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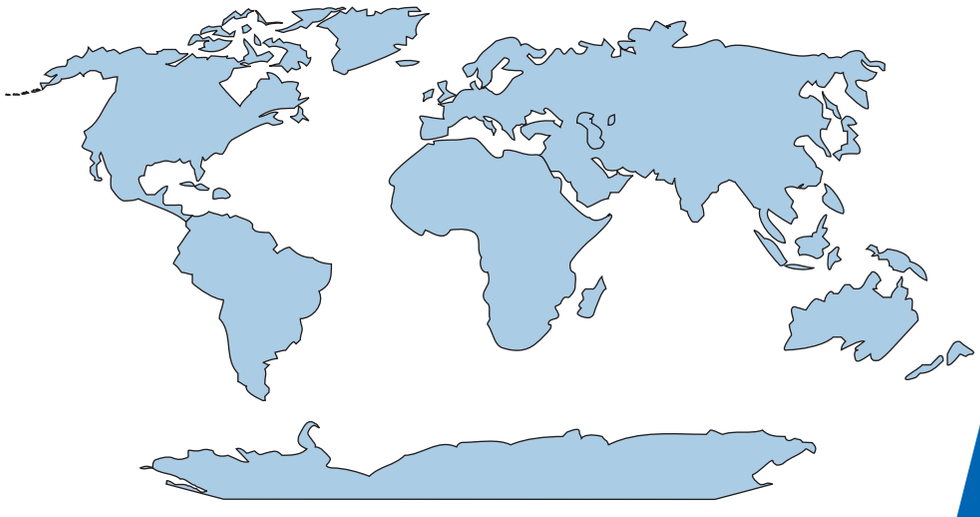

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January - March 2018

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21st February 2018

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The second international conference is called at the time of great transformation in the domain of international business, finance, operations and supply chain management (SCM). The neo-liberal economy set at different pace in order to sustain its fundamental objectives and operations. The nation states across globe are connected via trade blocs and agreements which are also administered by the multilateral trading systems such as WTO. The recent trends in European Union such as Brexit, emergence of TPP (Trans pacific Partnership) led by United States. BRICS's expansion and development Bank, China's growth as an alternate power, reverse logistics, demonetisation in India, reviewing silk route by Turkey and ever-growing trade imbalance between north and south are most happening contemporary events. The IPR (Intellectual Property Rights), IFRS (International Financial Reporting System), Environment & Trade, Ethical issues etc., are debated across globe. The international Organisations do their best in disseminating global issues which need to be documented, measured and researched. The basic objectives of the conference are to address above mentioned issues through drawing attention from academicians, intellectuals, researchers, student community for further debate.

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Research Papers

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A REVIEW OF LITERATURE ON INTERRELATIONSHIP BETWEEN STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH

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ABSTRACT
The role of stock market in the growth and development of an economy has become pivotal in recent years. The stock market operations have increased considerably in the recent years and have thus become an indispensable part of the world economy. A significant growth in the market capitalisation of stock markets has been witnessed globally in the past two decades. The relationship between financial development and economic growth has been defined in several studies but empirical and theoretical evidence pertaining to the clearly defining the stock market and economic growth's interrelationship is still limited. Growth–finance controversy is limited only to the examination of relationship between financial development (represented by only banking sector development) and real economy. The present paper aims in assessing the interrelationship between the two. The study summarises theoretical and empirical work from several papers, comprising various referred journals and reports, covering different economies and countries. The impact and variables for measuring stock market development and economic growth have also been identified on the basis of extensive literature review conducted.

Keywords: economic growth, financial development, interrelationship, market capitalisation, stock market development

1. INTRODUCTION
Stock market is indispensable for the economic growth of a country. It can be used as an indicator to assess the growth of a country's economy. As per Liua and Sinclair (2008), the dramatic and dynamic changes in stock market in recent years have garnered the attention of both decision makers and academicians' .The suitability of stock market as a predictor of economic growth has been an issue of debate for long. (Mun.et.al. 2008) in his study opined that considerable increase or decrease in stock market indicates future growth or recession in economy. Matadeen and Seetanah (2015) in their study in Mauritius using VECM concluded that though in short run stock markets fail to boost economic growth yet they help to significantly accelerate pace of economic growth in long run. Naik and Padhi (2015) undertook a panel data study on 27 emerging economies using Panel regression and Granger causality method .They reported the presence of unidirectional causality and added stock market development significantly boosts economic growth. Owusu and Odhiambo (2014) conducted a study in Ghana using Wald Statistics and ARDL and concluded that liberalisations of capital account and growth of stock market fail to have a positive effect on economy in long run. The world recession due to the 1987 stock market crash and the 1997 Asian crisis raised doubts regarding the credibility of financial markets in predicting growth of the economy.

