global supply chain sustainability. SMEs represent the majority of all enterprises, and rapidly evolving communication technologies allow for various routes of network formation (**Moore, S.B. and Manring, S.L, 2009**).

According to Khanka (2010) small enterprises have become one of the two important legs of industrial economy of India. That, of late, small enterprise sector has emerged as a vibrant sector in the Indian economy is indicated by its contribution in employment, income and exports. For example, they constitute over 90 per cent of total industrial units, account for around 80 per cent of the total industrial employment, and contribute nearly 39 per cent of the industrial production and around 33 per cent of the country's exports. (**Khanka, 2010**)

"The study of **Upadhyay et al (2011)** tried to explore the factors affecting implementation across the stages of ERP implementations using the responses from 98 MSMEs engaged in manufacturing activities. The minimum

number of factors explaining the maximum variance in data is determined using confirmatory factor analysis (CFA). The factor analysis is performed on SPSS with the principal component method using the Varimax Rotation Technique. The results of this study highlights four crucial factors that influence the ERP implementation process in the Indian MSME segment. Broadly, they may be summed up under the following heads: project execution competency; product and vendor perspective; organizational climate; and technical perspective. (Upadhyay, P., Jahanyan, S. and Dan, P.K, 2011)

Lahiri (2012), critically analyzed the definitional aspect of MSMEs and explore the opportunities enjoyed and the constraints faced by them in the era of globalization. Annual Average Growth rate (AAGR) has been used as the major statistical tool to compare the performances of MSMEs during pre and post liberalization process. The study results show that except marginal increase in growth rate in employment generation, the growth rate in other parameters is not encouraging during the liberalization period (J.Anuradha ; T.Parthiban, 2014)

Sharma et al., (2012) reviewed concisely the literature in this field and addresses in particular opportunities and challenges faced by women entrepreneurs in rural areas. It examined the impact on women empowerment through micro entrepreneurship development and SHGs (Sharma, A., Dua, S. and Hatwa V, 2012).

Kiran (2013) attempted to understand as to how a small or micro undertaking can achieve success by adopting strategic decisions at the appropriate time. The case study of S.S. Fiber Tech Industries describes a successful journey of a micro industry wading through challenges for a decade into grow into a small industry by apt marketing decision and new channel strategies (Kiran, V.U., 2013).

“**According to Dey (2014)** the importance of MSME has been recognized in recent years in both developed and developing countries for its significant contribution in gratifying various socio-economic objectives such as higher growth of employment, output, promotion of exports and fostering entrepreneurship. They play a crucial role in the industrial development of any country. The MSME sector is an important pillar of Indian economy as it contributes greatly to growth of Indian economy (Dey, 2014).

“**Rajesh et al., (2015)** observed that micro, small and medium enterprises (MSMEs) all over the world have been recognised as silent drivers of a nation’s economy. Their role in the economic and social development of a country is well established. The MSME sector is a breeding ground of entrepreneurship, often driven by individual creativity and innovation at grass root level and shows dynamism in terms of Micro, small and medium enterprises (MSMEs) have been accepted as an engine for economic growth and equitable development (Rajesh, P., Singla, S. and Gupta, A, 2015).

“Gupta and Barua (2016) identified important enablers of technological innovation in the context of Indian MSMEs. Extant literature review and expert judgment are used to identify enablers of technological innovation. A novel multi-criteria decision making technique called best worst method is applied to find out most important enablers among these. Research results indicate project resources and capabilities; technical know-how of entrepreneurs and government policies as most important enablers contributing significantly towards technological development of MSMEs (Gupta, H. and Barua, M.K, 2016).

An ongoing debate in employment policy is whether promoting small and medium enterprises creates jobs. **Martin et al., (2017)** used the elimination of small-scale industry (SSI) promotion in India to address this question. Authors identified the consequences for employment growth, investment, output, productivity, and wages of dismantling India's SSI reservations. They exploit variation in the timing of dereservation across products and also measure the long-run impact of national SSI policy changes using variation in pretreatment exposure at the district level (Martin, L.L., Nataraj, S. and Harrison, A.E, 2017).

III. METHODOLOGY

The research methodology and particular steps taken to carry out the current investigation are presented in this section. This covers details on the research design, sample selection, creation of the research instrument, mode of data collection, and techniques for data analysis. One of the rural districts was chosen as the study region for the current study.

Population and Size of Sample

The study's target population, or universe, is a comprehensive collection of all units. Accordingly, depending on the goal and scope of the study, the population can be made up of all the units in the nation, those in a specific geographic area, or members of a particular ethnic or socioeconomic group. A population could also be made up of non-human entities like farms, homes, or commercial buildings. Thus, the entire universe of MSMEs was taken into consideration. 175 MSMEs in total were chosen for the current study's data generation.

Data Collection, Sampling Technique, and Reliability

In the current study, Clustered Random Sampling approach was used. Randomly chosen MSME units were taken from each cluster. A questionnaire was created as an instrument for data gathering. From the chosen sample, data were gathered regarding this designed instrument.

The instrument's test-retest reliability was discovered to be 0.85, which is sufficient for the reliability required for data collecting.

Statistical Tools

For the analysis of data various statistical tools will be used in this study such as

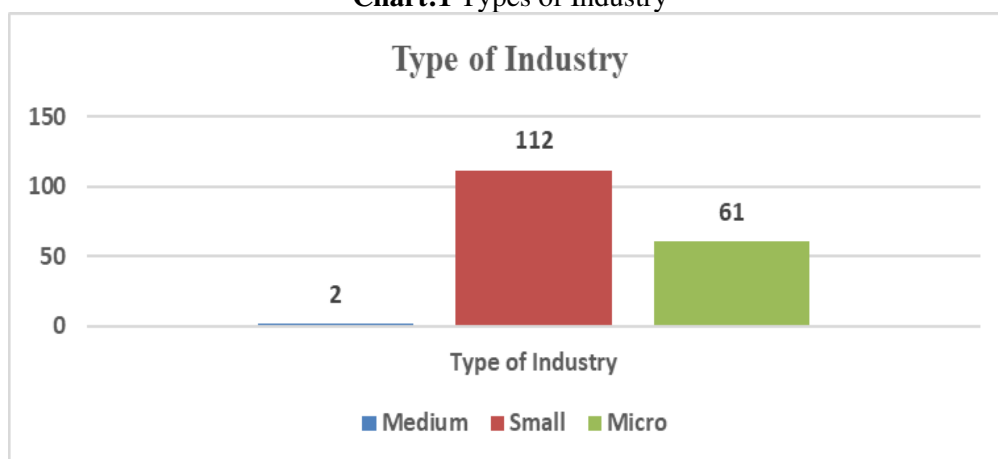
1. Graph and Chart will be used for presentation
2. Cronbach's Alpha test
3. Association measurement: Correlation Coefficient and regression analysis
4. Chi-Square significance test
5. One direction ANOVA

IV. DATA ANALYSIS

The major part of this research paper is data analyzing and interpretation for the collected data using proper research Methodology for those collected respondents profile of this studies. The analyzing the role of Micro Small Medium Enterprise for economic development of rural India for that purpose researcher tries to analyze the types of size industries of MSMEs, and the profile of workers and employed in the particular industries, and what types of Training is required for improving productivity, Quality control as import and part of industries, and which types of Problems faced by industries for working higher labor problems as well as Financial assistance, and Government policies.

Table No: 2: Type of Industry

Type of Industry	Frequency	Percentage
Medium	02	1.1 %
Small	112	64.0 %
Micro	61	34.9 %
Total	175	100 %
Chi sq	Df	Sig.
38.426	2	<0.001

Chart:1 Types of Industry

The above table no.2 and chart no.1 highlights different types of industries for collecting respondents for this study purpose. The majority of the small industry is total no of 112 (64.0%) respectively, as compare Micro level industry is total no of 61 (34.9%) and rest of medium level industry is 02 (1.1%).

Table No.3: Workers Employed in Industries

Workers	Frequency	Percentage
Less than 25	163	93.1 %
More than 25	12	6.9 %
Total	175	100 %

Chi sq	Df	Sig.
130.291	1	<0.000

Chart No.2: Workers Employed in Industries

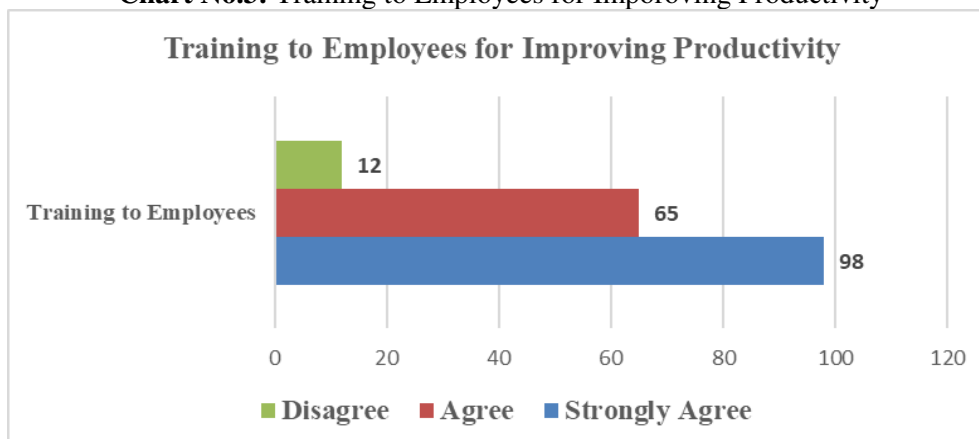


Table No.3 and Chart No.2 showing the details regarding workers employed in different types of MSMEs total of 175 respondents out of 163 (93.1 %) Less than 25 workers need and more than 25 respondents is 12(6.9%) worked in employed in different industries.

Table No.4: Training to Employees for Improving Productivity

Training to Employees	Frequency	Percentage
Strongly Agree	98	56.0 %
Agree	65	37.1 %
Disagree	12	6.9 %
Total	175	100 %
Chi sq	Df	Sig.
103.149	2	<0.001

Chart No.3: Training to Employees for Improving Productivity

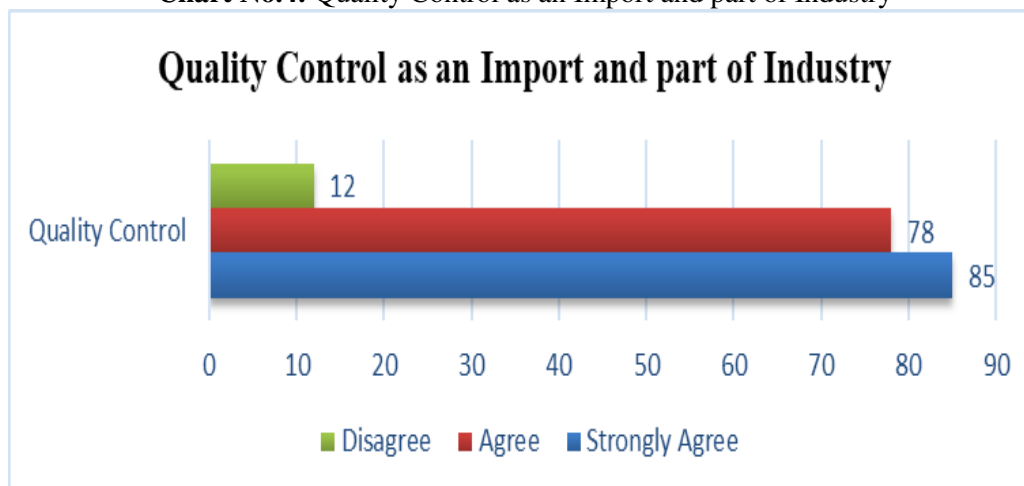


Above table no.4 and chart no.3 opinions about the requirement for training to employees in the improving productivity in respective industries 98 (56.0%) respondent strongly agree , 65 (37.1%) respondents Agree, 12 (6.9%) respondents Disagree regarding need for training to employees for improving better quality of productivity.

Table.5: Quality Control as an important part of Industry

Quality Control	Frequency	Percentage
Strongly Agree	85	48.6 %
Agree	78	44.6 %
Disagree	12	6.9 %
Total	175	100 %
Chi sq	Df	Sig.
103.149	2	<0.001

Chart No.4: Quality Control as an Import and part of Industry

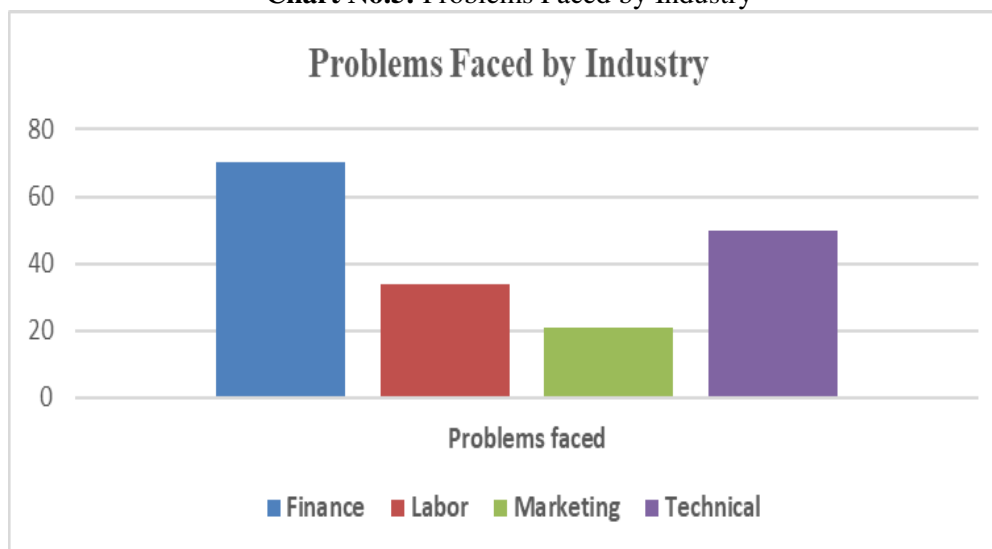


The quality control is a very important part of every industry table no.5 and chart no.6 showing the opinion 85(48.6%) respondents Strongly Agree, 78 (44.6%) respondents Agree, and 12(6.9%) Disagree.

Table No-6: Problems Faced by Industry

Problems faced	Frequency	Percentage
Finance	70	40.0 %
Labor	34	19.4 %
Marketing	21	12.0 %
Technical	50	28.6 %
Total	175	100 %

Chart No.5: Problems Faced by Industry

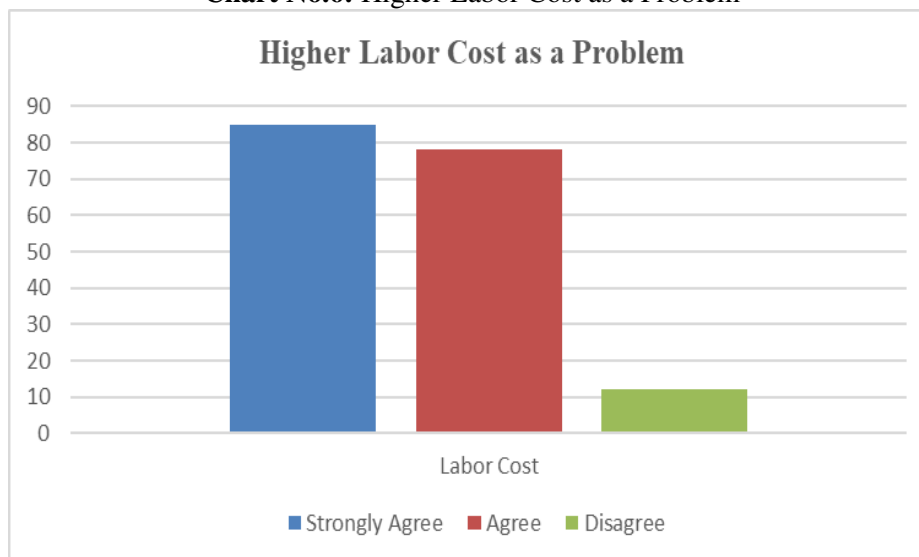


The above table no.6 and chart no.5 showing the problems faced by the industry, the majority 70 (40.0%) respondents face financial problems, 34 (19.4) respondents face skilled labor, 21(12.0%) respondents face marketing problems, 50 (28.6%) respondent face technical problems by their respective industries.

Table No-7: Higher Labor Cost as a Problem

Labor Cost	Frequency	Percentage
Strongly Agree	85	48.6 %
Agree	78	44.6 %
Disagree	12	6.9 %
Total	175	100 %
Chi sq	Df	Sig.
69.411	2	<0.001

Chart No.6: Higher Labor Cost as a Problem

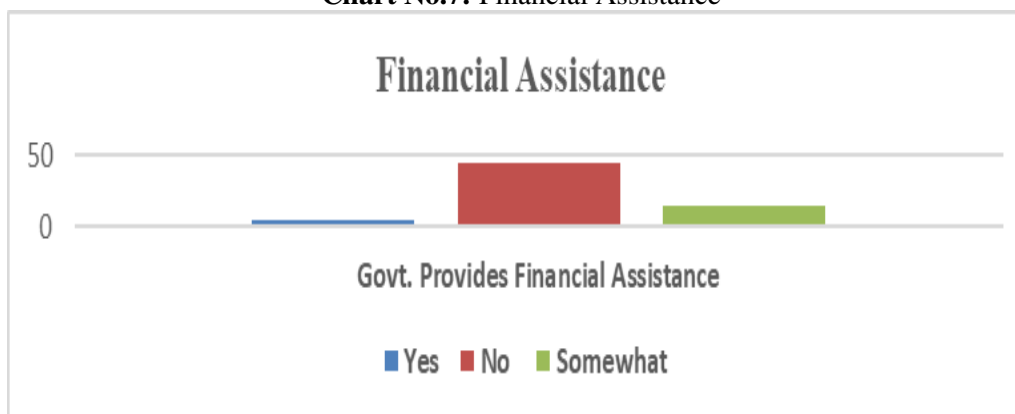


The above table no.7 and chart no.6 face the problems of high labor costs in their respective industries, 85 (48.6 %) respondent opinion is Strongly Agree, 78(44.6 %) respondent opinion is Agree, and 12 (6.9%) respondent opinion is Disagree.

Table No-8: Financial Assistance

Govt. Provides Financial Assistance	Frequency	Percentage
Yes	115	65.7 %
No	45	25.7 %
Somewhat	15	8.6 %
Total	175	100 %
Chi sq	Df	Sig.
41.434	2	<0.001

Chart No.7: Financial Assistance

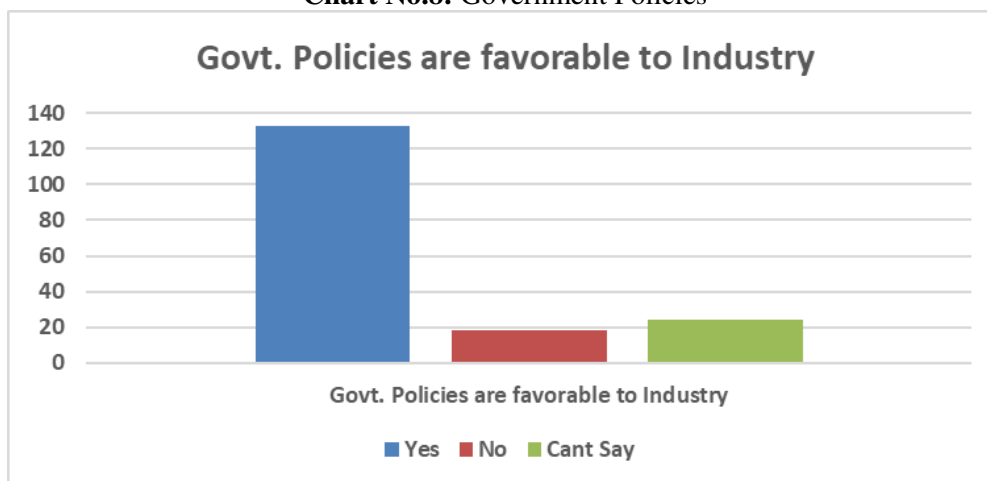


The MSME unit's government provides financial assistance for promoting such types of industries for nation-building. The above table no.8 and chart no.7 highlight a total no of 115 (65.7%) respondents who recorded Yes, the government provides financial assistance for setup industries, and the rest of the 45(25%) said No, and reaming 15 (8.6%) respondents response is recorded somewhat.

Table No-9: Government Policies

Govt. Policies are favorable to Industry	Frequency	Percentage
Yes	133	76.0 %
No	18	10.3 %
Cant Say	24	13.7 %
Total	175	100 %
Chi sq	Df	Sig.
41.434	2	<0.001

Chart No.8: Government Policies



Any industrial development needs to clear and clean government policies to the favorable for industries. The results of government policies in the favor of 133(76.0%) respondents who recorded a response in favor of government policies, 18(10.3%) industries recorded a response as unfavorable, and the rest of 24 (13.7%) respondents recorded their opinion as cant say.

V. CONCLUSION

- ✓ Majority of MSME industries had less than 25 workers.
- ✓ Regular training to employee working in MSME industries help in improving the productivity of industries.
- ✓ Quality control is an important part of the MSME industry.
- ✓ MSME industries faced finance-related problems, labor-related problems as well as marketing and technical problems.
- ✓ Raising labor costs is a problem for the majority of MSME industries.
- ✓ Current government policies are favorable for the development of MSME industries.
- ✓ Government provides financial assistance to MSME industries.
- ✓ Government should ensure that there should be no power cut-off for MSMEs in the region.

REFERENCES

- Baptiste-Cornelis, T. and Long, W. (2008). The Impact of Small Business Enterprises on the Economy of Trinidad & Tobago. Economic Impact of SBEs on the Economy of TT Paper.
- Dangayach, G.S. and Deshmukh, S.G. (2005). .Advanced manufacturing technology implementation: Evidence from Indian small and medium enterprises (SMEs). Journal of Manufacturing Technology Management, 16(5), 483-496.
- Dey, S. (2014). Msmes in India: It is Growth and Prospects, Abhinav National Monthly Refereed. Journal of Research in Commerce & Management, 3(8), 26-33.
- Gupta, H. and Barua, M.K. (2016). Identifying enablers of technological innovation for Indian MSMEs using best–worst multi criteria decisionmaking method. Technological Forecasting and Social Change, 107, 69-79.
- J.Anuradha ; T.Parthiban. (2014). Problems and Prospects of Micro, Small nd Medium Enterprises (Msmes) In India In The Era of Globalization. International Journal of Advanced Information Science and Technology (IJAIST), 3(7), 1-11. doi:10.15693/ijaist/2014.v3i7.53-59
- Khanka, S. (2010). IPR Powering MSMEs, Small Enterprises Development. Management & Extension Journal, 37(2).
- Kiran, V.U. (2013). Dealer Network Strategy for MSMEs - A Case Study of Growth Strength, Small Enterprises Development. Management & Extension Journal, 1, 40.
- Martin, L.L., Nataraj, S. and Harrison, A.E. (2017). In with the Big, Out with the Small: Removing Small-Scale Reservations in India. The American Economic Review, 107, 34-386.

-
- Moore, S.B. and Manring, S.L. (2009). Strategy development in small and medium-sized enterprises for sustainability and increased value creation. *Journal of Cleaner Production*, 17(2), 276-282.
 - Rajesh, P., Singla, S. and Gupta, A. (2015). Performance of Small Scale Sector in India. EDII Institutional Repository.
 - Saleh, A.S. and Ndubisi, N.O. (2006). An Evaluation of SME Development in Malaysia. *International Review of Business Research*, 2(1), 1-14.
 - Sharma, A., Dua, S. and Hatwa V. (2012). Micro-enterprise development and rural women entrepreneurship: a way for economic empowerment. *Arth Prabhand: A Journal of Economics and Management*, 1(6), 114-127.
 - Upadhyay, P., Jahanyan, S. and Dan, P.K. (2011). Factors influencing ERP implementation in Indian manufacturing organizations: A study of micro, small and medium-scale enterprises. *Journal of Enterprise Information Management*, 24(2), 130-145.

SKILL DEVELOPMENT MISSION OF INDIA

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INTRODUCTION

The United Kingdom (UK) began cooperation with India under the Taito India program. At the school level, virtual partnerships are launched so that young people from this country can experience the school system of another country and develop an understanding of culture, traditions, social and family systems. A commitment has been made to ensure mutual recognition of UK and Indian qualifications. Skill India or the National Skill Development Mission of India is a campaign launched by Narendra Modi (PM) and led by the National Skill Development Corporation of India. Narendra Modi (PM) launched the Skill India campaign on July 15, 2015 to train more than 30 million people in India by 2022 in various skills. Several initiatives of this campaign include, National Skill Development Mission, National Skill Development and Entrepreneurship Policy, 2015.

Skill Development of India: On 16.10.2022 India's first Skill India International Center will be established in Bhubaneswar, which is engaged in training young people with the aim of improving opportunities for skilled work abroad. The National Skill Development Institute and the Skill Development Institute exchanged a memorandum of understanding in the presence of the Union Skill Development and Entrepreneurship Minister Dharmendra Pradhan on Saturday. A recent systematic literature review by Cabral and Dhar (2019) identified the importance of skills development if the implementation of such systems reduces poverty, exploits the demographic dividend, socio-economic empowerment of disadvantaged sectors, achieves economic growth, reduces social challenges, and economic inclusion. In terms of institutional mechanism, Skill Development Corporation, Ministry of Skill Development and Entrepreneurship and Prime Minister Kaushal Vikas Yojana have led to significant results but have not achieved the expected results. The study confirms the critical requirement of capacity development for technology adoption and women empowerment in the country. Japan's private sector plans to establish six manufacturing institutes to train 30,000 people over 10 years in Japanese-style manufacturing skills and practices in predominantly rural areas. To this end, the Japan-India Institute of Manufacturing and Japan Engineering College Courses

are established in India as a public-private partnership between Japanese companies. The first three institutes will be established in Gujarat and Rajasthan in summer 2017. The government has invested core to launch the Skill Acquisition and Awareness Program for Livelihood Promotion, another major initiative of the Skill India Mission. . Through this, it aims to provide marketable education to 350 million young Indians. In addition, the government will set up 100 Indian International Centers of Excellence to conduct advanced foreign language courses to help young people prepare for foreign jobs. It provides opportunities for the youth of India.

What is Skill Development?

Our entire lives are simply long periods of skill development. We are learning to walk. We are taught how to speak. We learn how to look after ourselves. All of this is accomplished through the same general method of repeatedly repeating something until it becomes a subconscious act. We follow the same pattern as we learn new skills later in life. The only difference is that we are much more aware of and interested in our academic pursuits.

Definitions of Skill Development

- Identifying a person's knowledge and skill gaps
- To improve and hone these abilities. It's critical because your abilities determine your ability to carry out your plans effectively.

Skill Development Can be Divided Into two Categories, They Are as Follows:

- Hard skills are skills that are relevant to a specific task and are typically easily quantifiable. Subject proficiency, training, and specialized qualifications are examples of knowledge-based qualifications. Language fluency, XYZ tech skills, graphic design, and scripting are all difficult skills to acquire.
- Collaboration, management, problem-solving, stress management, decision-making, flexibility, ability to cope with challenges, and communication are examples of soft skills.

Certificate Skill Development Courses

- The certification courses in skill development are considered as an additional qualification for the graduates with the bachelor's or master's degree.

- The duration varies for each course depending upon the institution or the online website providing the course.
- Whereas offline courses are offered by some colleges and institutions which provide the candidates with hands-on practice with a valid certificate that will be very much useful to the candidates.
- The duration of the course is decided depending upon the type of certification chosen.

Skill Development for Women

According to CSO, 59.30% rural women are self-employed and male ratio is 54.50%. This clearly indicates that the government has been undertaking proactive steps to converge the entrepreneurship in India towards development of rural women. Through the 2nd phase of Pradhan Mantri Kaushal Vikas Yojana, around 68.12 lakhs of women had undergone skill training. And also, around 4.08 lakh women had undergone training during 2018-2020, and Industrial training Institutes (ITI) had completed training for 38.72 lakhs women.

Performance

As of 15 February 2016, the "Indian Leather Development Programme" trained 51,216 youth in a span of 100 days and it plans to train 1,44,000 young person's annually. Four new branches of "Footwear Design & Development Institute", at Hyderabad Patna & Gujarat are being set up to improve training infrastructure. The industry is undergoing acute skill shortage and most of the people trained are being absorbed by the industry. In an Endeavour to prepare a generation of skilled employees and leaders in alignment with the modern day market demands, Skill India was launched by Prime Minister Narendra Modi in 2015 Skill India, launched to train over 40 crore citizens with different industry relevant skills by 2022, is to be implemented through a streamlined institutional.

Empowering Youth of Nation through Skills

The Skill Development Unit has been entrusted with the responsibility of training the youth by imparting skills to them through AICTE approved colleges/registered trainers to improve their employment/self-employment opportunities. A cell uses different systems to achieve its goals. Important schemes are: Pradhan Mantri Kaushal Vikas Yojana for Technical Institutes (PMKVY-TI), Employability Enhancement Training Program (EETP), National Employment Enhancement Mission (NEEM), AICTE Startup Policy, Skill Assessment Matrix for Vocational Promotion of Youth (SAMVAY), Management Development Programs etc.

Roles & Responsibilities

The Skill Development Cell is engaged in various skill development projects of AICTE, The main programs are:

- Startup Policy for Technical Institutions: AICTE has formulated a startup policy for students of technical colleges to create technology-based student-owned startups and job opportunities.
- Pradhan Mantri Kaushal Vikas Yojna, Technical Institutions (PMKVY-TI): This scheme is implemented through AICTE approved colleges to impart technical skills to drop out students and find suitable private sector jobs.
- AICTE-UKIERI: AICTE has entered into an Implementation Agreement with the UK Department of Business, Energy and Industrial Strategy (DBEIS) to collaborate on UK India Education and Research Initiative (UKIERI).

- I. In Phase III of UKIERI, the following four areas of educational cooperation will be implemented
- II. Development of management and teaching staff GDPs, the Council approves, SDC successfully implemented two workshops for 100 participants.

Skill Development: Opportunities and Challenges in India

India has seen rapid economic growth in recent years driven by the development of new age industries. The increase in purchasing power has led to a demand for a new level of service quality. According to the National Skill Development Corporation (NSDC), skills can be classified into four levels based on the level and duration of education required.

- Skill level 1 (semi-skills) refers to skills that can be acquired through short-term courses, targeted interventions and work placements.
- Skill level 2 (skill) refers to occupation-specific skills that can be acquired through technical or vocational training.
- Skill level 3 (high skill) refers to skills related to activities at a high technical or business level, which can be acquired through degrees, diplomas and further education.

- Skill Level (Highly Skilled Specialization) refers to highly specialized skills involving research and design that can be acquired through a PhD or several years of work experience in a specific field or field.

Challenges of Skill Development

In light of the current infrastructure and policy framework, India faces many challenges. The challenges of skill development are discussed below:

- Inadequate capacity: The current infrastructures of educational institutions across the country are inadequate considering the huge demand for skilled manpower. There are not many trained and highly qualified trainers. A teacher must be motivated and professional to occupy higher positions.
- Mobilization: People's view of skills development is still very traditional. Registering students for vocational training has become a very difficult task.
- Scalability: Each model needs a lot of support from different stakeholders to succeed. Due to limited buy-in from the business sector, the development of such initiatives is slow.

Opportunities: The labor markets around the world, including India, are undergoing tectonic shifts. The Future of Work in India, A report by the Observer Research Foundation and the World Economic Forum on Inclusion, Growth and Change sheds light on the future of transformative technology and its impact on work in India. Some key takeaways from this report are that companies expect technological change to create jobs, not job losses. They recognize the potential of new technologies in the coming years. The entire focus is expected to be to automate repetitive tasks, optimize time, maximize productivity, create digital platforms for online access to job opportunities and formalize informal activities. It is important that people constantly adopt new tricks of the trade and stay abreast of new technological changes in their work.

CONCLUSION

Development of the capacity is the most important aspect of the development of our country. India has a huge "demographic dividend", which means that its potential to supply the labor market with skilled labor is very high. This requires a concerted effort by all stakeholders including.

REFERENCES

1. The World's Top Countries for high- skilled employment. (n.d.). Available from: <http://www.forbes.com/sites/niallmccarthy/2015/06/01/the-worlds-top-countries-forhigh-skilled-employment- infographic/#796c442d31b0>. Date accessed: 19/10/16
2. Ministry of Skill Development and Entrepreneurship. (n.d.). Available from: <http://www.skilldevelopment.gov.in/nationalskilldevelopmentcorporation.html> Date accessed: 10/10/16
3. National Skill Development Corporation. Available from: <http://www.nsdcindia.org/> Date accessed: 10/10/16.
4. Planning Commission, XII Five Year Plan, Employment and Skill Development http://planningcommission.gov.in/plans/mta/11th_mta/chapterwise/chap9_employ.pdf
5. Wheelbox. India Skills Report. 2016. Available from: <https://wheebox.com/logo/ISR-2016-small.pdf> Date accessed: 16/10/
6. "Government to train 40 crore people under Skill India initiative", The Economic Times, 15 July 2015
7. Hanzala Kathewadi "PM Modi Launches Skill India Initiative That Aims to Train 40 Crore People", NDTV, 15 July 2015
8. "Modi in UK: 11 British companies support skill development in India", Daily News and Analysis, London, ANI, 13 November 2015
9. Hemanta Pradhan (16 April 2022). "Country's first Skill India International Centre launched in Bhubaneswar | Bhubaneswar News - Times of India". The Times of India. Retrieved 26 April 2022.
10. Cabral, Clement; Dhar, Rajib Lochan (25 June 2019). "Skill development research in India: a systematic literature review and future research agenda". Benchmarking: An International Journal. 26 (7): 2242–2266. doi:10.1108/BIJ-07-2018-0211. ISSN 1463-5771.
11. [https://www.aicte-india.org/bureaus/skill_development#:~:text=Major%20schemes%20are%2D%20Pradhan%20Mantri,SAMVAY\)%2C%20Leadership%20Development%20Programs%2C](https://www.aicte-india.org/bureaus/skill_development#:~:text=Major%20schemes%20are%2D%20Pradhan%20Mantri,SAMVAY)%2C%20Leadership%20Development%20Programs%2C)
12. www.google.com.
13. Various books and Article in news paper.

THE CHANGING ASPECTS OF INDIAN AGRICULTURAL MARKETING

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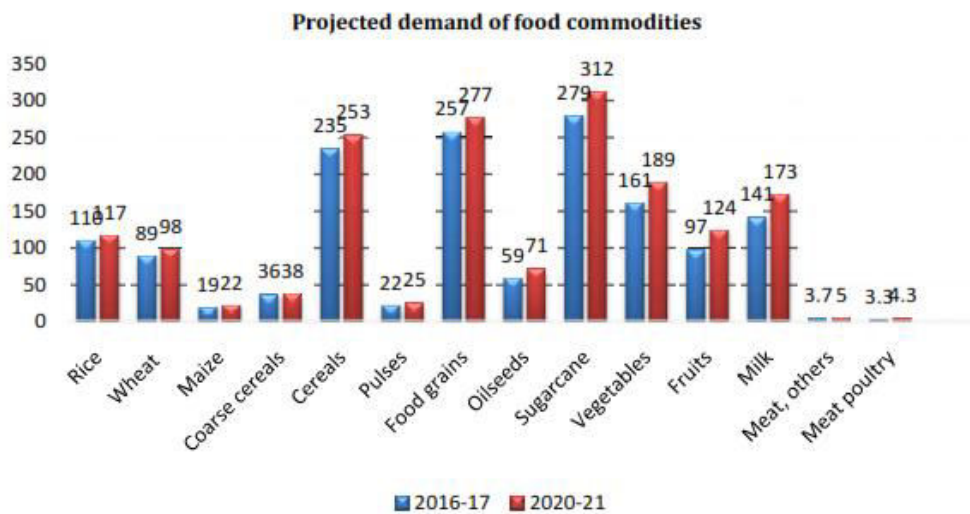
ABSTRACT

Marketing for agriculture satisfies customer demands. India's workforce is made up of 65% workers in agricultural marketing. There are three levels of agricultural marketing: primary, secondary, and terminal. Secondary data from journal research articles and Indian agriculture marketing reports are used in this investigation. The essay emphasises legislative initiatives and a fundamental shift in farm marketing tendencies. Food demand is rising nationally. Comparing the demand for food commodities in 2020–21 to 2016–17 In addition to seeds, modern agriculture also needs equipment, pesticides, insecticides, and fertilisers. Transfer of products, physical mobility, and facilitation are all part of agricultural marketing. To control the Mandi, the state established the Agricultural Produce Market Committee. The APMC Act encourages the development of infrastructure, contract farming, and public-private marketing alliances. The market will be reformed and integrated via new channels as e-NAM (electronic-National Agriculture Market). In the national electronic market, each state has 498 APMCs. The most e-NAM-linked Mandis are in Uttar Pradesh, followed by Gujarat and Madhya Pradesh.

Keyword: Agricultural Marketing, Reform, National Agriculture Market

INTRODUCTION

Marketing in agriculture links producers and consumers. Food production in India is growing. Agriculture, which contributes around 14% of the country's GDP and provides essential raw materials to industry, is crucial to the Indian economy. Rural agriculture is a source of raw materials for the agro-industry. Marketing for agriculture satisfies consumer demands. It raises income and living standards in rural areas. Agriculture marketing helps the economy and feeds the country. Agriculture marketing includes farm-to-consumer advertising, storage, processing, distribution, and transportation. There are 65 percent of the workforce. There are three levels of agricultural marketing: primary, secondary, and terminal. Farmers, growers, and merchants perform the primary market function. The processing agent is included in the secondary market function, and the primary and secondary market functions, which involve commodity shipping agents, are both included in the third-term market function. welfare fulfilment of client requests. Agriculture marketing is seeing a sharp increase in input marketing. Innovative technology for seeds, machinery, agricultural equipment, herbicides, insecticides, and fertilisers is sought after in modern agriculture. Consequently, by giving timely input, agricultural marketing is growing and assisting farmers in increasing productivity. As the output of food and horticulture increases, cold storage is required to transport perishable food and horticultural products for sale. food commodity merchant demand in 2020 and 2016. The secondary market function is carried out by the processing agent, and the primary and secondary functions of product transportation are included in the third-term market function. Consumers get the most from marketing. fulfilment of client requests. Agriculture marketing is seeing a sharp increase in input marketing. For seeds, machinery, agricultural chemicals, and fertilisers, modern agriculture needs cutting-edge technology. Agriculture marketing is growing as a result, and timely farmer communication increases production. As the output of food and horticulture increases, cold storage is required to transport perishable food and horticultural products for sale. The graph below compares anticipated food commodity demand for 2020–21 to merchant demand during 2016–17. The processing agent is included in the secondary market functionary, and the third-term market function includes both the main and secondary shipping functions. Customer welfare is maximised via marketing. fulfilment of client requests. Agriculture marketing is seeing a sharp increase in input marketing. For seeds, machinery, agricultural chemicals, and fertilisers, modern agriculture needs cutting-edge technology. Agriculture marketing is growing as a result, and timely farmer communication increases production. As the output of food and horticulture increases, cold storage is required to transport perishable food and horticultural products for sale. There are 21 comparisons in the graph.

1 Graph: Projected demand of Food Commodities in India during 2020-21 (in million tons)

Source: Indiatat, <https://www.indiatat.com/table/agriculture-data/2/agricultural-marketing/14278/996183/data.aspx>

Marketing functions

Marketing is the process through which producers and farmers transfer ownership of their goods to consumers. The marketing functions listed below are categorised as follows:

(1) Function of transfer of Ownership	(a) Selling
	(b) Buying
	(c) Demand creation and
	(d) Price determination
(2) Function of Physical Movement	(a) Transportation and
	(b) Storage
	(c) Function of changing the form of the product
	(a) Standardization and grading
	(b) Packaging
(3) Facilitating Function	(a) Market financing
	(b) Risk bearing and
	(c) Market information

METHODOLOGY

This essay is based on secondary data that was gathered from a variety of websites, published research papers, annual reports on agricultural marketing, and other secondary sources.

RESULT AND DISCUSSION

• Reforming Agricultural Market

To compete in the globalised world and link with worldwide practises and quality, agricultural market reform is required. To improve output quality and transaction turnaround times, upgrade storage and logistics. The main objectives of farm market reform are to meet the needs of buyers and sellers and to provide uniform market licencing.

• APMC Act

State Mandi, or agricultural markets, are governed under the Agriculture Produce Market Committee Act. In the market region defined by the relevant government, no one may wholesale or market. This committee board is created by the state government. The committee oversees the development of infrastructure, the market for perishable goods, grade standards, single licencing fees, and licencing relaxation. Farmers selling to brokers or traders are under APMC's supervision.

- **E-commerce in Agricultural Marketing**

Online payments and purchases are both part of e-commerce. The e-trading system allows producers, user organisations, electronic traders, and prevailing traders to market a product, and buyers and sellers can broadcast their purchasing wants and product requirements. E-trading marketing reduces costs and fosters greater openness. Farmers can obtain fair pricing when intermediaries are removed. Online payments and purchases are both part of e-commerce. The e-trading system allows producers, user organisations, electronic traders, and prevailing traders to market a product, and buyers and sellers can broadcast their purchasing wants and product requirements. E-trading marketing reduces costs and fosters greater openness. Farmers can obtain fair pricing when intermediaries are removed.

- **New trends in Agricultural Marketing**

Trade liberalisation and FDI With less tariffs and non-tariff barriers, agriculture marketing expanded. The Mumbai-based nationalised transparent electronic spot exchange helped agricultural farmers address a number of challenges by opening up various markets for agro-based products and raw materials. Market prices, agricultural news, inputs, and advice are efficiently distributed via mobile devices. Numerous initiatives from the private sector teach farmers every day. such as RML and IFFCO Kisan Sanchar.

- **Agmarknet**

By offering daily information for 400 agri-commodities in 10 languages in more than 2900 marketplaces, AGMARKNET integrates India's Agriculture Produce Market Committee, Marketing Channel, and Public-Private Partnership. AGMARKNET also has a number of other information and communication technology programmes that support daily price information dissemination and other marketing initiatives, such as I-SHAKTI, a-AQUA, RURAL BAZAR, I-KISAN, Mahindra Kisan, e-KRISHI, agribusiness centres, ITC e-choupals, and IFFCO e-portal.

- **Contract Farming**

Through contract farming with the firm, the APMC model act lowers the risk in the marketing of agricultural produce. While it establishes quality criteria, the firm purchases veggies from farmers. Some instances of businesses and farmers succeeding include PepsiCo's contract farming of tomato and potato in Punjab, SAB Miller's barley, and McCain's potato in Gujarat.

Table 1: States wise number of wholesale regulated markets integrated with Electronic National Market (e-NAM) from (2016 to 2018)

Particular State	No. of Market integrated
Uttar Pradesh	100
Gujarat	65
Madhya Pradesh	58
Haryana	54
Telangana	46
Maharashtra	45
Rajasthan	25
Andhra Pradesh	22
Himachal Pradesh	19
Jharkhand	19
Tamil Nadu	15
Chhattisgarh	14
Odisha	10
Uttarakhand	5
Punjab	1
India	498

Source:Indiastat.com

CONCLUSION

Although the country places a lot of importance on agricultural marketing, there are still obstacles to be solved in terms of institutional and infrastructure development. In addition, the price is far lower than it could be due to the involvement of numerous intermediaries. Market integration and the reform of agriculture marketing are two recent developments in the nation. These new channels, including the electronic-National Agricultural Market (e-NAM), would fundamentally alter the way that agriculture is marketed. There are now 498 APMCs connected to the electronic national market inside the United States.

REFERENCES

1. Kīruthīgā, M., Karthī, R., Daīsy B. (2015) AgrīculturalMarkètīng – An Ovèrvīèw. Īntèrnātiōnal Journal of Scièntīfic and RèsèarchPublicātiōns, 5(4):1-2of-gujarats-banaskantha-dīstrīct.
2. Poonam (2017) agrīculturalmarkètīngīnĪndīā.Īntèrnātiōnal Journal of MultīdīscīplīnaryRèsèarch and Dèvèlōpmènt 4(6):115-116
3. Raju K.V., Naīk G, Ramsèshan R, Pandèy T and Joshī P. (2016). Transformīng Agrīcultural MarkètīngīnĪndīā: LīnkīngFarmèrs to a NātiōnalGatèway and È- Markèts, CurrèntScènāriō and a Way Forward. RèsèarchRèportĪDC-5. Patanchèru 502 324. Tèlangana, Īndīā: Īntèrnātiōnal Crops RèsèarchĪnstītutè for thèSèmī-ArīdTropīcs. 44 pp.
4. Rèhman, S., Sèlvaraj, M. and SyèdĪbrahīm, M. (2012). ĪndīanAgrīculturalMarkètīng- A Rèvīèw.Asīan Journal of Agrīculturè and Rural Dèvèlōpmènt, 2(1)2012: 69-75.

THE SCOPE AND STATUS OF E-COMMERCE IN AGRICULTURE BUSINESS IN INDIA

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ABSTRACT

Indian economy has a major contribution from the agricultural sector. In today's agriculture and the food supply chain in general, there appears a history of quick adoption and assimilation of new technologies especially cost deduction technologies. Agriculture was identified as one of the great promises of e-commerce due to high level of fragmentation present in the supply chain, large volume traded, and homogeneous products only reinforced the expectations. Internet technology has provided the possibility for cost reduction and demand enhancement along the food supply chain through the use of e-commerce.

This paper tells us about the scope and status of E-commerce and agribusiness in India. E-commerce platform for Indian agriculture marked and challenges as well as strategies in adoption of e-commerce in agribusiness sector in India. Along with the opportunities of agribusiness in India. The study starts with a E-commerce and agriculture along with general framework for e-commerce adoption followed by different business models supporting e-commerce adoption. But e-commerce is relatively primitive, but today more and more companies want to publish on the Internet, as it is essential to be in competition.

Keywords: E-Commerce, E-Agribusiness, Agriculture, E-Marketing and Supply Chain

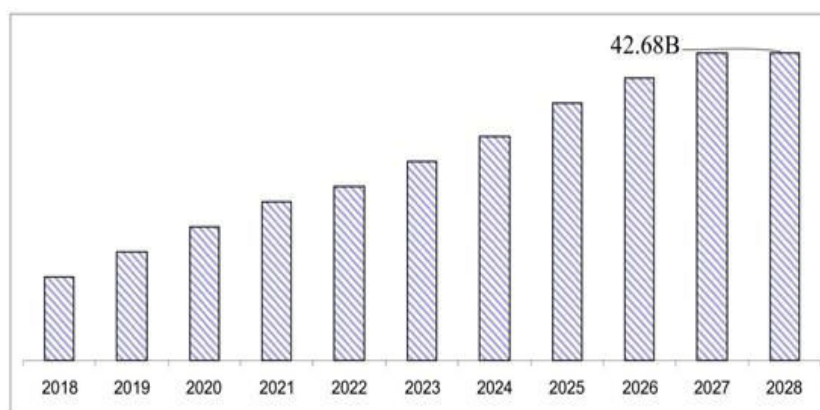
• INTRODUCTION

In 2020, the e-commerce industry for agriculture products was worth roughly USD 28.56 billion, and by 2026, it is predicted to be worth around USD 48.68 billion. Over the projection period of 2020-2026, the market is estimated to develop at a CAGR of roughly 6.84% with the growing use of e-commerce has risen dramatically. Agricultural e-commerce has significant possibility for product cost reduction and demand increase. In recent years, an increasing number of such as China have started selling agro goods directly to customers through online stores run by a third-party trading platform. In recent years there has been a significant increase in competition among

agricultural companies. Cost, supply chain, and middlemen have all been put under more strain as a result of online sales. Micro and medium sized enterprises can benefit from e-commerce. This has aided vendors in lowering shipping costs and gaining access to previously unexplored markets.