In past, many such studies have emphasised mostly on contribution of financial development thereby ignoring the role of financial market. The contribution of stock market in emerging economy like India has increased manifold since its inception. As activities of stock markets have direct impact on several other sectors of the economy, it has attracted academic interest of researchers to study its increasing role and importance .Stock markets have assumed increased importance in policy formulation and transmission. The present paper aims at assessing nature and degree of association between growth of economy and stock market. The paper is basically divided into four sections. Methods and materials are discussed in first section, followed by literature review, third section is about discussion and findings and finally last section deals with conclusion of the study.

2. METHODS AND MATERIALS USED
The present study adopts a three pass approach developed by Keshav for conducting the literature review. It eliminates unnecessary and inferior studies in the first two passes and conducts a detailed analysis of potential studies in the third pass. The process of conducting three pass approach can be diagrammatically expressed as:

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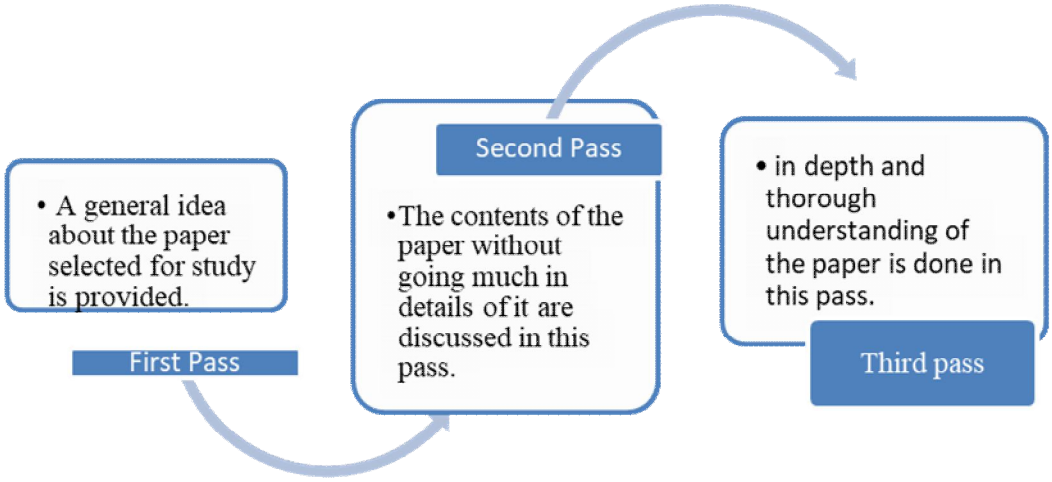

There are unique goals to be achieved in each pass and path for the next pass is also identified. In the first pass by merely having a bird's eye view, a decision of further proceeding with the paper is taken. On the basis of category, context, correctness such as assumptions, clarity and contributions made, the paper is analysed. In the second pass, paper is summarised and key points are highlighted, so that it can be conveniently explained to anyone with the help of supporting evidence. If the conditions are found suitable, the third pass is conducted. An attempt is made to virtually recreate the paper by putting oneself in place of the author in third pass. The paper is reconstructed by the reader in his own way by considering and challenging the same assumptions as taken in the paper. In order to conduct the three pass approach firstly five recent papers in the area were identified. This was followed by identifying those papers which had repeated citations in the bibliography. Finally the key researchers, along with the websites and conferences where their papers were published were also identified to conduct the detailed literature review.

3. LITERATURE REVIEW

As an outcome of extensive research conducted for measuring the impact that variations in stock market can have on economic activity, two crucial viewpoints arise. Studies for assessing relationship between them through financial intermediation show ambiguous results. (Schumpeter,1932 and McKinnon, 1973). The way economic growth is impacted through development of stock market can be summarised as under on the basis of the results of the studies:

a) Positive impact b) Negative impact c) No impact

On basis of direction of causality, the results can be classified as i) Unidirectional causality (Stock market to economic growth and vice versa). ii) Bidirectional causality between the two.

The relationship existing between growth and finance is primarily classified into four different schools of thought. First are supply leading hypotheses advocating the fact that economic growth occurs as a result of financial development. Many theoretical and empirical studies support the above fact. (Chakraborty and Ray, 2006 and Beck and Levine, 2004).On the contrary, some researchers disagree by saying that volatile and arbitrary nature of stock market, macroeconomic instability due to sudden economic shocks negatively impact economic growth. (Lucas,1988 and Singh,1998).