It is becoming increasingly obvious that e-commerce has emerged as a new and successful means of assisting small holders in gaining market access. Because of the absence of the pricing pressure from middlemen and the marketing restrictions of information asymmetry, e-commerce has enabled small holders to sell most of their products at a greater price than before. The use of agricultural e-commerce by small holders is propelling the sector forward. The agriculture industry in South America and Asia Pacific, which are the fastest expanding regions, has significant technology and digital gaps. The amount of knowledge among farmers or small sellers, as well as the network infrastructure required to conduct agricultural e-commerce efficiently in rural places, are both lacking. The market's expansion is being hampered by a lack of understanding regarding agricultural e-commerce and a lack of network infrastructure.

Global E-Commerce of Agriculture Products Market 2021-2028 (USD Billion)



For the time being, the COVID-19 pandemic is projected to have a little influence on the worldwide agriculture e-commerce business. The supply chain and transportation have both been harmed as a result of the lockdown in practically every location. E-commerce platforms have suffered significant losses as a result of the abrupt suspension of transportation services.

At present, most of the elements of e-Agribusiness have been around in practice and literature for years, yet, their unique application in the context of rapid technological change made it relevant to compose definitions of the following terms.

- **E-Business:** Business that uses computer media and involves a minimum of two players. e-business focuses on management and strategy. e-Marketing, e-commerce, and e-Agribusiness are subsets of e-Business.
- **E-Marketing:** Moving elements of marketing strategies and activities to a computerized, networked environment such as the internet.
- **E-commerce:** Business conducted over the internet in which a financial transaction or binding commitment to exchange of goods/services occurs.
- **Agribusiness:** Includes the agricultural input sector, the production sector, and the processing/manufacturing sector, farmers/providers of farm inputs, processors of farm outputs, manufacturers of food products, and those who transport, sell or prepare food products.
- **E-Agribusiness:** Is simply an e-business that has a focus on agricultural goods or services.

• **Growth of E-Commerce in India**

The e-commerce sector has seen rapid growth in technology adoption led by the increasing use of devices such as smart phones and tablets, and access to the internet through broadband, 3G, 4G etc. Which led to an increased online consumer base. Furthermore, growing internet user base helped aid this growth.

In terms of highlights, the growth shown by home grown players such as Flipkart and Snapdeal and the huge investor interest around these companies displayed the immense potential of the market. With the entry of e-commerce behemoths such as Amazon and Alibaba, the competition has further intensified. Both these international players come with deep pockets and the patience to drive the Indian e-commerce market.

• **Application of e-Agriculture**

Application of e-

Agriculture encompasses all agriculture and infrastructure. Projects in which ICT has the potential of enabling the empowerment of the community. Such as;

1. Providing Internet Demand Based Agriculture Information through ICTs helping farmers to access information on commodity prices.
2. Helping farmers to access information on commodity prices.
3. Practices for cultivation crop care and in forging direct relationships with potential buyers in order to provide better value for their produce.
4. Multipurpose community centers enhancing access to the farming community.
5. Information related to not only agriculture but also impacting other areas of life such as education, health and products required for daily needs besides facilitating between the village community and the rest of the world.

• **Scope of e-Agribusiness**

1. There is a great scope for e-agribusiness in agriculture, specially in horticulture and processed products. Mango, grapes, spices etc. has a large demand in national and international market.
2. Products like sugar, tea, processed agri products, dairy products, beverages etc. can also be sold online to gain more profit.
3. Farmers get up-to-date information about the market and can sell their produce through the electronic medium.

• **Major Advantages of e-Agribusiness**

1. Global Market
2. Inventory Costs

3. ConsumerService
4. DistributionPeriod
5. Easyreachtocustomers.
6. Directlinktocustomers.

- **Obstacles ine-Agribusiness**

1. Internet connectivityproblems.
2. Computerilliteracyandunawarenessaboutecommerce.
3. Languageproblems
4. Electricityproblems

- **Evaluationofe-Agribusiness**

The evolution of e-commerce In the agribusiness sector is picking upslowlyduetocertainfactorssuchasrateofadoptionofinternetbyproducers as well as consumers as a business tool, their scale operations aremigrating online. Another factor is the magnitude of the benefits accruing toparticipantsine-commerce.Intheprocess,someofthethirdparty-agribusinesssitesarelikelytofailbecauseofstrategicandoperationalconstraints, inefficiencies in operation or shortage of capital E-commerce isnotjustbusinessbutmore aboutstrategythantechnology.

- **The important things the e-commerce companies need for growth**

1. Customerexperience.
2. Technologicaladvancements.
3. Convergenceofonlineandofflinechannels.
4. Deliveryexperience.
5. Paymentsandtransactions
6. TaxandRegulatoryEnvironment.
7. Operationalframework.
8. Customeracquisition.

- **CONCLUSION**

As the Indian Agriculture and Allied sector is on the verge of adoptingmoderntechologies,suchasIOT,AI/MLandgridronesforunmannedaerial surveying, Indian and foreign agritech players can play a vital role issupplying these advanced technologies to farmers. Currently exhibits a hugeopportunity for private and foreign entities to expand their footprint in thecountry. However of digital agriculture in India are technology affordability,ease of access and operations, easy maintenance of systems and supportivegovernmentpolicies.

REFERENCES

1. Muller, A. E. Rolf (2002), 'Emergent E-Commerce in Agriculture',AIC IssuesAgricultural Issue Center,University ofCalifornia,No.14,pp-1-8
2. The CII-Deloitte Report, (2016) on "e-Commerce in India – A GameChanger for the Economy" is a thought leadership publication thatpresents thee-CommercelandscapeinIndiawithkeytrendsandbrings forth the point of view of major stakeholders in the Indian e-Commerceindustry.
3. Priya Jashnani. (2015) Mobile and E-Commerce Grocery Retail andFood Service Bloom, GAIN, Report Number: IN5115, New Delhi,India.
4. Jason Handerson. Frank Dooley and Jay Akridge, (2000) Adoption ofe-Commerce strategies foragribusiness.AmericanAgricultureEconomicsAssociationAnnualMeetingReport.2000,Tampa.FL
5. Prof.Rahulgoswami,EktaJunejaand,SwatiSharma(2008).Agribusiness sector in Rual India and increasing opportunities in e-Commerce.MarketingtoRuralConsumers-Understandingandtapping ruralmarketpotentia 1,3,4,5, April2008,pp.145-148.

UPGRADE CUSTOMER SATISFACTION IN AGRICULTURE BUSINESS

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ABSTRACT

Very little research has been done on business units within an agricultural business, especially with regard to customer satisfaction. It could be beneficial for managers of agricultural businesses to determine which business units perform the best and the worst in terms of customer satisfaction and which units most influence customer satisfaction. The best performing business unit was grain storage, while mechanization was considered to be the worst performing business unit for the participating business. When these two business units were tested separately from the other business units, it was found that mechanization had the biggest impact on customer satisfaction, indicating that if the participating business were to consider improving customer satisfaction of the agricultural business as a whole, it should rather focus on the worst performing business unit, because a small improvement in the customer satisfaction of this business unit could increase customer satisfaction substantially for the business as a whole. Direct marketing of agricultural produce helps in complete elimination of middlemen and commission agents who charge high level of commission fee from the agriculturists/farmers coming to the market yards for selling their produce and then artificially inflate the retail prices. Whether you are operating a roadside stand selling strawberries or a farm-machinery leasing business, satisfied customers are going to determine your company's long-term viability. Service quality is important and strategic aspect in potential management of not only for public and private sector firms, but also non-profit making organizations

Keywords: direct marketing, customer satisfaction, service quality, farm products

Direct Marketing

Direct marketing of agriculture produce involves selling a product from the farm directly to customers. Direct marketing is a long felt need of the farmers and consumers of the country as it goes a long way in ensuring higher remuneration to the farmers and meeting the satisfaction level of consumers through direct sale of the agricultural commodity by the farmers to the consumer at affordable prices. Direct marketing of agricultural produce helps in complete elimination of middlemen and commission agents who charge high level of commission fee from the agriculturists/farmers coming to the market yards for selling their produce and then artificially inflate the retail prices. Many growers choose to direct market their products because it allows for better potential profit margins compared to selling wholesale. The benefits realized by cutting out the middleman and getting direct feedback from the customer can make these marketing avenues worth the labour required to sell directly.

Farmer's Market

A farmer market is a common facility or area where several farmers or growers gather on a regular, recurring basis to sell a variety of fresh fruits, vegetables and other farm products from independent stands directly to consumers. Farmers markets are flexible market channels that accommodate producers with various levels of production experience, quantity of product and product mix.

Customer Satisfaction

Superior customer service leads to customer satisfaction and loyalty. Customer service adds value to the products and services of any business, including an agriculture business. It is essential for repeat customers, sales growth and sustained profitability. Whether you are operating a roadside stand selling strawberries or a farm-machinery leasing business, satisfied customers are going to determine your company's long-term viability

1. Recognize the dimensions of customer service that are critical for improving customer satisfaction. According to Pennsylvania State University agricultural marketing educator John Berry, these dimensions are activities, such as order processing and billing; performance indicators, such as order-processing times; and a strategic focus on customer service throughout the company.
2. Obtain feedback from your customers. For a small business, you could simply ask your regular customers how they feel about your products, prices and customer service. A formal customer-satisfaction survey would be an effective way to collect this customer information for larger companies. The survey questions will depend on the nature of your business. If you sell food products, ask customers if they are satisfied with

the quality of your products and if they would recommend your products to their friends. The objective of this feedback process is to determine what you are doing well and where you can improve, suggests Oklahoma State University Professor Phil Kenkel.

3. Identify a couple of areas where improvements could have the maximum impact on customer satisfaction. As a temporary measure, ask your sales representatives and service technicians to respond to customer calls. If a customer is having a problem with recently purchased farm equipment, send one of your technicians to the customer site to investigate and fix the problem.
4. Implement a year-round training program. Customer-service staff should be able to respond effortlessly and courteously to customer questions on all aspects of your products, including prices and installation. Your staff should be able to direct customers to local stores and restaurants that carry your products. The best promotion for your business is word-of-mouth advertising. Therefore, your customers' first impressions of your business should be pleasant and memorable.
5. Display prices where customers can easily see them. State your payment methods and returns policy. Offer to help customers with heavier and hard-to-reach items. Offer installation assistance for farm equipment and related products. Follow up with a phone call or email to see how the customer is using the product.
6. Design a website for your business. If you sell packaged items, such as seeds or processed food items, consider adding e-commerce features to your website. The convenience of online shopping could increase both sales and customer satisfaction.

Service Quality

In today's competitive environment, quality of service is considered as an essential strategy for success and survival. Service quality is important and strategic aspect in potential management of not only for public and private sector firms, but also non-profit making organizations. Nonetheless, measuring extension service quality from client perspectives can minimize the wastage of valuable resources and manpower by precise indication of programme strengths and weaknesses.

Although there are a number of other models (Seth et al., 2005). Direct or modified application of the SERVQUAL model in measuring agricultural extension service organizations in no exception also applied SERVQUAL model for measuring quality of agricultural extension service in selected regency in Indonesia. Despite popularity, SERVQUAL has both theoretical and operational limitations, which have been underpinned by different theorists. Babakus and Boller (1992) argued that the number of service quality dimensions varies with particular service. Brown et al. (1993) explained that the measurement of scores of difference in expectation and perception of customers is often weak in reliability

Farm Products

India is considered as Agricultural Country since ancient times because most of the population in India has adopted agriculture as their primary business or family business. Most of the products are export to other countries from India. Due to Covid, when all business were announced to close or pause for a short time, at that time, farmers and landlords were still working in their farms so it has become emerged one of the most reliable sectors in business industries. This sector has been expanded a lot and still expanding because of having many of the money making Agriculture Business Ideas. There are hundreds of industries which have been linked with agriculture.

1. Agricultural Farm

One can start an agricultural farm by investing reasonable money. You can produce items as per the local demand and sell them locally. For far areas, you can even supply the product through distribution channels.

2. Fertilizer Distribution Business

In India, the fertilizer sector is becoming increasingly organized. Anyone can establish a fertilizer distribution business on a small, medium, or large size. Small distributors, on the other hand, often operate inside the district, whereas major distributors operate within the state, or sometimes in more than one state. Fertilizer distribution is a thriving industry that shows no signs of slowing down. This business can be started with a small amount of money. It is largely governed by the government.

3. Organic Farm Green House

This agricultural industry has expanded due to the rising demand for organically grown farm products. People are cultivating organic food since there are significant health dangers in foods grown with pesticides and fertilizers.

4. Poultry Farming

In the current Indian market, poultry farming is one of the fastest-growing and most successful agriculture companies. Furthermore, the poultry company is the greatest option for people seeking a profitable agri-business career in India. It has evolved from backyard farming to a techno-commercial business over the last three decades. It is regarded as the fastest-growing agricultural and farming business sector.

5. Mushroom Farming Business

By doing this business you can make good profits in just a few weeks. It requires a low start-up capital investment. Even with a little knowledge of mushroom growing and with a farm mushroom farming business can be done.

6. Sunflower Farming

The land is the primary requirement to start sunflower farming. Growing sunflowers for oilseed requires a small investment. It is also known as Commercial Cash Crop. Sunflower is a highly profitable crop in oilseed production and takes a very short duration 80-115 days to grow. It's also suitable to grow in rainfed conditions and has the ability to perform in diverse agro-climatic & soil conditions.

7. Bee Keeping Business

It demands day-to-day monitoring with close supervision of the bees. Beekeeping business is done for selling honey and other products like wax. Not to forget, as the demand for honey is growing globally. Opting for this business is a profitable venture which requires a small investment.

8. Fish Farming

Fish farming is raising fish commercially in the tanks & ponds for the purpose of producing food. Commercial fish farming has already been established as a profitable business venture all over the world. This business can be done at any time of the year. It requires modern techniques and moderate capital investment. Interestingly, you can easily raise the fishes in tanks until they are ready for selling or marketing and they don't need the wide capture of wild fish. Commercial fish farming also helps to preserve natural ecosystems.

9. Fruits and Vegetables Export

One can start the export of fruits and vegetable businesses by collecting them from local farmers. It can be done through easy communication means like a telephonic conversation, computer with an internet connection.

10. Broom Production

It is a good and profitable business idea as broom has been used for centuries for cleaning purpose. It is a simple business and can be done with a moderate capital investment. Broom can be divided in two categories. First is broom made with natural materials and second is a plastic broom.

CONCLUSION

It is undergoing a process of transition to a market economy, with substantial changes in the social, legal, structural, productive and supply set-ups, as is the case with all other sectors of the economy. The results indicated that customer satisfaction towards retail shops has the biggest impact on overall satisfaction of all the business units. Almost 99 per cent of the respondents make use of this business unit and retail shops are generally considered to be the "window" through which customers view the agricultural business.

REFERENCES

- 1) www.researchgate.net
- 2) www.ekrishikendra.com
- 3) www.tandfonline.com
- 4) www.smallbusiness.chron.com
- 5) www.krishijagran.com
- 6) www.google.com
- 7) www.tractorgran.com
- 8) www.search.yahoo.com

WOMEN EMPOWERMENT IN INDIA

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Aurangabad**ABSTRACT**

This paper attempts to analyze the status of Women Empowerment in India and highlights the ways to Women Empowerment. Today the empowerment of women has become one of the most important concerns of 21st century. But practically women empowerment is still an illusion of reality. We observe in our day to day life how women become victimized by various social evils. Women Empowerment is the vital instrument to expand women's ability to have resources and to make strategic life choices. Empowerment of women is essentially the process of upliftment of economic, social and political status of women, the traditionally underprivileged ones, in the society. It is the process of guarding them against all forms of violence. The study is based on purely from secondary sources. The study reveals that women of India are relatively disempowered and they enjoy somewhat lower status than that of men in spite of many efforts undertaken by Government. It is found that acceptance of unequal gender norms by women are still prevailing in the society. The study concludes by an observation that access to Education, Employment and Change in Social Structure are only the enabling factors to Women Empowerment.

Keywords: Women Empowerment, Education, Health, Socio-Economic Status. Crimes against women, Policy implications.

INTRODUCTION

Women empowerment is when women have the freedom and choice to make their own decisions. They have the most potent right in deciding what's right for them and what's wrong for them. Women have suffered through the decades because they didn't have any rights. They suffered in the hands of their male counterparts. In earlier centuries, they were treated as almost non-existent. As if all the rights belonged to men even something as basic as voting. As times evolved, women realized their power. There on began the revolution for women empowerment.

As women were not allowed to make decisions for them, women's empowerment came in like a breath of fresh air. It made them aware of their rights and how they must make their own place in society rather than depending on a man. It recognized the fact that things cannot simply work in someone's favor because of their gender. However, we still have a long way to go when we talk about the reasons why we need it.

REVIEW OF LITERATURE

Panda, D. (2017) investigating on "Women Empowerment in India: Rational and Present state." He has found that women empowerment is not necessary fact for our country but it is a must for sustainable development of a nation. So let us start to empower women from now for our secure future. It is required to change the mindset of people in India for women. The man should feel that the world is moving towards equality and equity. Hence women empowerment with bring prosperity for the coming generation

Khatrri, R. (2016) in her article entitled "The Role of Education towards Women Empowerment in India" focuses on the impact of literacy and education on empowerment of women as well as the suggestion to improve the changes that need to be considered for women empowerment and economic development. Suresh, P. & Sivakumar, T. (2017) published their article entitled "Women Empowerment in India- A Changing Scenario." They observed that empowerment of women is essentially the process of upliftment of economic, social and political status of women, the traditionally underprivileged ones in the society. It is the process of guarding them against all forms of violence.

H. Subrahmanyam (2011) compares women education in India at present and Past. Author highlighted that there has a good progress in overall enrolment of girl students in schools. The term empower means to give lawful power or authority to act. It is the process of acquiring some activities of women.

OBJECTIVES OF THE STUDY

1. To know the need of Women Empowerment.
2. To assess the Awareness of Women Empowerment in India.
3. To study the Ways of Empower Women
4. To know the Government Schemes and Programmes for Women Empowerment.

RESEARCH METHODOLOGY

The present study is a qualitative study. The researcher collected data from different secondary sources like books, magazines, journals, various government organizations, website etc.

Need of Women Empowerment

Reflecting into the “Vedas Purana” of Indian culture, women is being worshiped such as LAXMI MAA, goddess of wealth; SARSWATI MAA, for wisdom; DURGA MAA for power. The status of women in India particularly in rural areas needs to address the issue of empowering women. About 66% of the female population in rural area is unutilized. This is mainly due to existing social customs. In agriculture and Animal care the women contribute 90% of the total workforce. Women constitute almost half of the population, perform nearly 2/3 of its work hours, receive 1/10th of the world's income and own less than 1/ 100th the world property. Among the world's 900 million illiterate people, women out number men two to one. 70% of people living in poverty are women. Lower sex ratio i.e. 933, The existing studies show that the women are relatively less healthy than men though belong to same class. They constitute less than 1/7th of the administrators and managers in developing countries. Only 10% seats in World Parliament and 6% in National Cabinet are held by women.

WAYS TO EMPOWER WOMEN**Boost Her Self-Esteem**

You will see the magic happening when you encourage women/ girls to put forth their opinions instead of telling them to shut up. From their childhood, girls are given a picture of a so-called 'perfect girl'. They are told to be quiet, calm, modest, and whatnot, in short, we can say that women are supposed to be people-pleasers. And growing up, they know these are wrong but they are afraid to express themselves because there is a picture of the perfect girl in her subconscious mind.

So, motivate the women around you, and make them feel special and strong. Encourage your friends to speak up, make sure they know the value of their opinions so that they're never scared to use their voice. Celebrate her self-expression from a young age. There's no “right way” for girls to dress or speak. And whenever you hear your friend start to explain her actions, after listening for a few minutes, gently remind her that 'just because you want to' is a sufficient reason.

Run Businesses

We are well aware of the challenges faced by women entrepreneurs. Financing female entrepreneurs often lack access to financial and human capital, which impedes business growth. Not only that, many women with sufficient skills to start a business give up on their dreams because of the obstacles they face. The role of women as business owners is gradually increasing all over the world. The number of women entrepreneurs is increasing. However, their power in use and control over the household and business-related resources are still limited.

In 2012, the World Economic Forum identified women entrepreneurs as “the way forward”. Yet, despite this, women entrepreneurs still struggle to take their rightful place in economic life. Even though more and more women are starting businesses globally, they still manage fewer businesses than men and run businesses in less profitable sectors that grow more slowly and are ultimately more likely to fail. Supporting their business gives them a sense of security.

Proper Education

It is so fascinating to say that we are in the 21st Century, yet the right to girl's education has been denied in many parts of the world. And there are various reasons for that like safety, unavailability of schools nearby or just because people think it's not so important.

According to UNICEF, around the world, 132 million girls are out of school, including 34.3 million of primary school age, 30 million of lower-secondary school age, and 67.4 million of upper-secondary school age.

The only way a society or nation can move forward and aspire to economic growth and development is not just through girls education but especially among women citizens. It enables them to respond to challenges, confront their traditional role, and change their life. Education educates a person and helps her realize that she is a vital part of society. Occupational achievement, self-awareness, and satisfaction are among the many things that will be ensured by an effective girl's education. It gives them the power to make their own decisions, stand up for their rights, and say NO to harmful traditional practices.

Educating the world's women and girls is clearly the key to transforming the cyclical nature of poverty into a cycle of prosperity.

Job Opportunities

Studies have reported that raising female employment to male levels can directly impact GDP growth rates, increasing it by 34% in some countries. Countries' productivity can increase by as much as 25 % if discriminatory barriers against women are removed. The lack of safe working conditions, social security benefits, and a fair wage induce women to opt-out of employment—unless critical for their basic sustenance.

In 2016, men held 78.8% of S&P 500 board seats, while women held 21.2%. Women are still fighting daily for equal rights in the workplace even though more women are attending and graduating from college, and more women are in leadership roles than ever before.

Women's employment is observed as a prominent tool for women's empowerment. Participation in the labor market is an effective strategy to strengthen women's condition inside as well as outside the home. Women Employment and income-generating activities improve the economic position of women, which then leads to a good treatment she receives.

If you see them experiencing unfair treatment in a meeting or on a paycheck, say something. Women must work together to empower one another in the workplace. Work as a positive and powerful team of women employment, and you'll make things move.

Help a New Mom Adjust.

Whether it's offering maximum maternity or paternity leave at your company, or offering to donate babysitting services to a mom you know, helping a new mom adjust is a great way to empower moms and their little ones.

Giving a mom some time to take care of herself helps her recharge—and moms inspire and empower all of us! So be sure to take care of the moms who show us love every day.

Show Your Appreciation for the Women in your Life.

Say thank you, give and accept compliments, and help out the women around you. Show the women in your life how much you appreciate them by sending a thank you card, giving them a compliment, or simply telling them what they mean to you.

The Government Schemes and Programmes for Women Empowerment.

The Ministry of Women and Child Development (MWCD) and the Central Social Welfare Board (CSWB) are implementing various welfare schemes and programmes for Indian women. These schemes and programmes are listed below

1. Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG)-Sabla.
2. Indira Gandhi Matritva Sahyog Yojana (IGMSY).
3. Support to Training & Employment Programme for Women (STEP).
4. Working Women Hostel (WWH).
5. Women Empowerment and Livelihood Programme in Mid-Gangetic Plain (Priyadarshini).
6. Swadhar Scheme for Women in Difficult Circumstances.
7. Scheme for Combating Trafficking.
8. Family Counseling Centers (FCCs).
9. Short Stay Home Programme.
10. Awareness Generation Programme (AGP).
11. Condensed courses of Education for Adult Women (CCE).
12. Integrated Scheme for Women's Empowerment (ISWE).
13. Gender Budgeting Scheme (GBS).
14. Beti Bachao Beti Padhao Scheme.
15. One stop centre scheme
16. Women Helpline Scheme.

Many programmes have been implemented and run by the government such as international women's day, mother's day etc in order to bring awareness in the society about the true rights and value of the women in the development of the nation.

CONCLUSIONS

Therefore we see that in 21st century societies have being accepted women's empowerment for development of the world, women as an active agent for development, participation in and guiding their own development. Women education is essential in the 21st century for women empowerment. Education is an important tool that enables women and girls to participate in decisions that affect their lives and in improving their social status. Women empowerment makes them independent decision makers. By the women empowerment social, political and economic development of a country is possible. So, to develop a country woman should be empowered from all directions. For this the women should be provided more scopes and advantages.

REFERENCES

1. Khatri, R. (2016). 'The Role of Education towards Women Empowerment in India.' International journal of Advance Research, 4(11) pp-550-555.
2. Suresh, P. (2017). 'Women Empowerment in India- A Changing Scenario.' Kaav International Journal of Art Humanities & Social Sciences, 4(1) pp-335-348.
3. 'Global Issues: Gender Equality and Women's Empowerment', Peace Corps. <https://www.peacecorps.gov/educators/resources/global-issues-gender-equality-and-womens-empowerment/>. Accessed on 11 June 2020.
4. Constitution of India, India.gov.in. <https://www.india.gov.in/my-government/constitution-india>. Accessed on 11 June 2020.
5. Saubhadra Chatterji and Avijit Ghosal, "Trinamool Congress declares 40% reservation for women candidates", Hindustan Times, 12 March 2019. <https://www.hindustantimes.com/lok-sabha-elections/trinamool-congress-declares-40-reservation-for-women-candidates/story-5OwZzWfWRfdfl5q1gfiCnJ.html>. Accessed on 12 June 2020.
6. Surendra Singh, "Chandrayaan-2: India's 1st space mission being led by women scientists", Times of India, 14 July 2019. <https://timesofindia.indiatimes.com/india/chandrayaan-2-indias-1st-space-mission-being-led-by-women-scientists/articleshow/70214125.cms>. Accessed on 14 June 2020.
7. Jayshree Sengupta, 'India slips on gender equality', Observer Research Foundation, 27 December 2019. <https://www.orfonline.org/expert-speak/india-slips-gender-equality-59555/>. Accessed on 14 June 2020.
8. <https://www.opengrowth.com/resources/7-ways-to-empower-women-globally>
9. <https://rothys.com/blogs/the-loop/15-ways-to-empower-women>

AN EMPIRICAL INVESTIGATION OF COVID-19'S IMPACT ON STARTUPS AND MSME IN INDIA

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ABSTRACT

Restrictions brought on by the COVID-19 epidemic have caused a wide range of issues for MSMEs and startups in India. In this short period of time, the pandemic has partially negated the substantial benefits from India's improved business rules. This essay's goal is to examine how the COVID-19 pandemic has impacted MSMEs and startups in India. In light of this pandemic, it aims to assess their present and future prospects as well as the assistance provided by various Central and State Government authorities. The research's approach comprises a thorough examination of the literature and in-depth interviews with startup and MSME owners and/or their managers using a cutting-edge questionnaire created especially for the purpose. Some comments and ideas have been made based on the findings of the literature study and interview questionnaire survey for all parties involved to better manage this unprecedented circumstance.

Keywords: COVID-19, Startup, Entrepreneurs, MSME

INTRODUCTION

All micro, small, and medium-sized businesses in India are referred to collectively as MSMEs (Micro, Small, and Medium Enterprises). The Indian government defines a startup as an organization with Indian registration, with a turnover of less than 25 crore Rupees annually, less than seven years old (10 years for the biotechnology sector), and working to innovate, develop, or improve products, processes, or services, or if it is a scalable business model with a high potential for creating wealth or jobs [1]. India is predicted to soon have a consistent yearly growth of 12-15% thanks to the third-largest startup environment in the world, where 2-3 tech businesses are formed every day.

The Startup India project, launched by the Department of Industrial Policy and Promotion, helps convert business ideas into reality for a thriving startup environment by fostering a favorable, efficient, and simple entrepreneur ecosystem in the nation. Micro firms make up the majority of new MSMEs, and they are more prevalent in rural than in metropolitan sections of the nation. They are geographically concentrated in India, where eleven states collectively account for around 75% of MSMEs, with Uttar Pradesh and West Bengal accounting for about 30% of the total. Therefore, to combat circumstances like the COVID-19 Pandemic, both the state and federal governments must work together. Small, unorganized businesses make up the majority of businesses in India. They are spread out on both inurbanand ruralareasalike.

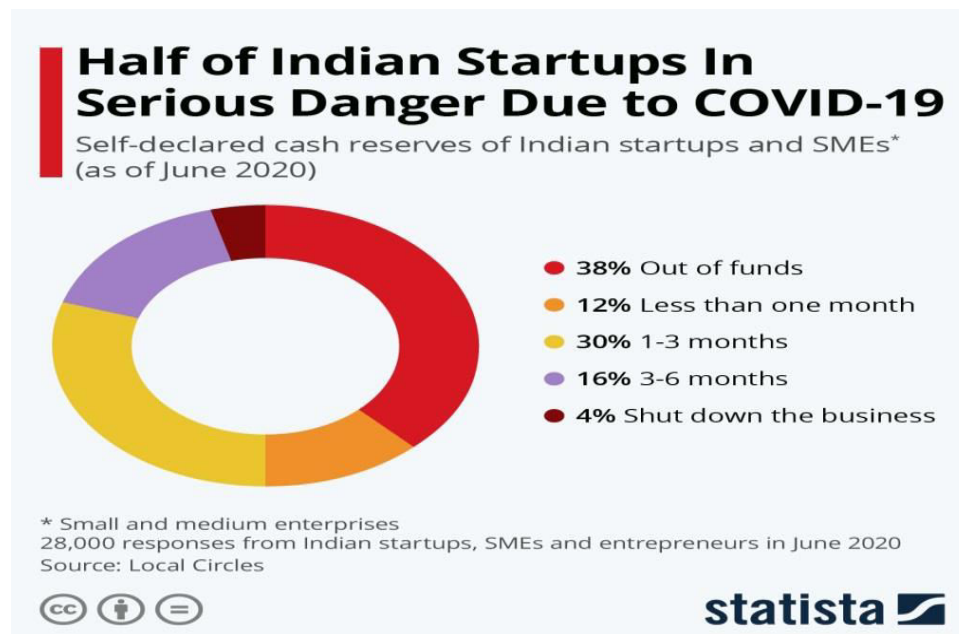
Table 1- Percentage Change in Gdp over Previous Year

Industry	2019–2020		2020–2021	
	Q1	Q2	Q1	Q2
1. Agriculture, forestry & fishing	3.0	3.5	3.4	3.4
2. Mining & quarrying	4.7	–1.1	–23.2	–9.1
3. Manufacturing	3.0	–0.6	–39.3	0.6
4. Electricity, gas, water supply & other utility services	8.8	3.9	–7.0	4.4
5. Construction	5.2	2.6	–50.3	–8.6
6. Trade, hotels, transport, communication & services related to broadcasting	3.5	4.1	–47.0	–15.6
7. Financial, real estate & professional services	6.0	6.0	–5.3	–8.1
8. Public administration, defence & other services	7.7	10.9	–10.3	–12.2
GVA at basic prices	4.8	4.3	–22.8	–7.0

Source: Ministry of Statistics & Programme Implementation, Government of India (GoI).

The sudden and stringent lockdown caused the bulk of the firms to close, at least in its initial stages, which increased unemployment and decreased demand in the economy. Millions of migratory workers, mostly in the informal sector, were compelled to return to their villages as a result (Srivastava, 2020). According to data from the Centre for Monitoring Indian Economy, the national and regional levels of unemployment in India were

greatest in the months of April and May. The unemployment rate in the nation reached about 24% shortly after the lockdown was implemented in the final week of March, with metropolitan areas experiencing rates of 25%–26% and rural areas of 23%, respectively. However, in June, when the economy was gradually reopened in phases, the employment situation in the economy began to show signs of recovery. The country's unemployment rate dropped in June and July to roughly 7.43%, with urban and rural areas seeing different levels of unemployment of 9.15% and 6.66%, respectively. Therefore, it is evident from these observations of trade, GVA, and employment in 2020 that the spread of COVID-19 and the implementation of containment measures have had a significant negative impact on the Indian economy.



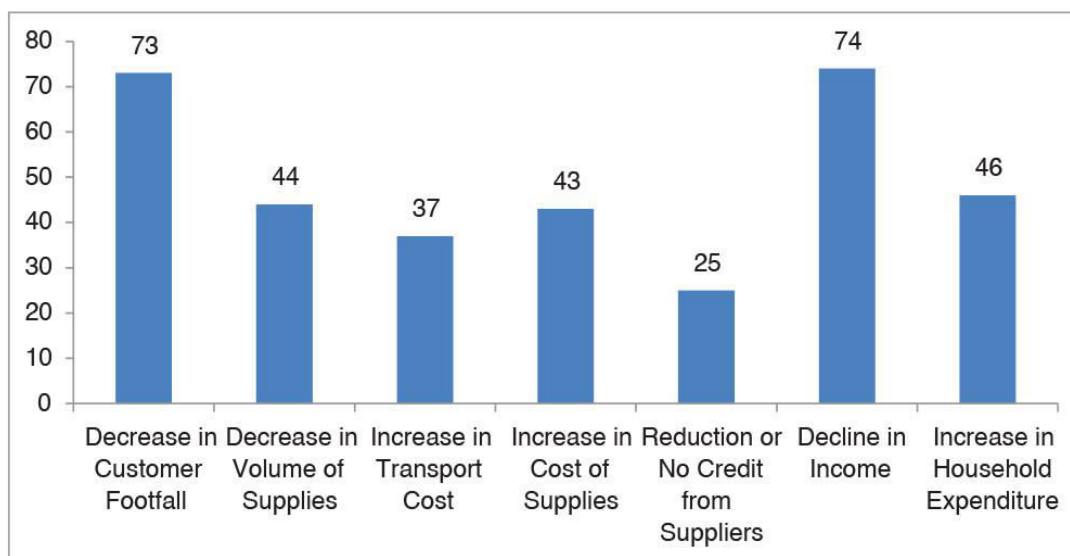
Effect of Covid-19 Pandemic on MSMEs and Startups in India

MSMEs, which considerably contribute to the GDP and exports and employ millions of people, particularly those at the bottom of the socioeconomic hierarchy, play a crucial role in the sustainable expansion of the Indian economy. The MSME sector in India contributes 30.27% of GDP and 33.50% of GVA, respectively, according to the MSME Annual Report 2020–21 (M/o MSME, 2021). Additionally, MSMEs account for roughly 48% of all Indian exports (M/o MSME, 2019). The spread of COVID-19 has had a significant impact on the GDP and exports of the nation (as it has in many other nations), therefore the MSME sector will likely suffer a similar or higher impact in terms of a decline in output and exports. A large-scale reverse migration of workers from the MSME sector, which is largely unorganized and consists of small-sized individual units, has also been brought on by the lockdown; as a result, more MSMEs in urban areas may experience a labour shortage, which will have an impact on the production and services of the business units. Given their size, area of operations, and resource limitations, studies show that MSMEs in India have been more severely impacted by the shutdown than major companies (Ghosh, 2020; Rathore & Khanna, 2020; Sahoo & Ashwani, 2020; Sipahi, 2020).

Larger businesses have some structured plans in place to meet such scenarios, even though it is improbable for any company, regardless of size, to have procedures to face a pandemic like COVID-19 (Rebmann et al., 2013). MSMEs, however, lack the funds and expertise necessary to weather such shocks without government support (Watkins et al., 2008). Lack of financial resources is MSMEs' major long-term and short-term recovery obstacle (Cumbie, 2007; Farrell & Wheat, 2016). MSMEs therefore have a significant risk of irreversible closure following a major calamity (McCall, 2020; Rebmann et al., 2013; Schrank et al., 2013). The municipal quarantine policy, business reopening permits, workplace health requirements, damaged supply chains and logistics, poor market demand, and others are additional obstacles to their rehabilitation.

According to a study of micro and small businesses conducted by MicroSave Consulting, in April 2020, approximately 74% of the firms were open and 26% were closed. These businesses primarily participated in retail trade of necessities. 73% of the enterprises reported a decrease in consumer traffic, while 44% reported a decrease in supply volume. About 37% and 43% of the enterprises, respectively, reported an increase in travel costs and supply costs. About 25% of businesses reported a decrease in or absence of supplier credit. What's more, 46% of households reported an increase in spending while 74% of enterprises reported a drop in income. These results demonstrate that MSMEs are dealing with a number of issues, such as a decrease in the number of customers, an increase in production/operational costs, a decrease in supplier credit, and a decrease in revenue

as a result of COVID-19 and the lockout. Small businesses will see further decrease as a result of being forced to use their savings as a result of rising household expenses and declining revenue. The survey does, however, also suggest that some businesses have benefited from panic or bulk purchases.



Source: India Report, Impact of COVID-19 Pandemic on MSMEs, MicroSave Consultancies (June 2020)

Policy Initiatives by the Government and Their Implications for Msmes

COVID-19's exceptional economic downturn has had a major impact on both corporate and governmental investment strategies globally (UNCTAD, 2020). Through relief packages that include income transfers, easing liquidity flows to the financial sector, deferring debt repayment, and new loans with favourable terms, several countries have taken protective steps to boost the economy and assist vital local sectors (International Labour Organization, 2020). Additionally, the GoI has announced a number of steps to boost the economy. On March 26, 2020, the finance minister announced a \$1,700 billion relief package under the PMGKY. This aid package includes free gas cylinders for poor households, free food grain distribution to the needy, insurance coverage for health workers, cash transfers to farmers, Jandhan account holders, and pensioners (the elderly, widows, and people with disabilities), wage increases under the Mahatma Gandhi National Rural Employment Guarantee Act, and contributions to employee provident funds. To increase investor confidence, the RBI also unveiled policies that favour lower interest rates and deferred debt repayment (RBI, 2020). The prime minister also issued a call for Atmanirbhar Bharat [Self-reliant India] on May 12, 2020, along with a relief package worth over 21,000 billion rupees, or nearly 10% of GDP. The five components of Atmanirbhar Bharat's stimulus packages, which concentrate on land, labour, liquidity, and laws, aim to promote the five pillars of self-reliance: economy, infrastructure, system, vibrant demography, and demand (Table 2).

This package also includes prior government relief initiatives and RBI decisions made to address the financial difficulties that businesses and individuals were experiencing as a result of the containment measures. The package offers services to all socioeconomic groups, including the working class, the middle class, farmers, cottage industries, MSMEs, and the industry as a whole (for details, see Table A1). Additionally, it places a strong emphasis on regional markets, supply chains, and sectors.

Table 2- Summary of Stimulus Provided Under Atmanirbhar Bharat

S. No.	Part	Focus Sector	Total Stimulus (₹ billion)
1	I	MSME, EPF, Garib Kalyan, RERA, credit	5,945.50
2	II	Farmers, migrants, labourers and their credit supply	3,100.00
3	III	Agriculture and allied sector	1,500.00
4	IV	Coal minerals, aviation, defence, space, atomic energy, electricity tariffs	481.00
5	V	Ease of doing business, health, education, support to state Govt	
6		Sub-total (A)	11,026.50
7		Earlier measures including PMGKY	1,928.00
8		RBI measures (actual)	8,016.03

9		Sub-total (B)	9,944.03
10		Grand total (sum of sub-total A and B)	20,970.53

Source: Ministry of Finance, GoI (<https://www.indiabudget.gov.in/anbp/>)

Due to the interdependence of the economy, every government or RBI initiative or relief package, whether or not it focuses on MSMEs, would have an effect on the sector. However, the Atmanirbhar Bharat stimulus package's main initiatives for MSMEs include (a) changing the definition of MSMEs, (b) creating an emergency credit line guarantee programme, (c) creating a credit guarantee programme for subordinate debt, and (d) providing equity infusion to MSMEs through a "Fund of Funds." The Pradhan Mantri MUDRA Yojana (PMMY) includes the following provisions: (e) Interest Subvention Scheme for Shishu Loans; (f) Modification of Global Tender Rules in Favor of MSMEs; (g) Promotion of E-Market Links; and (h) MSME Dues to be paid within 45 Days. Select policy measures with direct repercussions for MSMEs have been chosen in light of the article's topic.

Table3- Revised Criteria for Micro, Small and Medium-Sized Enterprises

Enterprise Type	Existing Definition		Revised Definition: Manufacturing and Services
	Investment in Plant & Machinery (Manu)	Investment in Equipment (Service)	Annual Sales Turnover
Medium	≤\$1.3 Million	≤ \$680,000	Investment ≤\$6.8 Million and turnover ≤\$34 Million
Small	≤\$680,000	≤\$272,000	Investment ≤\$1.36 million and turnover ≤\$6.8 Million
Micro	≤\$34,000	≤\$13,600	Investment up to \$136,000 and turnover ≤\$680,000

Even before the COVID-19 outbreak began, the central government was considering the possibility of changing the definition of an MSME. Small-scale industrialists reportedly rejected it because they saw a danger from larger competitors who would also be qualified for size-dependent incentives like subsidised bank financing. The current state of the economy made it possible to implement the reform without running afoul of specific interest groups.

It was commonly felt that the current definitions of MSMEs, which exclusively included investment, had prevented small businesses from growing in size. The threshold investment level for the category Micro units is increased to one crore (about US\$133,000 at current exchange rates) under the new common definition of MSMEs, and the turnover requirement is added. According to the new composite definition, if an industrial or service establishment doesn't meet either of the two criteria, namely investment or turnover, it will be categorised as being under the Micro/Small/Medium group. The MSME sector is actually made up of all businesses with annual revenue under Rs. 250 crores, or roughly US\$33 million at the current exchange rate. An establishment leaves the designated category if it exceeds both the investment and turnover thresholds of that category. The purpose of the higher threshold is to promote MSMEs' growth by encouraging them to make larger investments, gain economies of scale, and become more cost-competitive.

RESEARCH METHODOLOGY

This study uses two different methodologies. First, a review of the literature has been conducted to investigate the effects of COVID-19 on startups and MSMEs as well as the assistance provided by governments and other organizations to address this issue. In order to understand their perspective, issues, and potential solutions, Forty-two (42) entrepreneurs, startup, and MSME owners and/or their managers were approached and interviewed between June 2020 and May 2021 utilizing an interview questionnaire created especially for this study. The majority of them only agreed to the interview if their identities were kept a secret.

To protect their identities, Non-Disclosure Agreements (NDA) were signed with the participants. However, it was decided that the data would be used for research. During the interviews, the respondents were questioned about the current environment for entrepreneurship growth in the nation, the difficulties they frequently encounter and those brought on by the COVID-19 Pandemic, the type of assistance provided by the government, the simplicity of conducting business in India, etc. The so-received responses were examined, and the findings are described in this work.



Figure1-Methodologydiagramadopted forthecurrentresearch

RESULTS

DemographicProfileofRespondents

Table4- Demographicprofileofrespondents

S.No	DemographicFactor	Result(infigure)	Result(in %) (Roundedoff)
1	TotalNumberofRespondents	42	100
2	Sex		
	Male	39	93
	Female	3	7
	Transgender	0	0
3	AgeGroup(in years)		
	Upto25	2	5
	26-35	26	62
	36-45	13	31
	46-60	1	2
	61and above	0	0
4	Qualifications		
	UptoHighSchool	0	0
	Graduate	30	71
	PostGraduate(PG)	10	24
	AbovePG	2	5
5	Field ofEducation		
	Arts	2	5
	Sciences	1	2
	Commerce/Management	14	33
	Engineering	23	55
	Others	2	5
6	WorkExperience(inyears)		
	0-2	19	45
	2-5	17	41
	5-10	3	7
	Above10	3	7

Major Results from Interview Questionnaire

According to data gathered from direct interviews with startup and MSME owners and their managers, the majority of business owners (83%) were initially perplexed by the pandemic situation, and 41% thought about bailing out and shutting down operations during the strict national lockdown because they were concerned about both a lack of demand and manufacturing challenges. However, things started to improve over time as a result of government intervention, the release of numerous new rules, and the introduction of financial aid programmes. When compared to business owners who obtained corporate or bank loans, individuals who made investments using their own money or the support of their families reported higher levels of psychological stress since their degree of accountability and dependability was seen as being higher. Most participants (71%) expressed satisfaction with government programmes and packages as of June 2021, yet they wished for more from them. Most people desired additional tax relief and flexibility with other financial obligations like loan repayment schedules.

Many of them expressed dissatisfaction with the government's management of its websites and portals at times of urgency or significant activity. The government agencies need to work in this issue and resolve any ambiguities.

DISCUSSIONS AND RECOMMENDATIONS

There is still work to be done in the areas of loan guarantees and immediate liquidity provisions, loan extensions and penalty waivers on repayment delays, and interest rate reductions on future loans for immediate short and long terms. The Indian Central and State Governments have made a few bold and liberal moves to lessen the burden on MSMEs and startups. Although the policy changes made are positive, they are skewed in favour of the larger, formal/organized sectors and look insufficient for the smaller, informal/unorganized sectors, which account for the vast majority (>94%) of India's industries and more than 55 million enterprises [19]. The Employees Provident Fund (EPF) and the Government's contribution to EPFO, for instance, may not be used by these mainly unorganised enterprises. Only about 7% of MSMEs and startups receive funding from formally recognised institutions or the government [20]. Interventions in the credit market like lower interest rates and higher NPA limits might not directly benefit this industry. Additionally, because the majority of MSMEs operate on a cash basis, they need quick access to funds in order to deal with unforeseen circumstances like COVID-19. Therefore, more precise liquidity measurements need to be developed. In order to eventually move India out of its economic crisis, officials face the extraordinary task of not only containing a public health pandemic but also creating quick business regulations to safeguard the most susceptible the present global economic slump.

CONCLUSIONS

A global economic downturn has made COVID-19's catastrophic effects on emerging entrepreneurs even worse. The findings of this study are significant because small businesses, particularly those that employ low-skilled workers, are the foundation of our nation. In order to identify solutions to the issues they confront, further research is needed, according to the patterns and conclusions of this study. The MSMEs and startups will benefit substantially from the implementation of the research's suggestions in their efforts to address COVID-19-related issues. Although the government has made great efforts to simplify the procedures for business owners, a more hospitable atmosphere for their success can be developed by directly listening to the comments of startups and MSMEs. For them to survive and sustain this challenging pandemic period, more assistance from the government and its agencies is necessary, along with a strong policy.

REFERENCES

- Rathod, C. B. (2007), "Contribution of Indian Small-Scale Entrepreneurs to Economic Growth in India: Opportunities and Challenges in Global Economy" Prabandh-Journal of Management Research.
- Garg, I. and Walia, S. (2012). Micro, Small & Medium Enterprises (MSMEs) In Post Reform India: Status & Performance. International Journal of Latest Trends in Engineering and Technology.
- S. Manikandan - Assistant Professor, The Institute of Company Secretaries of India, Navi Mumbai. A study on start-up and its impact on MSME in India with special reference to Maharashtra state.
- Government of India: MSME Annual Report 2020-2021.
- www.msme.gov.in

A STUDY ON ROLE OF AGRICULTURAL SECTOR FOR WOMEN EMPOWERMENT IN INDIA

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ABSTRACT

This research presents the role of women empowerment in agricultural sector of India. Women's work in farm and also perform various responsibilities. Empowerment can be defined in various ways. Women empowerment means accepting and allowing women to take decision in different matters. Women Empowerment means to give power to women over their own lives, society, and also in their communities. Decision taken by one self creates a sense of empowerment. Women's empowerment is very important in today's technological era.

Keyword: Rural women, women and agriculture, women and rural development, rural women's education, farm women problem.

INTRODUCTION

India is a country where female deities are worshipped and ordinary women are ill-treated, raped, and are mentally harassed and face many problems every single day. Women empowerment in India has become a necessity. Empowerment here means people are capable of important decisions in their lives. Women empowerment is a process. Women can enjoy their right and also can control and benefit from the resources. Women empowerment refers to the ability to manage risk and also can improve their economic condition their status and also their wellbeing. Women empowerment is very necessary for the development of society. Over dependence on agriculture is the main cause of less economic productivity. Rural women are suffering from poverty in rural areas. About 70% of women are engaged in agriculture. Still these women are not recognized as farmers. Government of India has introduced many schemes for women empowerment.

RESEARCH METHODOLOGY

Data collected for this paper is secondary type of data. This research paper is based on data for various books, article, published paper and websites.

OBJECTIVES

1. To study the need women empowerment.
2. To know the advancement in agricultural activities regarding women empowerment.
3. To study women empowers herself in agriculture, the nation starts developing faster and becomes a developed nation.
4. To measure the difficulties of women start at their homes in the form of gender difference.

Need of Women Empowerment

1. Women in rural India are basically illiterate. Hence they depend on agricultural sector for their basic needs i.e. food, clothing and shelter.
2. Women empowerment should be given more importance, because women can help change the scenario in the agricultural sector.
3. Women's economic empowerment could reduce poverty for everyone.
4. Women empowerment helps to take a step and can change the life of themselves and also the people associated with them.

Farm Women Problems

India is an agricultural country. About 70-80% people depend on agriculture. There are various technologies in farming which have recently originated. These technologies are not known by women farmers. The women faces problem in doing farm activity. Women working in farm is working under pressure of male workers. Women do not get sufficient earnings and also they have to give this earnings for their family. Rural women working in farm are working hard to earn a livelihood. These women do not pay heed to their health conditions. This also affects their working hours and productivity on the farm. Even the family fully depends on the earnings from agricultural activities. Women should be given knowledge of technologies related to farming; they can lift many people out of hunger.

Women should be given awareness about the farm technologies. Women should be given equal opportunities in comparison to men. Many agricultural research and development programs are not concerned with the lives of the rural women working on the farm.

Women in Agriculture

Women play an important role in agriculture. There are many agricultural activities which are performed by women farmers. Therefore the contribution of women is necessary in agriculture in India. The reasons for women in agriculture are given below:

1. To eliminate poverty.
2. Food security.
3. Well being of themselves (Women).
4. Increase in agriculture production.
5. Land and livestock ownership.
6. Increase in economic contribution.

Role of Government in Women Empowerment through Agriculture: women empowerment is very necessary to make the future bright of the nation. The government of India is implementing a number of schemes for empowerment of women in employment, education, urban development, health, infra structure sector. The ministry of women and child development is administrating various schemes for the upliftment of women. Numerous activities can be undertaken under agriculture sector. The central, state or local government helps at all level for women empowerment. Women and no-one else cannot do miracles over night. Therefore, the government should watch and ward the working of different schemes. Thus, the fund or whatever may be directly should move to beneficiaries. There are various schemes of government for women empowerment through agriculture. They are as follows:

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):

- It is an Indian labour law and social security measure that aims to guarantee the work. This act was passed in September 2005. It aims to enhance livelihood security in rural areas. The law by providing "right to work" is consistent with article 41 that directs the state to secure to all citizens the right to work.

- **National Rural Livelihood Mission (NRLM)**

National Rural Livelihood Mission (NRLM) was launched by the Ministry of Rural Development (MoRD) Government of India June 2011.

- **Mahila Kisan Sashaktikaran Pariyojana (MKSP)**

Government of India has approved a new scheme namely, Pradhan Mantri Mahila Shakti Kendra (MSK) for 2017-18 upto 2019-20 to empower rural women through community participation and to create an environment in which they realize their full potential. The new scheme is envisaged to work at various levels.

- **Indira Awaas Yojana**

The government in 1985 under the leadership of Rajiv Gandhi introduced a public housing scheme that is popularly known as the Indira Awaas Yojana. This programme happen to fall under a larger scheme called a RLEGP which was the official acronym Rural Landless Employment Guarantee Programme. This scheme was run under the Ministry of Rural Development where the primary objective was to provide housing for roofless.

Support of Indian Law and Society

"I measure the progress of a community by the degree of progress which women have achieved."-Dr. B. R. Ambedkar. Dr. B. R. Ambedkar said that a nation can progress only if the women have achieved progress. Indian law and society should support women empowerment. Women empowerment in India depends on various factors such as caste, education, health, gender etc. The national policy for women 2016 associate with many problems with women and also its aim is to work for the development of rural women.

CONCLUSION

Women are the backbone of rural agricultural employees. Her hard work has mostly not been paid. Women do the most tedious and strenuous farm duties in agriculture, animal husbandry and homes. There are many problems faced by the women farmers, they are not able to donate more to the agriculture of our country. Women empowerment can change humanists thinking and also can change the conditions of rural India. Nation can develop very fast with the help of women. Women face various difficulties at home. In today's age Women is given less importance. Women empowerment is a continuous process. Women empowerment is the need of the hour.

REFERENCES

1. Bhavani S 2012.Department of agriculture and co operation Ministry of Agriculture Government of India.
2. Vandana S 1991.Most farmer in India are women.FAO .New Delhi.
3. <https://www.youthkiawaaz.com/2019>
4. Ministry of Rural Development 2005.
5. <https://www.jagranjosh.com//general knowledge/women empowerment programmes>.
6. <https://en.m.wikipedia.org/wiki/womenempowerment>.

A STUDY PRODUCTION, POST-HARVESTING AND MARKETING STRATEGIES OF SOYBEAN IN MARATHWADA REGION

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ABSTRACT

The main aim of present paper is to know various marketing strategies to provide background for developing marketing plan, and concludes with discussing the steps of developing a marketing plan. Effective soybean marketing begins with understanding the fundamentals of the Indian and local soybean market complex. Being familiar with demand-users and sources of supply from both an Indian and local level can better enable a producer to anticipate changes in futures and local cash market prices. Present paper is based on secondary sources of data and broken down into a discussion on soybean supply/demand and logistics; The value of a commodity is based upon its value to the end-user at a specific time and place and of certain quality.

Keywords: Agriculture marketing, Market prices, marketing strategies, Post harvesting

INTRODUCTION

Soybean is the world's most important seed legume, which contributes to 25% of global food, about two-thirds of world's protein concentrate for livestock feeding. Soybean is a crop. It is considered as the oilseed crop instead of pulses. Soybean is a versatile food for human nutrition and health. Soybean is an important food source. Its main components are proteins, carbohydrates and fats. Soybean contains 33 percent protein, 22 percent fat, 21 percent carbohydrate, 12 percent moisture and 5 percent consume. The structure of a mycogamino acid of soya protein is equivalent to animal protein. Therefore soybean is a good source of high quality protein for human nutrition. These acids are essential fatty acids for the body. Soybean is not only an excellent source of protein, but also affects many physiological functions. Various researchers have studied the effects of soy protein on the amount of

plasma lipid and cholesterol, and it has been found that soy protein is helpful in reducing the amount of cholesterol in the human blood. Soy protein is probably the first soybean component for specified health use. Soybean meal is a valuable ingredient in formulated feeds for poultry and fish.

Soybean is known as the "GOLDEN BEAN" of the 20th Century. Though Soybean is a legume crop, yet it is widely used as an oilseed. Due to very poor cookability and digestibility on account of inherent presence of trypsin inhibitor, it cannot be utilized as a pulse. It is now the second largest oilseed in India after groundnut. It grows in varied agro-climatic conditions. It has emerged as one of the important commercial crops in many countries. Due to its popularity, the international trade of Soybean is spread. Several countries such as Japan, China, Indonesia, Philippines, and European countries are importing Soybean to supplement their domestic requirement for human consumption and cattle feed. Soybean has great potential as an exceptionally nutritive and very rich protein food. It can supply the much-needed protein to human diets, because it contains above 40 per cent protein of superior quality and all the essential amino acids particularly glycine, tryptophan and lysine, similar to cow's milk and animal proteins. Soybean also contains about 20 percent oil with an important fatty acid, lecithin and Vitamin A and D. The 4 percent mineral salts of Soybeans are fairly rich in phosphorus and calcium.

REVIEW OF LITERATURE

FICCI Project (2014), stated that increase the productivity of soybean, assess the results in terms of improvement in agricultural income; Document of farmers' engagement processes with input and output markets; identifying processes that enable a successful partnership between government, private industry and farmers. In the year, partnership was started with the aim of reaching at least 200,000 farmers of the state. FICCI evaluated the Soybean project implemented by ADM in the year 2012-13 and 2013-14. ICAR Report (2017), reported that in India, soybean is predominantly grown as a rainfall crop covering the states of Madhya Pradesh, Maharashtra and Rajasthan; on verticals and associated soil extreme variation in rain both in time and space acts as a major impediment in the successful cultivation of soybean and higher adoption of technologies along with technology adoption and other factors. Devendra et al. (2018), reveal that prices of soybean are governed by factors such as the presence of processing units and competition prevailing between purchasers etc. Thus, monthly arrivals of soybean and wholesale prices

are significantly and negatively correlated in the corresponding months. The pattern of arrival of soybean in different seasons indicated that 70% of total arrival of soybean were found in the peak season i.e. immediately after harvest. Market arrivals have declined in the mid and late season of the year.

OBJECTIVES OF THE STUDY

1. To assess the production trends of soybean in India and Marathwada region
2. To know Post-Harvesting Strategies and Marketing of Soybean
3. To evaluate the growth rates in area, production and productivity of soybean in Marathwada Region.

METHODOLOGY

The present study specifically deals with the prospects and problems in production and marketing of soybean in Marathwada region. The present study is also based on secondary sources of data and a descriptive nature which describes. The study intends to know the production and marketing strategies adopted by farmers who are cultivating soybean. Secondary data has collected from research journals, published data, books, magazines, research studies and other relevant documents, various reports and websites etc.

RESULTS AND DISCUSSIONS

A number of private sector companies are active in agriculture and agri-business, directly engaging with the farmers and improving their farm incomes. While most of these initiatives are successful, they are limited to specific geographical regions, crops and limited number of farmers. On the other hand, the Government has increased funding to farmer through a variety of schemes/subsidies for improving productivity/market linkages, etc. Unfortunately, the outcomes do not commensurate with the quantum of Government spending, mainly due to the limited extension capabilities leading to gaps in execution, delivery and results.

Table-1 Soybean Production in India (In million MT)

Year	India	Increase /Decrease	Changing (in %)
2010-11	978	--	---
2011-12	997	19	1.906
2012-13	1055	58	5.498
2013-14	1181	126	10.67
2014-15	1124	57	5.071
2015-16	809	-315	-38.94
2016-17	798	-11	-1.378
2017-18	594	-204	-34.34
2018-19	1009	415	41.13
2019-20	905	-104	-11.49

(Source: SOPA: Agriculture statistics report 2010-20)

India's soybean output is set to jump about 20 percent to 10 million tons in the 2020 crop year that starts in October, an industry official said on October or November 2020. Higher production in the world's top importer of edible oils could curb its appetite for cargoes from overseas, potentially dragging international soybean prices. We are looking at high acreage and satisfactory rain so far in major soybean growing areas like Madhya Pradesh and Maharashtra, said B.V. Mehta, Executive Director of the Solvent Extractors Association of India (SEA). The initial estimation (for 2019/20) is 10-plus million metric tons. He was said on the sidelines of an industry event in Kuala Lumpur. Mehta added that India would likely churn out 8.3 million tons of soybean in the 2019/2018 crop year that ends on Sept. 30. The amount of land in India planted with soybean for the 2018/2016 crop year has increased to 11.1 million hectares as of Aug. 10, according to government data, up from 10.2 million hectares at the same time the previous year. However, monsoon rains are expected to be below average in 2018, after some parts of the country experienced tepid rain during the first half of the season.

Table-2 Production and Productivity of Soybean in Marathwada Region

District	2010-11			2019-20		
	Area	Production (m.t)	Productivity (kg/ha)	Area	Production (m.t)	Productivity (kg/ha)
Latur	2.278	975	2.221	3.73	1003	3.74

Osmanabad	0.669	981	0.656	2.6	806	2.1
Parbhani	0.918	1245	1.143	2.21	1032	2.28
Hingoli	1.316	1000	1.316	2.13	1344	2.87
Nanded	1.743	975	1.699	3.41	1312	4.48
Aurangabad	0.096	969	0.093	0.14	978	0.13
Jalna	0.288	979	0.282	1.22	848	1.04
Beed	0.654	976	0.638	1.96	819	1.61

(Source: data compiled from Agriculture statistics report)

Area under soybean is 0.288 in lakh hector with production 979 kg per hectors and productivity 0.282 in lakh metric tons kharif season of 2010-11. And Area under soybean is

1.22 in lakh hector with production 884 kg per hectors and productivity 1.04 in lakh metric tons kharif season of 2019-20. Marathwada region has seventh rank in soybean area, production and productivity. Area under soybean is 0.288 in lakh hector with production 979 kg per hectors and productivity 0.282 in lakh metric tons kharif season of 2010-11. And Area under soybean is 1.22 in lakh hector with production 884 kg per hectors and productivity

1.04 in lakh metric tons kharif season of 2019-20

Post-Harvesting Strategies and Marketing of Soybean

Agriculture marketing plays a crucial role not only in stimulating production and computation, but in accelerating the space of economic development. A soybean crop gets prominence in the cropping pattern of the state because of its higher price as compared to other competing crops. It is a successful crop with short duration and moderate input requirements.

1. Grading

Grading is an important facilitating service in the marketing process of an agricultural commodity. It has been observed that uniform variety having bold grains fetch higher price in the market. The traders, who purchase Soybean, negotiate the price on the basis of its quality such as cleanliness, boldness, colour, moisture, shrinkage, admixture, etc.

2. Packaging

The Government of India has made it mandatory to pack food grains cereals, pulses etc., in Jute bags and an official notification in this regard was issued by the Ministry of Textiles on 30th June, 1997. The jute gunny bags of 89X54 cms. sizes are usually used for packing Soybean. The standard capacity of the bag for Soybean is 95 kgs. The small size seed of Soybean can be filled up to 100 kgs. However, it has been observed that sometimes small consumer packaging is carried out in transparent thick polyethylene bags. Soybean seed should be packed in clean, hygienic bags of any material, which does not affect the produce and prevents it from absorbing moisture.

3. Transportation

The packs of Soybean should be handled and transported in such a way so that they remain well protected from sun, rain or other sources of excessive heat, objectionable odour and from any type of cross infestation especially, while transporting through ships. During transportation, there should be proper arrangement of sufficient aeration and insulation to reduce the heat. Stacking height should be kept up to 6 to 10 tiers. While handling and lifting of bags during transportation, too much use of hooks by labourers should be avoided, which may cause spoilage losses from the Soybean bags.

4. Storage

Most of the farmers store Soybean in their own houses. They usually store in gunny bags. The filled bags are stacked above wooden planks and gunny bags or paddy straw is spread over the floor to avoid dampness. The big farmers normally have pucca-floored houses, where the Soybean is stored. Traders, commission agents and brokers usually have their own godown facilities. They keep the Soybean in bags in their own godowns in packed condition. The processing units are the main agencies who stock Soybean for a longer period. They purchase and stock Soybean to meet the requirements for the whole year. Generally Soybean is not stored in loose form. The bags are stored in the godowns, which have cemented floors.

Marketing Channels of Soybean in Marathwada

The major assembling markets for Soybean are located in Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. Some major assembling markets of Soybean in major producing states in India. In the producing states, commission agents are the major agency in distribution of Soybean. In the consuming states, the distribution is confined to retailers. The purchase of Soybean for processing units is mainly done by the

commission agents in all major assembling markets. As such, commission agents are the important distributing agency for Soybean. They attend to handling, packing and dispatch of Soybean on behalf of their clients. In the assembling markets, processing units also purchase and dispatch Soybean to their own units. Brokers and wholesalers play some role in distribution of Soybean but not to the extent of commission agents. The distribution for retail sale in the non-producing states is mainly affected through wholesalers.

The different existing marketing channels of Soybean are given below. The general marketing channels for Soybean as routed from producer to consumer through village trader, commission agent, broker, co-operative society, private miller, wholesaler, co-operative mill are as follows:

- Producer - Village trader - Private miller
- Producer - Village trader – Wholesaler - Private miller
- Producer - Commission agent - Private miller – Consumers
- Producer - Commission agent - Wholesaler – Consumers
- Producer - Broker - Wholesaler – Consumers.
- Producer - Broker - Cooperative mill – Consumers.
- Producer - Cooperative society - Cooperative mill – Consumers.

Soybean has attained unique distinction for its varied uses and extra-ordinary nutritional qualities. However, Soybean requires proper processing to make suitable for use as food, feed or industrial products. Largely, Soybean is processed to get oil and meal. The mechanical process was employed earlier to extract oil and meal by hydraulic press method. However, the processing has been shifted to the modern solvent extraction process, which is more efficient and tuned to the existing needs.

CONCLUSION

From above discussion it was concluded that the distribution for retail sale in the non-producing states is mainly affected through wholesalers. In the assembling markets, processing units also purchase and dispatch Soybean to their own units. Brokers and wholesalers play some role in distribution of Soybean but not to the extent of commission agents. The distribution for retail sale in the non-producing states is mainly affected through wholesalers. The purchase of Soybean for processing units is mainly done by the commission agents in all major assembling markets. As such, commission agents are the important distributing agency for Soybean. They attend to handling, packing and dispatch of Soybean on behalf of their clients. In the assembling markets, processing units also purchase and dispatch Soybean to their own units. Brokers and wholesalers play some role in distribution of Soybean but not to the extent of commission agents.

REFERENCES

1. Agmark Grading Statistics, 2013-2014 and 2014-2015, Directorate of Marketing and Inspection, Faridabad.
2. Ali, Nawal Ali (2004), "Soybean for Food Purposes, Technology for Processing and Utilization Share", Oils and Fat today. April 2004, pp.20-25.
3. Farkade, V.R., Choudhari, S.A., Amale, A.J. and Tilekar, S.N. (2011). Economic analysis of production and marketing of soybean in Vidharbhare region of Maharashtra. Indian
4. J. Agril. Mktg., 25(2): 122-134. Kumar, Vinod (2010). A study on marketing cost, price spread, price behaviour and marketing efficiency of groundnut in Rajasthan. Indian J. agric. Mktg., 24(2):152-163.
5. Kale Krishna Namdeo (2012) "Economics of Production and Marketing of Soybean in Kolhapur District" Mahatma Phule Krishi Vidya peeth, Rahuri- 413 722 Dist. Ahmednagar, Maharashtra State, India.
6. Lavanya, M. (2011). Price behaviour and marketing practices of turmeric in eroded district of Tamil Nadu. M.Sc. Thesis, Tamil Nadu Agricultural University, Coimbatore, T.N. (INDIA)
7. Singh, A. Sharma, R.P. and Singh, Vinita (2011). Economics of production and marketing of soybean in block sonkutch of district was of Madhya Pradesh. Agric. Mktg. J., 23-
8. Thakare, S.S., Naphade, S.A. and Vitonde, A.K. (2011). Economics of production and marketing of cowpea. Indian J. Agril. Mktg., 25(2) : 66. 26.
9. Waldman, Amy (2004), For Soybean Farmers in India A chance to join Global Village. Asian Age.

ANALYSIS OF EXPORT PERFORMANCE OF INDIA'S AGRARIAN TRADE

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ABSTRACT

Agricultural export is extremely important for the country as it earns precious foreign exchange. Exports have also resulted in increased production in agriculture sector. According to WTO Trade Statistics, India's agricultural exports and imports in global agriculture trade in 2017 were 2.27% and 1.90%, respectively. Even during the difficult period of pandemic lockdown, India took care not to disrupt the global food supply chain by exporting. An Exports of agricultural commodities increased by 23.24% from March to June 2020, to Rs. 25552.7 crore from Rs. 20734.8 crore during the same period in 2019. In this paper, an analysis of product groups and then specific commodities was conducted with regard to the current state of production and exports, strengths, challenges, and subsequent interventions.

Keywords: Agricultural Commodities, Exports etc.

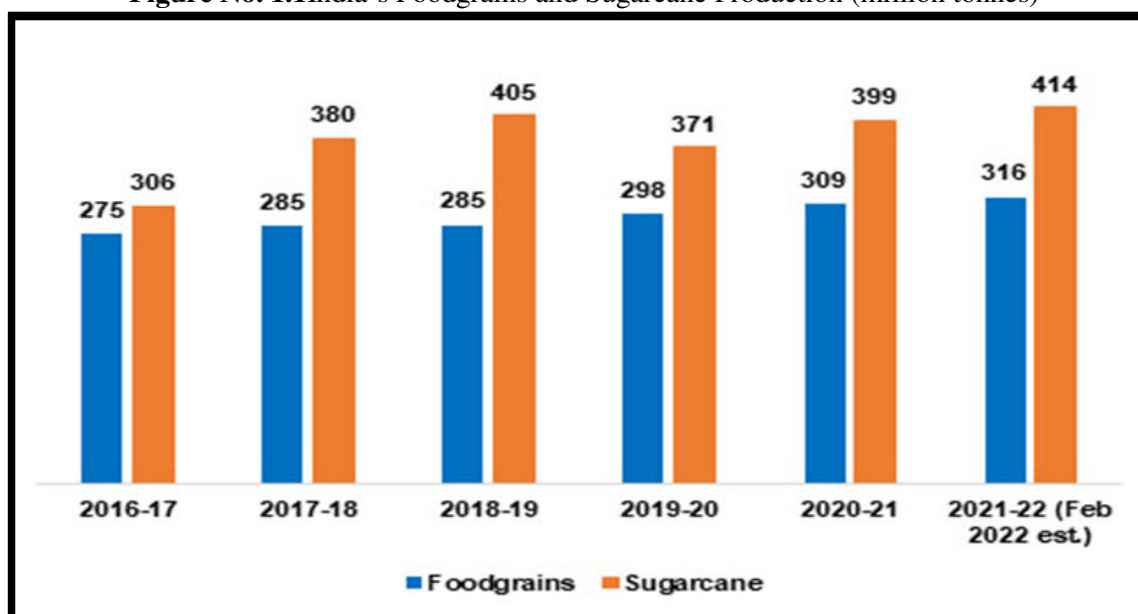
A. OVERVIEW

India has an agrarian economy, with over 54% of the country's land classified as arable and 50% of the labour force working in industries related to agriculture. India ranks among the top countries in the world for volume production of goods like rice, wheat, cotton, sugar, horticulture, and dairy. 20.2 percent of the nation's GDP is made up of the agricultural industry and sectors that are associated to it, such as forestry and fisheries. As a result, the agriculture industry is crucial to Indian politics, economy, and society.

In India, agriculture is the most important source of income. The country is one of the world's largest producers of agricultural and food products. The agriculture sector in India is expected to grow at a 3.9% annual rate in 2021-22, up from 3.6% in the previous year. Rice, wheat, pulses, oilseeds, coffee, jute, sugarcane, tea, tobacco, groundnuts, dairy products, fruits, and other crops are grown in the country. India's tea production is expected to be 1,344.40 million kg in 2021-22. During the same time period, coffee production increased by 2.39% year on year to 3420 lakh tonnes. Oilseed production in India is expected to exceed 37.15 million tonnes in 2021-22, while other products such as rice, wheat, maize, pulses, mustard, and sugarcane are expected to set new records.

West Bengal, Uttar Pradesh, Punjab, Gujarat, Haryana, Madhya Pradesh, Assam, Andhra Pradesh, Karnataka, and Chhattisgarh are the top crop-producing states in India. Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, Rajasthan, Bihar, and Gujarat produce the majority of the country's wheat. Uttar Pradesh is India's largest sugarcane producer, accounting for approximately 48% of total production, followed by Maharashtra and Karnataka, which account for 23% and 9% of total production, respectively.

Figure No. 1.1 India's Foodgrains and Sugarcane Production (million tonnes)



Source: RBI Handbook of Statistics, Ministry of Agriculture and Farmers Welfare

B. OBJECTIVES

The following are the objectives of this paper:

1. To Study the Indian Agrarian Industry's Export Performance
2. To examine the initiatives taken by the Government of India to increase agricultural exports.

C. DATA AND METHODOLOGY

The present study is based on time series secondary data collected and compiled from various published sources. To capture the trends and performance of agricultural trade a large number of commodities/products (27) were analyzed. The data on exports of agricultural products/ commodities were extracted from the APEDA and DGCIS. The export data from the year 2020-21 to November 2022 has been taken for the study.

D. PERFORMANCE OF EXPORT OF INDIAN AGRICULTURAL PRODUCES

In this section the main drivers of the agri-exports have been shown for the last three years. Also the state wise exports statistics and major importing countries from India also revealed.

1. Agricultural Commodity wise Exports

Table No. 1.1 Product-wise Export (from 2020-21 to 2022-23 November)

Sr. No	Product Name	2020-21		2021-22		2022-23 (April-November)	
		Qty	US\$ Mill	Qty	US\$ Mill	Qty	US\$ Mill
1	Non-Basmati Rice	13,087,941	4,796	17,260,688	6,124	11,568,807	4,109
2	Basmati Rice	4,631,531	4,019	3,947,973	3,540	2,732,497	2,873
3	Buffalo Meat	1,085,615	3,171	1,176,058	3,303	767,625	2,127
4	Wheat	2,086,372	549	7,234,677	2,120	4,656,399	1,508
5	Misc Processed Items	0	864	0	1,164	0	905
6	Other Cereals	3,026,736	694	3,850,667	1,085	2,060,097	699
7	Processed Fruits & Juices	534,749	695	629,179	777	414,748	593
8	Fresh Vegetables	2,326,538	722	2,384,845	803	2,098,755	585
9	Cereal Preparations	410,374	635	415,415	652	309,341	489
10	Groundnut	638,551	727	514,180	629	372,927	461
11	Guargum	234,821	263	321,435	447	294,053	443
12	Dairy Products	117,588	322	191,896	635	112,756	421
13	Fresh Fruits	956,961	766	1,164,603	876	560,644	406
14	Pulses	276,863	266	388,403	359	455,542	392
15	Processed Vegetables	366,380	425	381,523	426	237,951	325
16	Milled Products	401,823	207	704,052	311	564,075	247
17	Alcoholic Beverages	247,849	330	200,906	286	146,275	219
18	Cashew	70,088	420	75,450	453	29,309	213
19	Cocoa Products	26,391	150	27,478	154	21,849	99
20	Fruits / Vegetable Seeds	32,249	125	21,052	113	12,197	88
21	Poultry Products	0	59	0	71	0	82
22	Floriculture	15,842	78	23,597	104	15,009	61
23	Sheep/Goat Meat	7,111	45	8,696	60	6,538	44
24	Animal Casings	13,888	56	13,827	64	9,248	32
25	Cashew Nut Shell Liquid	3,736	3	4,944	4	11,463	10
26	Other Meat	895	2	1,946	6	746	2
27	Processed Meat	780	2	470	2	247	1
	Total		20,390		24,568		17,435

Source: DGCIS

Product-wise exports of the agrarian goods are shown in the **Table No. 1.1** for the three consecutive years from 2020.21 to 2022-23 (April – November). Non-Basmati Rice is the highest exported goods in terms of quantity and value followed by Basmati Rice, Buffalo Meat and Wheat (only top 4).

2. State-wise Exports of Agricultural Produce

Table No. 1.2 India's State wise Export Statistics (From 2021- till November 2023)

Sr. No.	State	2020-21		2021-22		2022-23 (April-November)	
		Qty	US\$ Mill	Qty	US\$ Mill	Qty	US\$ Mill
1	Gujarat	8,468,656	5,439	12,270,584	6,832	9,878,270	5,724
2	Maharashtra	4,837,822	3,807	5,391,838	4,278	4,179,904	3,073
3	Andhra Pradesh	5,288,527	1,865	7,932,915	2,670	5,284,560	1,866
4	West Bengal	5,587,061	1,760	8,493,240	2,850	4,877,006	1,668
5	Uttar Pradesh	1,763,535	2,394	1,844,771	2,422	978,749	1,564
6	Haryana	1,510,911	1,606	1,258,913	1,462	789,496	1,043
7	Tamil Nadu	1,617,412	1,259	2,342,689	1,538	1,675,797	1,037
8	Punjab	437,825	477	346,096	400	305,694	389
9	KERALA	263,313	464	276,877	477	210,379	307
10	Karnataka	282,158	451	288,262	413	182,361	264
11	Bihar	1,314,731	388	1,378,937	438	545,078	215
12	Rajasthan	95,909	109	206,731	235	145,557	198
13	Telangana	127,232	203	139,853	238	101,946	171
14	Madhya Pradesh	183,083	174	145,071	178	129,388	153
15	Delhi	70,974	161	59,923	179	36,078	121
16	Odisha	168,501	60	204,337	76	88,006	39
17	Assam	18,031	10	30,391	17	32,800	15
18	Chhattisgarh	39,658	14	35,636	11	39,684	13
19	Tripura	131	0	84,040	27	36,672	13
20	Uttarakhand	18,686	13	15,674	13	14,644	11
21	Goa	6,717	13	5,368	12	2,332	5
22	Sikkim	6,274	4	10,985	7	7,362	4
23	Himachal Pradesh	430	0	4	0	489	1
24	Meghalaya	16	0	40	0	152	0
25	Jammu & Kashmir	0	0	1	0	0	0
Total		32,107,590	20,673	42,763,173	24,774	29,542,403	17,896

Source: DGCIS

Table No. 1.2 reveals that the Gujarat state is the major exporter of the agrarian produces with a value of US\$ Million 5439 in the year 2020-21, US\$ Million 6,832 in the year 2021-22 and US\$ Million 5,724 in the year 2022-23 till November. The Maharashtra state stands at the second position with annual gross export value of US\$ Million 3,807, 4,278 and 3,073 for the year 2020-21, 2021-22 and 2022-23 till November respectively, whereas the Jammu & Kashmir does not contribute more in the exports of agrarian commodity.

3. Countries Importing Agrarian Produce from India

Table No. 1.3 Major Importers of Agrarian Produce from India

Rank	Country	2021-22			
		Qty in 000'MT	Value in Rs.Crore	Value in USD Mill	% Share in value
Total India's Export		42,764	184,769	24,774	100
1.	Bangladesh	8,405	21,155	2,839	12
2.	United Arab Emts	1,972	11,973	1,605	7
3.	U S A	694	9,329	1,251	5
4.	Vietnam Soc. Rep.	2,259	9,254	1,241	5
5.	Saudi Arab	1,079	8,394	1,125	5
Other Countries		28,356	124,664	16,714	68

Source: DGCIS

According to the **Table No.1.3** major countries (only top 5) which import the agricultural goods from India are Bangladesh, U.A.E., U.S.A., Vietnam and Saudi Arab respectively with a share of 34% of India's Total Export.

India has demonstrated an outstanding growth trajectory from a country with a lack of food to one that is now both food sufficient and surplus. India has been a net exporter of agricultural products through all agricultural productivity revolutions that have been sparked by technologies, incentives, and institutions. In recent years, India has had success exporting a variety of value chains, including rice and marine products, which make up a third of all of India's agricultural exports. These products, in which India has a competitive advantage, are listed by APEDA and the 2018 as value chains of opportunities.

E. GOVERNMENT INITIATIVES

The government's determination to raising farmers' income can be observed in the sharp increase in Agri-exports that was seen as a result of its emphasis on fostering exports. APEDA has been used by the government to carry out a number of projects, including the organization of B2B exhibitions in other nations and the exploration of new prospective markets through product-specific and general marketing campaigns.

1. Agriculture Export Policy 2018 (AEP)

To encourage the export of agricultural goods, the Indian government has established the comprehensive Agriculture Export Policy (AEP). The main goals of the AEP are to increase high value-added agricultural exports, diversify export sources and destinations, encourage exports of indigenous, organic, traditional, and non-traditional agriproducts, provide an institutional framework for pursuing market access, and make it possible for farmers to take advantage of export opportunities in foreign markets.

2. Financial Assistance Scheme (FAS)

FAS is the Agriculture and Processed Food Products Export Development Authority's programme for promoting exports (APEDA). It is a component of the Finance Commission Cycle for 2021–2022–2025–2026. This program's main objective is to help companies develop their export markets, quality, and infrastructure. The plan will provide financial support ranging from Rs. 5 lakh (US\$ 6,500) to Rs. 5 crore (US\$ 650,000).

3. Ministry of Commerce & Industry Scheme

The Ministry of Commerce & Industry's Department of Commerce has also started a number of export promotion programmes, such as the Market Access Initiatives (MAI) Scheme and the Trade Infrastructure for Export Scheme (TIES). Additionally, support for exporters of agricultural goods is offered through the MPEDA, APEDA, Tobacco Board, Tea Board, Coffee Board, Rubber Board, and Spices Board export promotion programmes. Additionally, India has made Nuclear Magnetic Resonance (NMR) testing a requirement for honey sold to the USA in an effort to increase exports of honey.

F. CONCLUSION

Due to increased investment in agricultural infrastructure, including irrigation systems, warehousing, and cold storage, the agriculture sector in India is anticipated to gain further pace in the coming years. Additionally, it's likely that the increased usage of genetically modified crops will increase Indian farmers' yields. The increase in the minimum support price and the concerted effort of scientists to obtain early maturing types of pulses are likely to make India self-sufficient in pulses within the next several years.

A large population and rising urban and rural income is driving the demand. External demand is driving export from agriculture sector. Demand for agricultural inputs such as hybrid seeds and fertilizers and allied services like warehousing and cold storages is increasing in India at a fast pace. High proportion of agricultural land, diverse agro-climatic conditions encourages cultivation of different crops.

The demand is being driven by a big population as well as increased urban and rural affluence. Exports from the agricultural industry are being driven by international demand. India is experiencing a rapid rise in demand for agricultural inputs like hybrid seeds, fertilizer, and related services like warehousing and cold storage. The development of various crops is encouraged by the high share of agricultural area and the variety of agro climatic conditions.

India occupies a leading position in global trade of agricultural products. However, its total agricultural export basket accounts for a little over 2.5 percent of world agricultural trade. The major export destinations were USA, Saudi Arabia, Iran, Nepal, and Bangladesh. It is also emphasised that the existing Agri clusters are required to be strengthened and more product clusters to be developed to fulfil the gap of bulk quantity and quality of supplies. A time bound action plan has also been prepared for import substitution with particular focus upon Edible Oils, Cashew, fruits and spices thereby making India self-reliant.

G. REFERENCES

1. Vinod Kumar (2021). "Trends and Performance of India's Agricultural Trade in the Midst of COVID-19 Pandemic". Indian Journal of Agricultural Economics Volume 76, Number 3, July-September 2021.
2. Anjali Tandon(2005). "Growth, Performance and Instability of India's Agricultural Exports A Pre And Post Reform Analysis". Indian Economic Journal, Volume 53, Number 4, 74-86
3. Agriculture and Processed Food Products Export Development Authority (APEDA)<https://apeda.gov.in/>
4. www.ibef.org

DECENTRALIZATION OF POWER AND WOMEN LEADERSHIP: A STUDY OF MARATHWADA REGION IN MAHARASHTRA STATE

¹Dr. Vrushali B. Kute and ²Dr. Siddharth Jadhav¹Assistant Professor, Balbhim Arts, Science and Commerce College, Beed²Assistant Professor K.S.K. College, Beed**INTRODUCTION**

Assertions in favour of decentralisation are often founded upon a wider critique of central state planning, which holds that large and centrally-administered bureaucracies represent an inefficient and potentially destructive means of allocating resources (and generating wealth) within society.

However, a problem that is well-recognised in the literature on decentralisation is that the devolution of power will not necessarily improve the performance and accountability of local government. Indeed, in many cases, decentralisation has simply empowered local élites to capture a larger share of public resources, often at the expense of the poor. Reflecting on these relatively long-standing problems, an important strand of scholarship in the decentralisation literature has argued that the underlying distribution of assets and entitlements will have an important bearing on the extent to which marginal groups are able to take advantage of the mechanisms and opportunities created by decentralisation, and improve their ability to gain access to the (various) resources provided by the bureaucratic state. Within rural areas (which are often the central focus of decentralisation), such assets and entitlements would include land, land tenure, formal property rights, and full rights of citizenship. An important hypothesis that emerges from this scholarship is that societies in which the distribution of assets and entitlements is relatively equal will produce more effective and accountable forms of governance.

Decentralization in India

A commitment to the reduction of poverty has been a defining characteristic of the Indian state, from the time of Independence to the present day. As Kohli (1987: 62) has argued, the Indian state that emerged after Independence was deeply committed to 'industrialisation, economic growth and a modicum of income redistribution.' In terms of poverty reduction, this involved an early attempt at improving agricultural productivity through the implementation of land reforms, agricultural cooperatives and local self-government (Harriss et al., 1992; Varshney, 1998). From an early stage in this process, the reduction of poverty and the empowerment of poor and politically marginal groups in India have been strongly associated with at least some form of decentralisation (e.g. Drèze and Sen, 1996; Jha, 1999). Perhaps the most enduring image of decentralisation in India is Gandhi's vision of village Swaraj, in which universal education, economic self-sufficiency and village democracy would take the place of caste, untouchability and other forms of rural exploitation. Although this vision has been hotly debated since (at least) the time of independence (see, especially, Ambedkar's debates with Gandhi, cited in World Bank, 2000a: 5), Gandhi's vision has had an enduring effect on the ways in which decentralisation has been argued and defended in Indian politics. Beyond the symbolic imagery of the independent 'village republic,' an important element of this relates to the idea that formal, constitutional changes in India's administrative system can have a lasting impact on informal and unequal structures like caste, class and gender.

Decentralization of Power and Maharashtra State**Women's Leadership in Local Bodies**

- Political parties in Maharashtra will immediately after the 73rd Amendment. have to nominate 130,734 women in local bodies during elections, now that the state cabinet has approved increasing the women's leadership quota from 33% to 50%
- The Maharashtra cabinet has approved reservation of half the seats in local self-government bodies for women leadership. Although a bill to reserve 33% of seats for women in Parliament.

Limitation in Women Leadership

A constitutional provision is only a necessary step which should be followed by effective measures for women's upliftment. Women representatives lack this aspect of qualitative leadership.

OBJECTIVE OF THE STUDY

1. To study the power of decentralization in Marathwada Region.
2. To find out women leadership and their empowerment by Decentralization in Marathwada Region.

RESEARCH DESIGN AND METHODOLOGY

A large number of questions arise in our mind as the role of Panchayati Raj leaders becomes all the more important in tribal dominated areas because of the specific features of the tribal society, such as, the pattern of scattered habitation, the hilly topography, the knowledge of elected members about needs of local people and the welfare schemes, the role of elected member in creating awareness among the local people, the role of government officials in implementing the policies, financial autonomy of Panchayati Raj institutions and the knowledge of the elected members about their financial and decision making powers determine the research strategy. Keeping in view some of these specifications, the research design for the present enquiry has been prepared.

Data Collection

The data and information have been collected both through primary and secondary sources. The main source of primary data was the field survey based on the interview schedule and discussion with the respondents and verification of the same with responsible and knowledgeable person in the respective panchayats. Secondary source also included articles in research journals, magazines and other published documents. In case of secondary source, books and journals touching the subject were consulted. Secondary data refer to the data, which have already been collected and analysed by someone else. The secondary data for the present study were collected from the various census reports published by the government. Data were also collected from the statistical department's report and from the report prepared by community development workers and research scholars.

Sample Selection

Therefore, it will be decided to use **purposive quota sampling method** to select the respondent for this study. Total **800** respondents will be selected for the study from Marathwada Region.

Primary Data

The purpose of a social survey may also be to provide scientifically gathered facts or materials affording some empirical basis for the social theorists to set up their conclusions. Therefore, it were decided to use **purposive quota sampling method** to select the respondent for this study. Total **1973** respondents were selected for the study from Marathwada Region. The total number of women members in Rural Ares as per 73rd amendments are 23899 and out of that 5% respondents has been selected and in other hand in no. of women members in urban area as per 74th amendments are 778 and researcher has 100% respondents are selected for the study.

Secondary Data

The researcher has collected the secondary data from various sources, like internet, books, journals, publications and newspapers.

The interview was chosen because most of the respondents are illiterate or lowly educated. This method "involves presentation of oral verbal stimuli and reply in term of oral-verbal responses." Most of the interview had to be conducted either early in the morning or late in the evening to suit the convenience of the respondents. This, coupled with our expectations of completing a certain minimum number of interview per day.

In the light of the objectives of the study and the sample, the choice for a method of collecting data is taken to be questionnaire. In the present study the interview schedule technique has been adopted. First part of the schedule consists questions pertaining to the personal information about the age, sex religion, caste, literacy, education, occupation and land ownership.

REVIEW OF LITERATURE

The process of state rescaling and its link to policy outcomes in terms of efficiency, growth, inequality, and political stability raises multidisciplinary interest ranging, for instance, from economics (Tiebout, 1956; Oates, 2006) and politics (Loughlin, 2001; Keating et al., 2009) to geography (Jones et al., 2005) and planning (Houghton, 2005). Analysis often conflates analysis with prescription in fields such as democracy (Drèze and Sen, 2002) and market reforms (Lobao et al., 2009).

The process of rescaling of the state raises several methodological issues (Cohen and Peterson, 1996). Indeed, the variety of approaches followed across different studies suggest "a startling diversity of definitions and measures to the decentralisation concept [so that] there is little agreement about what constitutes an example of decentralisation, what causes decentralisation, or what effects it is likely to have" (Schneider, 2003: 32, 33).

Not only have different meanings been attributed to "decentralisation" (administrative, fiscal, political, spatial – see Table 3.1), but also many different terms are used in order to refer to changes involving the balance of power and competencies between central government and other actors both at sub-national and supra-national

level within multi-level systems. A further concern is the initial starting point of the kinds and degrees of centralisation and/or decentralisation within particular countries and the respective size of the countries and their differing units of decentralised governance. As a result of these difficulties, conceptual confusion has often been the result (Treisman, 2007).

DATA ANALYSIS AND INTERPRETATION

The purpose of a social survey may also be to provide scientifically gathered facts or materials affording some empirical basis for the social theorists to set up their conclusions. Therefore, it were decided to use **purposive quota sampling method** to select the respondent for this study. Total **1973** respondents were selected for the study from Marathwada Region. The total number of women members in Rural Area as per 73rd amendments are 23899 and out of that 5% respondents has been selected and in other hand in no. of women members in urban area as per 74th amendments are 778 and researcher has 100% respondents are selected for the study.

Table No. 1 Consideration of the opinion and suggestions of women participants in Gramasabha meetings.

Sr. No.	Particulars	No. of Respondents in Rural Area (as per 73 rd amendment)	%	No. of Respondents in Urban area (as per 74 th Amendment)	%	Total	%
01	Yes	445	37.24	345	44.34	790	40.04
02	To a certain intent	399	33.39	226	29.05	625	31.68
03	No	292	24.44	166	21.34	458	23.21
04	Not known	59	4.94	41	5.27	100	5.07
	Total	1195	100	778	100	1973	100

Source: - Primary Data

The Table -1 is indicate about opinion and suggestions of women's participants in Gramsabha meetings are considered. 40.04 percent women said Yes their opinion and suggestion are considered. 31.68 percent women said their opinion and suggestions to a certain intent. 23.21 percent women are said No their opinion and suggestion are not considered in the meeting of Gramsabha. And only 5.07 percent women's are not answered to this question. So its concluded that maximum women's opinion and suggestion are considered in the meeting of Gramsabha

Table No. 2 Role of Gramasabha in the discussions and decisions on special problems faced by women?

Sr. No.	Particulars	No. of Respondents in Rural Area (as per 73 rd amendment)	%	No. of Respondents in Urban area (as per 74 th Amendment)	%	Total	%
01	Very good	451	37.74	255	32.78	706	35.78
02	To a certain extent	578	48.37	390	50.13	968	49.06
03	Not effective	95	7.95	74	9.51	169	8.57
04	Not known	71	5.94	59	7.58	130	6.59
	Total	1195	100	778	100	1973	100

Source: - Primary Data

The above table is found the role of Gramsabha in the discussion and decision on special problems faced by women. 35.78 percent women are said the answered are Very good, behind that 49.06% percent women are said to a certain extent. 8.57 percent women not effected with the question and finally 6.59 percent women are not known on above given statement. So its conclude that maximum women to a certain extent Role of Gramsabha in the discussions and decisions on special problems faced by women.

Table No. 3 Whether the issues and problems of marginalized communities like the Scheduled Castes and Scheduled Tribes are considered in the Gramsabha?

Sr. No.	Particulars	No. of Respondents in Rural Area (as per 73 rd amendment)	%	No. of Respondents in Urban area (as per 74 th Amendment)	%	Total	%
01	Yes	670	56.07	395	50.77	1065	53.98
02	To a certain extent	402	33.64	245	31.49	647	32.79
03	No	78	6.53	69	8.87	147	7.45
04	Not known	45	3.77	69	8.87	114	5.78
	Total	1195	100	778	100	1973	100

Source: - Primary Data

On the above table given above is indicate the issue and problems of marginalized communities like Scheduled Caste and Scheduled Tribes are considered in the Gramsabha. Near about 53.98 percent women said Yes issue and problems of SC and ST are considered on the meeting in the Gramsabha. 32.79 percent women are told to a certain extent, 7.45 percent women said No Problems and Issues are not considered in the Meeting of Gramsabha and rest of only 5.78 percent women are response to the statement. So its conclude that majority of the respondents are said i.e. 53.98 percent the problems of SC and ST are considered in the meeting of Gramsabha

MAJOR FINDINGS ON PRIMARY DATA

- The Education Qualification of the Respondent, Primary and Secondary Education qualification are found here. It is 48.50 percent.
- The main occupation is the respondents are Labour and Agriculture.
- There were 223 respondents whose annual income was 05 lakh to 10 lakh and its percentage are 11.30 percent, While only 198 respondents were the annual income are 10 lakh and above and its percentage are 10.04 percent.
- 55.70% respondents have full knowledge of their duties and rights regarding 73rd amendment for decentralization of power. So 40.14% of the respondents know about some of their right and duties some extent and only 2.38% respondents do not have their duties and rights.

CONCLUSION

As a concluding remark, it may be said that gradually consciousness is coming among women in the democratic decentralized local bodies due to the new system. There is another side of story that lack of education, lack of training and prevalence of old traditionally dominant systems still act as the basic reasons for non-performance of women in public domain. Positive changes have been witnessed in terms of success stories of women Gram Panchayats, getting awards for social work, Adarsh Gram Panchayat and outstanding achievement in their field, women in Panchayats have set up examples for them and among them.

In this connection, enactment of 73rd and 74th Amendment Act, regular election to PRIs and ULBs has proved to be a milestone towards enlighten and social political consciousness of women as a section. Government is trying to implement the proposed schemes to make the Local Self Government a great success in India. However a part of the fault lies in the system. There are some areas of concern in local bodies. Wide gap between the aspirations of the people and the performance by the grassroots institutions, mismatch between the financial resources of the local bodies and the functions allotted to them, inefficiency in devolution of 3Fs to lower level of governance are few areas of concerns. These flaws further weakens the working of Gram Sabhas and leave unsolved the plight of local people and double the challenge of local bodies. And these factors work together against women coming in politics at lower level.

BIBLIOGRAPHY

1. Government of India, Third Five Year Plan Planning Commission, New Delhi, p. 338.
2. Clair Selitz et al, Research Methods in Social Science, Holt Rinehart and Winston Inc, New York, 1962, p. 50 as quoted by C. R. Kothari, Research Methodology, Wiley Eastern Ltd, New Delhi, 1986, p. 44.
3. K. Shastri, Political Linkages and Rural Development, National Publishing House, New Delhi, 1976, p. 8. 4. C. R. Kothari, Research Methodology: Methods and Techniques, Wiley Eastern Ltd, New Delhi, 1986, p. 137.
4. Edwin P. Hollander, Leadership Dynamics, The Free Press, New York, 1978,
5. L Misra, Education of Women in India from 1921 to 1955, 1961.

INDIAN AGRICULTURE AND EXPORTS: CHALLENGES AND OPPORTUNITIES

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ABSTRACT

India is an agrarian country, where more than 64.61 % rural population depends on agriculture. In such agrarian countries, where massive production for export and to fulfill their own feeding demands is the toughest job. Therefore, the agriculture sector has the vast pressure of fulfilling its own needs as well as the opportunities to fulfill the feeding to the growing global population. It is projected to reach 8.5 billion by 2030 (oecd.org, 2023).

Hence, it has huge opportunities for Indian farmers to capture the global demand by producing more and more agriculture products by applying new agro-based technology. So that they can improve income by exporting, more foreign currency and market. So systematic study can visualize future problems and prospects. Therefore, the researcher has taken the systematic enquiry to keeping the view on the objectives of the study.

Keywords: Agriculture, Export, Population, Manson, Export-Trends & Destination.

INTRODUCTION

In 1960 India was the importer of wheat. Now in 2020-21 US Department of Agriculture (USDA) has forecasted 1.8 million tonnes of wheat and 14.4 million tonnes of rice to be imported from India. This will be the highest-ever wheat export from India to the US in the last six years. India is one of the 15 leading exporters of agricultural products in the world.

Despite the Indian government's various steps to improve agricultural exports, there are a few challenges associated with the exports (ForumIAS, 2021).

Agriculture is the backbone of the Indian economy, where. 54.6% of the total workforce is engaged in agricultural and allied sector activities (Department of Agriculture, 2020-21). More than 58% of the rural population depends upon agriculture for their livelihood. India is the largest producer of agriculture and food products in the world. In the previous year 2021-22, 3.9% was the estimated agriculture sector growth rate. as compared to the 3.6% in the previous year. ((IBFE), 2023)

Indians are 17.84% of the world's population. India has a 15% livestock population with 2.4% world's land and 4 % water resources. Therefore, continues efforts should be taken for the improvement of productivity through innovation, technological support, infrastructural development, pre & post-harvest management, processing, and value addition to agriculture. It is seen that the perishable Agri product indicates a loss from 8% to 18% because of poor harvesting and its management, absence of cold chain, and processing facilities. As well as it directly impacts the export of agricultural products of any country. Therefore, agro-processing and agricultural exports are key areas and it is a matter of satisfaction that India's role in the global export of agricultural products is steadily increasing. India is currently ranked tenth amongst the major exporters globally as per WTO trade data for 2019. India's share in global exports of agriculture products has increased from 1.7% a few years ago to 2.1% in 2019.

Recent growth rates show that agri-food production is rising faster than growth in domestic demand, and the volume of surplus for export is witnessing an accelerated growth. This offers scope and opportunity for capturing overseas markets to earn foreign exchange and enable producers to earn higher prices for farm produce. (APEDA), 2022.

OBJECTIVES OF THE RESEARCH PAPER

1. To study the agricultural export Trends.
2. To know the Challenges and Opportunities before Indian Agri-Export.

DATA COLLECTION

This research paper is based on secondary data, which is collected from online literature i.e. online reports, research papers, the official website of the Indian Ministries and agencies, various blogs and newspapers, etc.

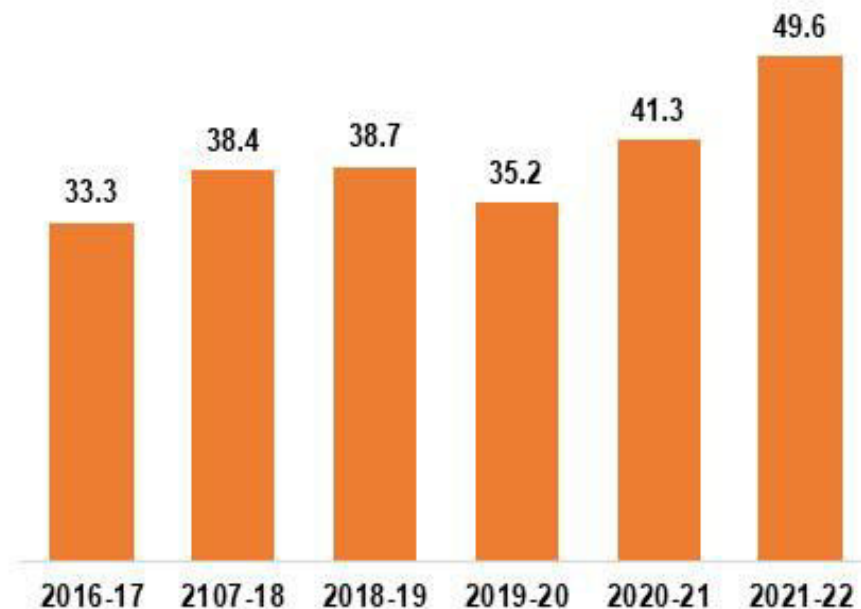
The numerical data collected from the different sources were analysed with simple calculations. Like percentage, change in percentage etc.

DISCUSSION

Indian Export Trend

Figure No.1

India's agriculture exports trend (US\$ billion)



Source: The Ministry of Commerce & Industry

(Source: IBFE, 2023)

Table No. 1

Years	Export (in US\$ Billion)	Change in Value	Change in %
2016-17	33.3	Base Year	
2017-18	38.4	5.1	13.28
2018-19	38.7	0.3	0.78
2019-20	35.2	-3.5	-9.94
2020-21	41.3	6.1	14.77
2021-22	49.6	8.3	16.73

(Source: Compiled from IBFE, 2023)

The above table indicates the Agricultural export from 2016-17 to 2021. In 2016-17, it was US\$ 33.3 billion. In 2017-18 it has increased by US\$ 5.1 billion i.e. 38.4 and by 13% of the previous year. But in 2018-19 it has increased very minutely and in 2019-20 it decreased by US\$ -3.5 billion and by -9.94%. At end of FY 2019-20 there were lockdown phases hence all the export and import as well as all physical trading activities were closed. Similarly in 2020-21 and 2021-22, it jumped by US\$ 6.1 and 8.3 billion respectively. It has changed by 14.77 % and 16.73%. so the export has a positive sign on the concern of Agricultural Products. (IBFE, 2023)

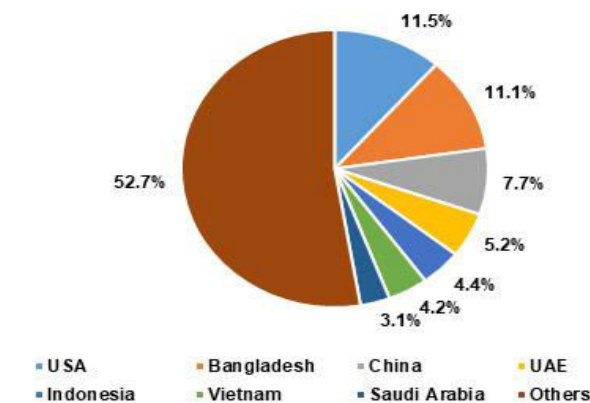
Here the commitment of the Govt of India to increase farmers income can be achieved by boosting agriculture exports. APEDA has played a very crucial role in this regard by organizing an exhibition in different countries. Through these promoting activities Indian agriculture can attract a potential market. The government of India has created a product matrix for 50 agricultural products with strong export potential and recognized 220 labs to provide services for testing a wide range of products to enable exporters across India. (IBFE, 2023)

Indian Export Destinations

The Major Export destination of India's agricultural products is the USA, Bangladesh, China, UAE, Indonesia, Vietnam, Saudi Arabia, Iran, Nepal, and Malaysia. The other importing countries are Korea, Japan, Italy, and the UK. Canada, Germany, South Africa, Australia, Thailand, Oman, Bhutan, Azerbaijan, Qatar, Singapore and Argentina. (IBFE, 2023)

Figure No. 2

Country-wise approximate share of exports (2021-22)



Source: The Ministry of Commerce & Industry

Source: IBFE, 2023

Above fig. no. 2 highlights the Country-wise approximate share of exports in the year 2021-22. Major exports destination of the Indian agri products is USA i.e. 11.5%, Bangladesh i.e. 11.1%, China i.e. 7.7%, UAE is 5.2%, 4.4% share of Indonesia, Vietnam has 4.2% and Saudi Arabia imports 3.1% of Agricultural products from India. The other importing countries are Korea, Japan, Italy, and the UK (IBFE, 2023).

To improve Indian Agricultural and food Products Govt. of India has initiated virtual buyer-seller meet (V-BSM) with importing countries. It promotes Geographical Indications (GI). 17 V-BSM have been organised with Kuwait, Indonesia, Switzerland, Belgium and Iran. Similar programs have been organized for Canada (Organic products), UAE & USA (GI products), Germany, South Africa, Australia, Thailand, Oman, Bhutan, Azerbaijan and Qatar. There are 13 Agri-Cell in Indian embassies. It provides real time basis inputs to improve Indian Exports by promoting trade, tourism, technology and investment goals (IBFE, 2023).

Challenges before Indian Agriculture Exports:

1. Increasing Population

Increasing population is one of the major challenges before Indian Agriculture Export. In 2050 the population of India projected to 1670490596. So as the Agricultural production will increased but the feeding challenges also increased. Following table and graph indicates the inferences.

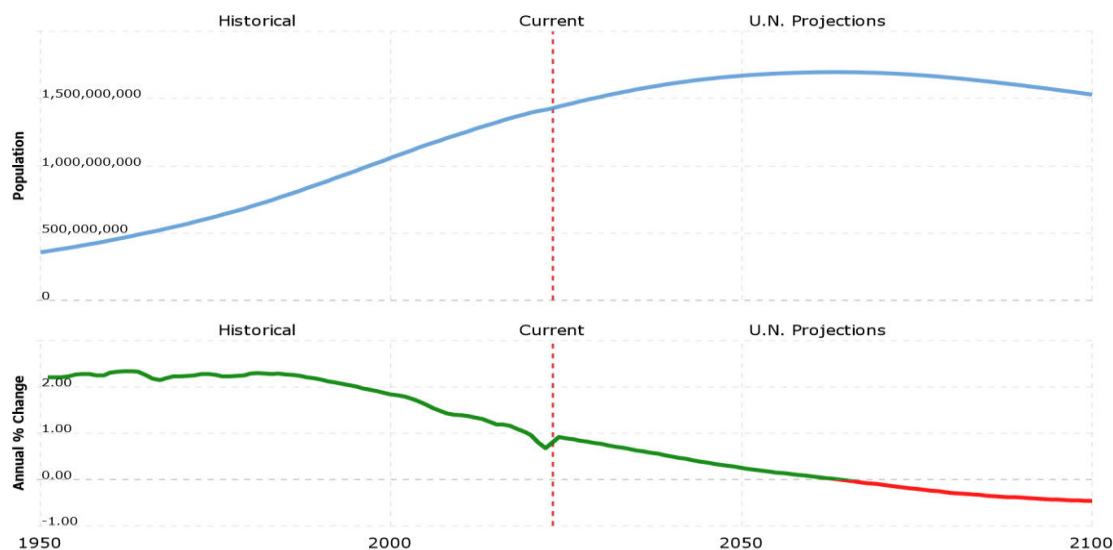
Table No. 2 Cumulative statement of Agri-Product and Population
(Million Tons)

Agri-Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
foodgrain	275	285	285	298	309	316
Sugarcane	306	380	405	371	399	414
Total Production	581	665	690	669	708	730
Change in value	Base Year	84	25	-21	39	22
% Change	Base Year	14.46	3.76	-3.04	5.83	3.11
Population	1,35,41,95,680	1,36,90,03,306	1,38,31,12,050	1,39,63,87,127	1,40,75,63,842	1,41,71,73,173
Growth in Population	1.16%	1.09%	1.03%	0.96%	0.80%	0.68%

[Formula= [(change in value)/original value] × 100]

(Source: Agriculture Production data (IBFE), 2023) & Population Data (macrotrends.net, 2023) details are extracted from the chart of Agri Production

Figure No. 3



(Source: macrotrends.net, 2023)

The above chart shows the foodgrains and sugarcane production(in mt.) from 2017-18 to 2021-22. Agricultural production has increased but the population also increased. The Figure and Table indicated the increase in population. So as per the projection shown in the above figure, it is projected to be 1670490596 in 2050. As an increasing population will have to manage through with sustainable goals. It will also impact the export because India has to fulfill its own need to feed their people. (ForumIAS, 2021)

2. Low Yield Levels of the Majority of Crops

lack of proper pre & post-harvesting, use of appropriate technology, lack of enough irrigation facilities and proper Research and Development the yielding of the crops remains much lower than the world average. so it impacts the productivity of agricultural production.

3. Decreasing Landholding

The majority of Indian farmers belong to the small and marginal category. Due to the division of the joint family, the land also gets divided, so the average land holding size in India is only 1.15 hectares. This is compounded by fragmented landholdings. The agricultural products produced were used majorly for their consumption. (ForumIAS, 2021)

4. Most of the Agriculture Depends on Monsoon

Serious look should be taken to the News published on (Last Updated on) Jun 19, 2022, in The Economic Times: [Poor monsoon could spell disaster for India's agriculture-based economy, say experts- The monsoon accounts for around 70 percent of the country's annual rainfall and irrigates 60 percent of its net sown area. Nearly half of the population depends on agriculture directly or indirectly. A bad monsoon invariably means bad crop production and inflation. An early onslaught of heatwaves has already impacted rabi crops, prompting the government to curb wheat exports and cut output predictions by roughly 5 percent — from 111.3 million tonnes to 106.4 million tonnes.] (The_Economic_Times, 2022).

It means that 40% of Indian agriculture depends on the monsoon so, we must eradicate this challenge and effort should be taken to bring this land into irrigation facilities. As well as indicates how it negatively impacts the export. Therefore dependency on the Monsoon should be decreased as the Israel has done.

5. Dependency on Agriculture for Livelihood

68% of the Indian population depends on agriculture. It creates an overburden on it, so income per capita decreases. Therefore, more dependency of the rural population should divert, or better alternatives should find out that can reduce the dependency on agriculture like rural entrepreneurship and Agro Truism etc.

6. Transportations & Storage Facilities

Agriculture products like fruits, vegetables, dairy products and other perishable products should be kept at a certain temperature or reached within time.

For export, the quality of the product should be maintained and it should be processed within time, so it requires fast transportation and storage facilities that can be delivered within time.

7. Technology and Innovation

As we see developed countries have emphasizes research and development activities so, that they can bring new varieties of crop that has more productivity than previous. The use of proper technology improves agriculture productivity. Therefore, Indian Agriculture export products have to maintain that quality, that can be accepted all over the world.

As well as better foreign export policies, govt initiatives, etc are other challenges before Indian Agriculture exports.

Ensuring food security and healthy diets for a growing global population:

The global demand is projected to be 1.2% per year over the coming decades. Hence it must be considered that the increasing demand must be fulfilled with the quality meal for the growing population (OECD, 2023).

8. Environmental Impact

The more we produce more we dump... the more agriculture production has large environmental impacts. Global greenhouse gas emissions from agriculture are projected to increase by 4 percent over the next ten years, mostly due to expanding livestock production (OECD, 2023).

Agricultural activity's greenhouse gas emission is 26%, 50% of the world's habitable land is used for agriculture, 70% fresh global water, 78% of the global ocean and freshwater eutrophication is caused by agriculture 94% of non-human mammal biomass is livestock, 71% of bird biomass is poultry livestock. Taking into consideration this, if sustainable practices are not done the impact of agricultural production will be alerting on the Environment and of course, it will negatively impact agricultural export (Roser, 2022).

Opportunities

India is the second largest exporter of agricultural production at US\$ 367 billion, yet India's share in the export market is minuscule. This indicates a huge opportunity in scaling up the exports.

As the cropping diversity and demand for textile, tea, coffee, leather, Ayurveda, beauty, rice, wheat, spices, fish, poultry, livestock and plantation etc. as per the global demand projection for agricultural production there is a huge opportunity to the agriculture production to grab it by producing a more standardized product.

Standardized farm inputs, quality assurance, traceability and certification to build connections to global value chains (GVCs) can help India reach the US\$ 100 billion milestone in agri-food exports in the next few years (Sharma, 2022).

India's spices and fruits are famous around the world for their high quality. India leads global production in several commodities. (Sharma, 2022).

Considering the Global demand for Indian Agricultural products have huge opportunities to fulfill this demand by producing more standardized Agri-products. to fulfill the growing global population Indian farmers have to improve their productivity. To feed this global growing population there will be a huge global demand. The prices of the exporting Agri-product will be competitive so, this will increase the income of the farmer. It has projected that the aggregate food availability to be grown by 4% over the next decade. It will reach over 3000 calories per person in a day (OECD, 2023).

CONCLUSION

Worldwide Indian Agriculture products are famous. Export of these products has certain challenges such as the increasing Population of India, Indian Agri-Products has the Low yield levels of the majority of crops, Decreasing Landholding, Most of Agriculture depends on Manson, Dependency on agriculture for livelihood, Transportations & Storage Facilities, Technology and Innovation, Ensuring food security and healthy diets for a growing global population and Environmental Impacts.

If the above-stated challenges have been solved on a priority basis, the Indian Agri-Export can get a boost. There are huge opportunities for the Indian Agri-Product to capture the Global Market by adapting International Standards because India has a huge diversified production. In this regards the government initiatives for the promotion of the Agri-Product are appreciable. The Agri-Export also helps to increase the foreign currency as well as it will increase the employment opportunities to the rural population. This can lead to the rural economy by improving farmer's income, remedy over rural unemployment etc..

REFERENCES

1. (agriexchange APEDA), A. &. (2023, January 12). Three Years Export Summary Statement (2019-20 To 2021-22). Retrieved from <https://agriexchange.apeda.gov.in>: <https://agriexchange.apeda.gov.in/indexexportstatement.aspx>

2. (APEDA), A. &. (2022, January 12). Agriculture Export Policy. Retrieved from https://apeda.gov.in/https://apeda.gov.in/apedawebsite/about_apeda/Agriculture_Export_Policy_27.01.2021.htm#Introduction
3. Department of Agriculture, C. &. (2020-21). Annual Report 2020-21. New Delhi-110 001: Department of Agriculture, Cooperation & Farmers, Ministry of Agriculture & Farmers' Welfare, Government of India, Krishi Bhawan, New Delhi-110 001.
4. ForumIAS. (2021, January 14). Agricultural Exports- India's potential, initiatives, challenges and solutions. Retrieved from <https://blog.forumias.com/https://blog.forumias.com/agricultural-exports-indias-potential-initiatives-challenges-and-solutions/>
5. IBFE, I. B. (2023, January 12). Agriculture and Food Industry and Exports. Retrieved from <https://www.ibef.org/https://www.ibef.org/exports/agriculture-and-food-industry-india>
6. macrotrends.net. (2023, Jan 14). India Population 1950-2023. Retrieved from [macrotrends.net: https://www.macrotrends.net/countries/IND/india/population](https://www.macrotrends.net/countries/IND/india/population)
7. OECD. (2023, January 14). OECD Agriculture and fisheries. Retrieved from <https://www.oecd.org/https://www.oecd.org/agriculture/oecd-fao-agricultural-outlook-presents-production-consumption-trade-and-price-trends-for-the-coming-decade.htm>
8. OECD.org. (2023, January 8). OECD-FAO Agricultural Outlook presents production, consumption, trade and price trends for the coming decade - Global agri-food systems need to transform to reach SDGs by 2030 . Retrieved from <https://www.oecd.org/https://www.oecd.org/agriculture/oecd-fao-agricultural-outlook-presents-production-consumption-trade-and-price-trends-for-the-coming-decade.htm>
9. Roser, H. R. (2022). Environmental Impacts of Food Production. Retrieved from [https:// ourworldindata.org: https://ourworldindata.org/environmental-impacts-of-food](https://ourworldindata.org/https://ourworldindata.org/environmental-impacts-of-food)
10. Sharma, R. (2022, November 16). India's Agriculture Exports: Status and Challenges – Explained, pointwise. Retrieved from [https://blog.forumias.com: https://blog.forumias.com/agriculture-exports-status-and-challenges-explained-pointwise/](https://blog.forumias.com/https://blog.forumias.com/agriculture-exports-status-and-challenges-explained-pointwise/)
11. The_Economic_Times. (2022, June 19). Agriculture. Retrieved from [https:// economictimes.indiatimes.com: https://economictimes.indiatimes.com/news/economy/agriculture/poor-monsoon-could-spell-disaster-for-indias-agriculture-based-economy-say-experts/articleshow/92314973.cms?from=mdr](https://economictimes.indiatimes.com/https://economictimes.indiatimes.com/news/economy/agriculture/poor-monsoon-could-spell-disaster-for-indias-agriculture-based-economy-say-experts/articleshow/92314973.cms?from=mdr)
12. tradingeconomics.com. (2023, January). <https://tradingeconomics.com/>. Retrieved from India - Rural Population: <https://tradingeconomics.com/india/rural-population-percent-of-total-population-wb-data.html>

ROLE OF SUSTAINABLE RURAL AGRICULTURE DEVELOPMENT

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ABSTRACT

India is an agricultural country. India is a country of villages. The atmosphere of the agricultural and village area with various qualities like natural environment and endowment natural resources, fresh and healthy air, mountain valleys, rivers, cows and calves, green forest trees, healthy and clean environment etc. But in reality, the villagers, the farmers and farm laborers involved in this business are facing the various problems due to various reasons. Like poorness, indebtedness, lack of knowledge and absence of professional attitude of the Farmers. They have been facing various issues and problems from many years and are facing inherent critical financial situation. Mahatma Phule's described of various problems of the farmers in his book "Shetkaryacha Asood" which is applicable even today also.

However, to overcome this situation, the concept of "Sustainable Agriculture" came into the limelight a few days ago. The government gave special importance to this concept and aimed to make efforts for the sustainable development of farmers and agriculture. But the government did not succeed as much as he wanted. However, the researcher has tried to study why sustainable development of agriculture is important in this article.

Keywords: Sustainable Development, Indebtedness, Professional Attitude, Occupation, Employment, Agro-Allied Agro Industries, Irrigation.

INTRODUCTION: AGRICULTURAL OCCUPATION IN INDIA

India is an agrarian country, this occupation has predominantly occupied with 69 % for their livelihood so the people still living in rural areas. Near about 60% of employment is available in agriculture and various agro-based businesses. The industrial sector of India is also depends on agriculture for its raw materials. The industrial agricultural goods processing sector is depends on this sector. In short, agriculture business is a very important which plays vital role in the Indian economy, that's why it said that India is an agrarian country. However, it ranks second in agricultural production in the world. As mentioned above mainly more than 60% of rural households are dependent on agriculture. On the employment side, more than 60% of the total employment in the country comes from agribusiness and agro-allied processing industries. Therefore, agriculture is still the biggest source of livelihood for most of the families. Farmers play a unique role in the economy.

But despite this, the same farmer sector has been facing many problems from the last three decades, such as changing climate, drought conditions, heavy rains, agricultural produce sale and market problems, dealer's network of brokers, increased prices of chemical fertilizers, seeds and agricultural equipments. as a result, most of the farmers are indebted. In a state of extreme poverty and the quality of life has deteriorated. Moreover, the global Covid-19 epidemic that occurred two years ago has added to many problems of farmers. Therefore, there is a big decline in the financial resources of the farmers. As a result, many farmers are committing suicide. However, Marathwada and Vidharbha in Maharashtra state are always said that areas affected by farmer suicides. In the monsoon session of the state legislature, on July 19, 2022, the opposition leaders informed that 137 farmers had committed suicide in the last 45 days. Of course, more than three farmers commit suicide every day.

According to the 2016 NSSO report, the average annual income of Indian farmers is around Rs 77,112. In this, only 50% or less of the family income of the farming family comes from agriculture. Therefore, the farmer family has to use other secondary sources of income apart from agriculture to survive. Income of farmers from agriculture has declined, many families have to do other jobs they can in the form of small commercial jobs, service sector jobs, daily wages jobs - industries, vehicle drivers, security guards, hawkers, small shopkeepers, dairy business, animal husbandry etc. for their livelihood. But due to Covid-19 period of lockdown, many farmers have lost their second source of income. Therefore, the previous critical situation is seen has re-increased. Due to increased cost of investment in agriculture and low return for farm produce, many farmers are trapped in vicious cycle of indebtedness.

Most of the farmers try to obtain the loans from various banks, societies, private moneylenders, micro finance companies to save agriculture which is the source of livelihood in rural areas and to provide livelihood.

However, the institutions that provide government loans to farmers often refrain from providing loans. Therefore, recently micro finance companies (private lending institutions) have come forward to provide loans in rural areas but charging high rate of interest. By taking loans from these various institutions, if the loan cannot be repaid from the returns of the agricultural produce, there are instances of suicides due to indebtedness. They have not a good house to shelter. There are no good clothes to wear. They can't spend much on health. The stigma of indebtedness is already attached to the family. They can't give good education to their children. Even if you work hard every day in your life, your stomach is not full. Many problems can be said in the case of these farmers, such that the standard of living and lifestyle cannot be improved. They can't sleep worrying about tomorrow. Most of the farmers are trapped in such a hopeless situation. The farming class is in the mindset to get rid of this situation.

OBJECTIVES OF THE STUDY

- 1) To study agricultural business and problems related to this business,
- 2) To study the solutions to the problems in the agricultural sector,
- 3) Finding businesses that complement and support agribusiness,
- 4) To study basic infrastructural facilities agriculture and rural sector,
- 5) To study the Government schemes related agriculture and rural sector.

HYPOTHESIS OF THE STUDY

- 1) There is no right and price guaranteed market for selling agricultural produce,
- 2) Due to high farm expenditure and unstable income, many farmers become indebted.
- 3) Constantly increasing expenditure on agriculture is the main reason for declining income in Agriculture business.
- 4) Labor problem in agriculture business, and due to mechanization, agriculture activities leads to increased expenditure.
- 5) Increasing indebtedness of farmers is critical problem.

RESEARCH QUESTIONS

- 1) There is no right and price guaranteed market for selling agricultural produce.
- 2) Due to high farm expenditure and unstable income, many farmers caught in the clutches of indebtedness.

Increasing Indebtedness is the Critical Problem

According to the 2011 census report, nearly 80 percent of farmers in India work on less than five acres of land. Therefore, small farmers are the backbone of agriculture occupation. Despite this, agriculture has become an expensive occupation. Many small farmers have to rely on other sources of income to sustain their livelihoods and break out of the cycle of poverty. As a result, many farming families are moving out of agriculture for other sources of income. Second, risks from both climate change and the commodity marketing system are making the livelihoods of smallholder farmers increasingly increasing day by day.

Increased cost of investment in agricultural inputs, lack of irrigation system, drought, heavy rains, floods, disease and failure of return of agricultural inputs all contribute to unavailability of agricultural occupation and indebtedness of farmers. In addition, factors such as unfavorable government policies and unfair practices of agricultural produce in the market are reducing the income of farmers. There is no right and price guaranteed market for selling agricultural produce.

Due to high expenditure on agriculture (investment in agriculture) and unstable income, many farmers are further become indebted.

How to Overcome from this Critical Situation?

Despite the productivity potential of the agricultural sector, low productivity in agriculture contributes to hardship and poverty among farmers in India. Scientific knowledge should be available in agriculture on the problem of low productivity. Strict and professional management and planning of agriculture should be there, avoiding unnecessary expenditure in investment, mechanization of small farms, agriculture related business, improvement of market system, development of decentralized form by creation of agricultural processing industry, farmer-centric policy making etc. Such a number of measures can be taken.

Second, to help farmers improve their production, manage agricultural inputs more efficiently, increase product quality, guide them to adapt to climate problems and protect natural resources, as well as efforts to improve agricultural productivity and storage capacity, establish storage centers for agricultural commodities, change

cropping patterns according to changing climates and environment. It has become necessary to bring about, increase cooperative-group farming, implement innovations of public-private investment in agricultural units, and promote food processing industries at the local level. Agriculture related factors have to be brought to the periphery by placing farmers at the center of the agricultural value chain.

Government policies focusing on agriculture, resources, irrigation and rural livelihood development are also expected. Provisions made in the budget for agriculture, new technology, contribution to innovation, poverty alleviation efforts, agricultural infrastructural development must be actual expenditure. Recently, through 'Agrovan', we are seeing stories of farmers who have succeeded in agriculture and agriculture related fields based on the personal efforts of active farmers and the benefits of various schemes from the government. Millions of similar success stories must be created, So that they will be a guide to other farmers. There will be positivity in agriculture sector.

There is a Need for Sustainable Development in Agriculture Occupation

As the above mentioned various problems in agriculture occupation, it cannot be forgotten that this business is the backbone of the country's economy. Because the population of India is the highest in the world, and the sector works to supply food grains to the government and the rest of the people for their food security. So this business must be maintained and sustained. The farmers of the country must survive. Therefore the Central and State Governments must make efforts for the development of this sector. Infrastructure should be developed for development of sustainable agriculture. Nowadays, tractors, threshing machines, sewing machines etc. are used in agriculture, as a result of which the cost of agro activities and sowing increases. Many families from rural areas are migrating to cities instead of working in agriculture, and there is a shortage of labor in agriculture. As many large farmers are unable to find labour which facing labour scarcity. The family grows, agro holding becoming small due to partition in the family which cause to small holding. So small farmers are seen leaving the farming business and settling elsewhere due to rising costs.

Agriculture in most parts of the country is dependent on rainwater and monsoon, if little water is available, then the problem of electricity. The problem of electricity in rural areas is very bad. However the government should provide free or very low cost electricity to the motor pump in Agri sector. Schemes like "Save the water, store the water" (Pani Adwa Paani Jirwa), should be promoted among the rural people. Farmers should be connected to the market. Government should provide agricultural market. Different organizations should take initiative to get fair price for agricultural produce. Farmers should be forced to undergo training, agricultural universities and other research centers should be linked and interacted with farmers to bring vitality to this sector.

In short, since agriculture is the main business of the country, the agribusiness, which is losing money, should be given a commercial existence by developing basic infrastructure, so the government should introduce various schemes to make the agribusiness flourish, otherwise the farming class will suffer from permanent indebtedness and other problems. will have happened And while on the one hand the country dreams of becoming a superpower, the farmer will be in debt-ridden condition, resulting in depression in this business which may have worse consequences. Therefore, the basis of sustainable agriculture can be a lifesaver for agribusiness.

SELECTIVE REFERENCE.

- 1) "Agricultural finance by Commercial Banks" by K. Shivraj, A.P.H. Publishing Corporation, New Delhi, 2007.
- 2) The Indian Economy by Ishwar C. Dhingra, published by Sultan Chand & Sons.
- 3) Indian Economy and its Growing Dimension by P.K.Dhar, published by Kalyani publication, 2008.
- 4) 'Indian Agricultural in brief, 25th edition, 1994 Ministry of Agriculture, Govt.of India.
- 5) Institutional Finance & Rural Development, by Dr.Benson Kunjukunju, Sr.S.Mohan, published by New Century Publications-Delhi.
- 6) 'Agricultural Economics" by R, K, Lekhi, Jogindersingh, published by Kalyani Publishers, 2006.
- 7) "Agricultural credit, sources, problems and emerging issues", by Balwinder Singh, published by Deep & Deep publication Pvt.Ltd.
- 8) Economic and Political Weekly-Dec.2006, "Status of Agriculture in India" by Archana S. Mathur, Surjit, Das,Subhalakshmi Sircar.
- 9) "Aagro-one", "Sustainable Agriculture"research paper by Mr. Somnath Gholwe, learned farmers. Dt. 19th Jan, 2023

RECENT TRENDS AND TECHNOLOGICAL INVENTION IN AGRICULTURE SECTOR IN INDIA

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India**ABSTRACT**

This paper aims to analyse the level of adoption pattern of different technologies, as well as the constraints in scaling up these technologies across various commodities, and geographies. It goes on to highlight key conditions for the successful adoption and implementation of agricultural technologies. Agriculture has been evolving since the age of prime humans. As fast-paced technology has overtaken the world by storm, the department of agriculture is too not left aside. In such scenarios, the startups, a.k.a. new businesses, are innovating and competing along the line to make the world a better place with the help of new technologies such as the Internet of Things (IoT), Artificial Intelligence, machine learning, etc. In this blog, we will discuss the latest trends in agriculture in India along with starting up businesses leading innovation. Furthermore, recent innovations have brought positive change to the livelihood in societies. This has happened not only in India but also around the world. Discussing this, we will move forward to recent innovations in the field.

Keywords: Agricultural development, Modernization, Technological invention

INTRODUCTION

Agricultural development is the process of rational utilization of the country's agricultural resources, with special reference to improving the efficiency of agriculture and the living standards of the agricultural population. Agricultural development, through which modernization changes from conventional agriculture, consequently increases productivity and production per unit of various resources. Any major change in the agricultural sector affects the general economic situation and any progress in the agricultural sector therefore tends towards the economic progress of the whole country. Agricultural development in India varies from state to state depending on many factors.

REVIEW OF LITERATURE

Throughout history, technological innovations have had a significant impact on agriculture. S, Balakrishnan et.al (2017) Traditional farms are replaced with modern farms and various agricultural operations that were practised few decades ago were replaced with advanced technologies such as devices, locomotive machines, sensors and information technology. Current agriculture technology uses robots for various machinery activities, temperature and moisture sensors for deduction of soil type, aerial images and GPS technology for assuming the location of land fields. Upendra, R S (2020) survey of technology usage in agriculture, it can be observed that there are numerous approaches that can be used for improving the quality and quantity of crops. In contrast to other developed countries, in India it is a big challenge to achieve the anticipated growth due to non-maintenance of resources on which the production systems depend. Various elements influence the successful use of quality farming

OBJECTIVES OF THE STUDY

The present study has been conducted on the following concrete objectives.

1. To study the recent trends in agriculture sectors in India
2. To study the present status of technological innovation in Indian agriculture

METHODOLOGY

The study was mainly based on secondary sources of data. The required data was collected from the various book and research journal and government agencies. The present study is depending on secondary sources of data it attempts to investigate trends and technological innovation issues of agricultural development among the farmers in the State of India. It tries to explore how various factors of modernization and development affect both life and agricultural economy of the farmers in India, so that it can provide some glimpses regarding how farmers use technology to keep pace with the overall agricultural development of the country and the state

RECENT TRENDS IN AGRICULTURE

Although many of the latest trends in Indian agriculture have brought positive changes in this world, we will only discuss a few trending of them in detail

DIGITAL AGRICULTURE

Digital agriculture is the use of new and advanced technologies, integrated into one system, to enable farmers and other stakeholders within the agriculture value chain to improve food production. In comparison with conventional and sensor based approaches, an advanced approach termed as digital agriculture can help the farmers to understand their agricultural practices in a much better and effective way in a real time manner. Thus, digital agriculture holds profound impact on the crop yield enhancements, by empowering the formers with required scientific knowledge to implement good agricultural practices

INCREASE IN PRODUCTION OF FOOD GRAIN

Due to the Green revolution in India, the production of food has significantly increased. This revolution began in 1967 under the leadership of Congressman Shri Lal Bahadur Shastri. The aim was to increase food production in mainly three states in India, i.e. Punjab, Haryana, and Uttar Pradesh. The state of Punjab excelled in the implementation of the idea and is oftencalled the bread basket of India. And it was successfully achieved as new DNA-modified varieties of food grains was introduced. Thus, this trend has left its impact in terms of better-yielding varieties of food grains, drought-resistant varieties of crops, etc. This was and is the latest trend in agriculture in India. On a yearly basis, due to research and development, newcrop varieties are introduce.

DIVERSIFICATION IN AGRICULTURE

The diversification in agriculture was a much-needed change to improve soil fertility and quality while there was a rush for crop production. Diversification of agriculture usually consists of the growth of horticultural crops, vegetables, oils, nitrogen-fixation plants, etc. This is one of the latest trends in agriculture in India. This is a much-needed change as this latest technology trend also needs a label.

HORTICULTURE AND ITS OUTPUT IN THE PRESENT SCENARIOS

Due to India's wide variety of soil conditions and textures, horticulture is constantly growing. According to reports, India is the second largest producer of vegetable crops and the largest producer of fruits in the world. This latest trend in agriculture in India is growing withthe flow. Therefore constituting a large part of India's GDP.

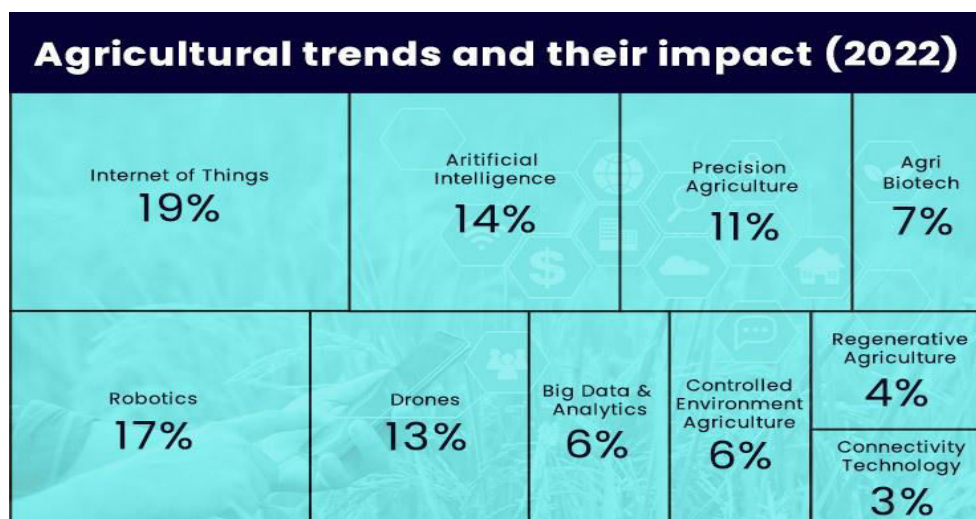
FLORICULTURE AND ITS INCREASING EFFECT ON THE INDIAN ECONOMY

Floriculture is one of the latest trends in agriculture in India, with a contribution of INR 266 Billion. As the technology relating to agriculture is improving day by day, flower production, a.k.a. floriculture, is improving day by day. As per reports, in floriculture around 31000 hectares of land in southern states of India involved.

TECHNOLOGICAL INNOVATIONS IN AGRICULTURE SECTOR

There are many recent innovations that might drive you crazy (if you're a farmer, of course). However, we have sorted some latest trends in agricultural technology in India. These technologies are changing the reality of agriculture in real time. Furthermore, these have the potential to change the future of agriculture.

In the below statistics, you get to know about the impact of the top 10 Agritech trends and innovations in 2022. This review includes the technologies related to: (i) genetic enhancement, (ii) natural resource management, (iii) farm mechanisation, (iv) conservation agriculture, (v) climate smart agriculture, (vi) biotechnology and genetic modification, (vii) biofortification, (viii) frontier technologies and (ix) digital technologies. The explore the adoption of such technologies through the lens of identifying adoption barriers, and how the adoption of such technologies impacted the agriculture sector, farmers' welfare, naturalresources and the environment.



INTERNET OF THINGS

The Internet of things is defined as the use of synched data on various platforms to exchange necessary information in real-time using the internet. Conventional farming requires a large amount of labour and time to monitor crops. Hence, the Internet of things changes this whole scenario and makes it real-time by using the technology. Let us tell you how. A large amount of information is collected by the use of sensors like soil humidity and temperature sensors, plant and livestock tracking sensors, etc. These sensors provide real-time information to farmers on their mobile devices. Hence, this latest technology is the latest trend in agriculture in India

AGRICULTURAL ROBOTICS

Agricultural robotics is taking shape in Indian agriculture. Although the concept has been roaming for a long period of time. The businesses involved in the technology are making serious efforts now. This latest trend in technology is used for seeding, fruit picking, harvesting, planting and much more applications.

ARTIFICIAL INTELLIGENCE

Incorporating artificial intelligence in farming provides real-time data to farmers. Henceforth, this technology has only given the farmers the real-time information they need, like the weather data, crop yield and prices. This enables farmers to make informed decisions. Furthermore, with the help of this technology, timely correction and corrective response are possible.

DRONES

Drones are mainly used to monitor crops, spray fertilizers and pesticides, etc. They are called unmanned aerial vehicles, and they are as per their definition. This latest trend in agriculture and agricultural technology is revolutionizing the farming tech by reducing the amount of labour required to grow a crop. The company below works on the same technology using its full potential. Equinox's Drones is an Indian startup that focuses on UAV (Unmanned Aerial Vehicle) surveillance of crops through modern technologies like ortho-mosaic maps, 3-D point clouds, contour maps, etc. The startup collects and processes images from crops and analyses them. This helps them determine the potential threat to the crops and the potential yield of the season. This latest trend in agriculture technology is bringing vital change in rural and urban areas in India.

CONCLUSION

We have discussed the latest agriculture trends in India and the start-up businesses leading innovation. Also, we discussed the various aspects of the latest trending technologies in India. Furthermore, we too, discussed some Indian startups involved in the same. Building on GPS technology are swath control and Variable Rate Technology VRT. This is where guidance really begins to show a return on investment. Swath control is just what it sounds like. The farmer is controlling the size of the swath a given piece of equipment takes through

the field. This video is a great visual representation of how swath control works. There is a wide gap between the technologies developed at the research institutions and their applicability at the farmer's field. Choice of variety, seed treatment, nursery raising, field preparation, time and method of transplanting, nutrient management, weed control, irrigation schedule, foliage pruning etc. have bearing on production

REFERENCES

1. Self, Sharmistha and Richard Grabowski. 2007. —Economic Development and the Role of Agricultural Technology *Agricultural Economics* 36 (3): 395 – 404.
2. S, Balakrishnan & Janet, J & Prof, Asso & Sachinkanithkar, R & Reshma, D. (2017). Technological Innovations for Agricultural Developments through Information Communications Technology (ICT). *CSI Communications*. 41. 10-13.
3. Upendra, R S & Umesh, I M & Varma, R B & Benchamardimath, Basavaprasad. (2020). Technology in Indian agriculture -a review. *Indonesian Journal of Electrical Engineering and Computer Science*.
4. P K Joshi and Deepak Varshney (2022) *Agricultural Technologies in India: A Review*, NABARD Research and Policy Series No. 5/2022
5. New Technologies in Agricultural Development, Kurukshetra, *A Journal of Rural Development* Vol. 62 No. 8 Pages 52 June 2014
6. <https://thestartuplab.in>
7. <https://www.ibef.org>
8. <https://www.outlookindia.com>

ROLE OF MODERN TECHNOLOGY IN AGRICULTURE DEVELOPMENT

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ABSTRACT

This is a research paper, in which the researcher has made an attempt to underscore the Role of technology in agriculture development of rural areas. Technological up-gradation and inclusive growth have been focal development points in rural India. Higher and better productivity, socio-economic equality, harmonizing modern technology, and sustainable growth can be considered the pillars for a nation's progress.

Technology in today's world has become imperative in all areas whether they are education, healthcare, business, transportation, industry, management, administration, banking or rural development. Technology mainly is concerned with the usage of computers and software applications. It has several meanings such as machinery, equipment, tools, skills, knowledge and expertise. For the development of rural areas, the utilization of technology has been done on an extensive scale and there has been expansion and progress in the field of agriculture because of effective implementation of technology.

Keywords: Rural Development, Technology, Information Technologies in Rural Areas

INTRODUCTION

Agriculture is regarded as a primary occupation of the individuals in rural areas. To feed the increasing population, it is essential to introduce modern and innovative techniques in the agricultural sector. New technologies are required to encourage the yield frontiers to an advanced stage, make use of the inputs resourcefully and diversify to a more sustainable and higher value cropping patterns. These are all knowledge intensive technologies that require both a strong research and extension system and skilled farmers. Technology is termed as the learning, planning, progressing, implementing, supporting or administering of computer-based information systems. Technology has played an essential role in the development of rural areas. Technology's major function in rural development is to provide individuals with information of any kind, the reason being, they need information, because it is indispensable for development. Information and communication technology can help in enhancing the educational opportunities of the rural people by utilizing distant learning methodologies and appropriate curriculum and instructional techniques.

RESEARCH METHODOLOGY

The secondary data are collected through government records, Articles, Journals, Survey reports, Research Data and Websites information.

OBJECTIVES OF THE STUDY

To know the role of technology in agriculture sector

To focus on features of new agricultural policy

To know the status of agriculture sector

AGRICULTURE

Rural India is home to 65% of the total population of our country. Center for Monitoring Indian Economy (CMIE) data from the consumer pyramid household survey shows the share of agriculture in total employment has gone up from 35.3% in 2017-18 to 36.1% in the year 2018-19 and further to 38% in 2019-20. The Center has promised to work shoulder-to-shoulder to implement specific schemes and technological advancements in agriculture.

In April 2016, the Government of India launched e-NAM (National Agriculture Market), an online platform for farmers that integrates agricultural markets pan-India with a theme of one nation, one market. The platform aids farmers and traders to view all Agriculture Produce Market Committee (APMC) related information, commodity arrivals, and buy and sell trade offers, thus helping farmers bid for the best prices across markets. The objective was to promote uniformity in agricultural marketing and remove the information asymmetry

between the buyers and sellers. The number of registered farmers has risen to 1.66 crores, while 1.28 lakh traders transact on this platform. More than 1000 Farmer Producer Organizations (FPOs) have also been enrolled on this platform.

The government is also investing in mapping all of India's aquifers. The National Program on Aquifer Mapping and Management (NAQUIM) aims at 3D mapping the aquifers and characterizing them in terms of quantity, quality, and spatial and temporal distribution of water level and resources. The Jal Shakti Abhiyan primarily focuses on saving and conserving rainwater for creating appropriate rainwater harvesting structures in urban and rural areas of all the districts in the country.

The union budget of 2022 has also pushed for an array of digital technologies and drones to propel growth in the farm sector. The promotion of drones to monitor the produce and spray insecticides will help scale up precision farming massively.

THE FEATURES OF THE NEW AGRICULTURAL POLICY ARE:

1. Greater private sector participation through contract farming.
2. Price protection for farmers.
3. National agricultural insurance scheme to be launched.
4. Dismantling of restrictions on movement of agricultural commodities throughout the country.
5. Rational utilization of country's water resources for optimum use of irrigation potential.
6. High priority to development of animal husbandry, poultry, dairy and aquaculture.
7. Capital inflow and assured markets for crop production.
8. Minimize fluctuations in commodity prices.
9. Adequate and timely supply of quality inputs to farmers.
10. High priority to rural electrification.

ROLE OF TECHNOLOGICAL ADVANCEMENTS THAT HAVE INNOVATED AGRICULTURE:


- 1. Drones:** Drones are being extensively used for mapping, surveying, and crop monitoring. They help in collecting data that can be used for the planning and execution of farming activities.
- 2. GPS Technology:** GPS technology is widely used in precision farming. It helps in locating the field boundaries and applying fertilizers, pesticides, and herbicides accurately. This reduces wastage and increases efficiency.
- 3. Satellite Imagery:** Satellite imagery is used for weather forecasting, crop monitoring, and yield analysis. It helps farmers take timely decisions regarding irrigation, cropping patterns, etc.
- 4. Automation:** Automation has been widely adopted in agricultural processes like sowing, transplanting, harvesting, etc. This has reduced the dependence on manual labor and increased efficiency.
- 5. Soil Sensors:** Soil sensors are used to measure soil moisture levels, temperature and other factors that affect crop growth. The data collected by the sensors is transmitted wirelessly to the farmer, who can then adjust his or her farming practices accordingly.
- 6. Weather Monitoring:** Farmers can now access real-time weather data that can help them make decisions about when to plant, how to irrigate, and what type of crop to grow. This information can be accessed via weather apps or websites, or through dedicated weather stations on the farm.
- 7. Agricultural robots:** Agricultural robots are being developed to carry out various tasks on farms, such as milking cows, picking fruits and vegetables, and even mowing grass. These robots can work long hours without tiring, and can often do a better job than human workers.

CONCLUSION

The increasing role of technology in addressing these issues is the only way forward to a food-secure future. Technology can help save foreign exchange for countries, increase productivity, and lead to an improvement in the overall standard of farmer communities. India has a long way to go in adoption of modern farming practices through technology. The pace is slow and path-breaking efforts need to be made to educate farmers about the benefits to be had with technology. Technology in agriculture has the potential to truly lead India to be “Atmanirbhar Bharat” in all respects, and be less dependent on extraneous factors.

REFERENCE

1. Ananth, P.N., & Karthikeyan, M. (2014). Application of Science and Technology in Rural Areas (ASTRA):
2. Radhika Kapur* “Usage of Technology in the Agricultural Sector” June 2018 Pedagogy and Organizational Culture in Nursery Schools, Delhi University, New Delhi, India.
3. The Monthly Journal ‘Kurukshetra’ Ministry of Rural Development Vol. 62 No. 8 Pages 52 June 2014.



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