Demand following hypothesis is dealt in next school of thought. As a result of increase in the economic growth, demand for financial services also arises. To meet the increasing demand of financial services, new financial institutions emerge. Therefore economic growth promotes stock market development. (Pradhan et al.2013 and Patrick, 1966).Third is a feedback hypothesis which combines features of both supply leading and demand following hypotheses. It believes financial development induces growth of economy which in turn accelerates the pace of financial development. (Greenwood and Smith, 1997).Lastly few studies even suggest of whatsoever no causal relationship between the two. Further a negligible effect of development of stock market on economic growth is seen in few studies. (Rioja and Valev,2014; Seetanah et al., 2012; Anwar and Sun, 2011)

3.1. A POSITIVE IMPACT

Ikikii & Nzomoi (2013) in their study on Kenya used VAR and Granger Causality test. They considered market capitalisation and turnover ratio as measures for development of stock market and GDP for measuring growth of economy. They concluded growth of stock market is correlated positively to economic growth in Kenya. In a study on a sample of 41 countries using time series regression, Levine and Zervos (1996) took market

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capitalisation, turnover ratio, liquidity, GDP, secondary school enrolment, income level and political instability as variables. They empirically concluded that economic growth is positively impacted as a consequence of growth in stock market.

Agrawalla and Tuteja (2007) used monthly data for period from 1990 to 2002 and considered market capitalisation, Index of industrial production, turnover ratio and bank credit to commercial sector as variables of a study conducted on India. Long run causality and increasing sophistication of stock market, positively impacting economic growth was seen in the study. Jahfer and Inoue (2014) used quarterly data from 1957-2001 and applying Vector error correction model concluded of an equilibrium relationship among three variables namely growth of both economy and stock market and financial development in long run in Japan. Market trade openness and access to larger markets leads to more competition, thus stimulating economic growth. (Bonfiglioli,2005).

To study the association between stock prices and growth of the economy Liua and Sinclair (2008) conducted a study on Greater China. Results showed in short run one way causality moves from stock market to economic growth and in long run direction is just reverse direction in long run .Studies have emphasised on the fact that effect of macroeconomic variables and economic growth is reflected in prices of stock.(Ritter, 2004 and Mauro, 2003;). Ahmad et al (2011) in their study, post liberalisation (1990) on Pakistan and Bangladesh stock exchanges found a positive impact of stock market on the economic growth. Further, market capitalisation had strong influence on Pakistan whereas liquidity and small size were dominant factors for influencing the economic growth in Bangladesh positively. Demirguc-Kunt and Levine (1996) researched various attributes of stock markets contributing towards economic growth. The internationally diversified stock markets promote economic growth through risk diversification and channelizing investments towards productive uses. Ranjan and Zingales (1998) in their panel regression analysis performed on 24 countries and 36 industries arrived on the conclusion that externally financed industries flourish more in countries where the level of financial development is high. The stock market generated liquidity resulting in capital generation, allocation and investment to firms. (Paudel,2005). In the developing countries domestic savings promotes economic growth through stock market. This has been well explained by the detailed literature review done by (Lean and Song, 2009). Greenwood and Smith (1997) opined that decreasing the cost of mobilising savings, large stock markets aid in increasing investment in productive technologies. (Rousseau and Wachtel, 2000 and Beck and Levine, 2003) state stock market development and real GDP per capita growth are highly correlated. Moreover stock market and banking development both contribute towards predicting economic growth, though in different ways.

Various arguments favour the fact that growth of equity market results in growth of the economy. Firstly, a developed equity market promotes economic development through increase in domestic savings by lowering the cost of foreign capital and increase in liquidity. (Neusser and Kugler, 1998).Secondly incentives given to managers for promoting investments of the firm through equity market also help in economic growth. (Dow and Gorton, 1997).Thirdly according to (Acemoglu and Zilibotti, 1997) developed equity market provides the opportunity to firms to diversify their portfolios and increase their productive efficiency. Lastly through generation of information regarding technology and entrepreneurs' innovative ability (King and Levine, 1993), developed equity markets aid in rapid economic growth. A well developed stock market encourages savings and efficient allocation of capital. The stock market provides altogether a different set of services different from banking, thus providing a boost to growth and savings. (Levine and Zervos, 1996).The nexus between prices of stock and economic growth have been emphasised in the traditional models. This nexus has been well supported through traditional valuation models of stock prices and 'wealth effect given by (Comincioli and Wesleyan, 1996). Benchivenga, Smith and Starr (1996) and Levine (1991) pointed out that stock exchanges provide liquidity by positively increasing the investments in new real estate. Investors prefer investing in common stocks due to their easy marketability, thus motivating the corporate to raise their funds through public, ultimately leading to economic growth. (Holmstrom and Tirole ,1998) stated that liquidity in stock markets help to increase the incentives for investors by providing information to them about firm and corporate governance.

By using liquidity, volatility and volume of transactions as indicators of stock market (Deb and Mukherjee, 2008) conducted a time series analysis in India. Bidirectional causality between market capitalisation and real GDP growth and unidirectional causality between activity of stock market and real GDP growth was found. Further they added that, when backed by a sound financial system, liquidity in stock market would surely accelerate the process of economic growth. In Mauritius (Nowbutsing and Odit, 2009) by using analysis based on time series reported of a positive correlation between stock market development and economic growth in

long as well as short run. Liquidity and size were taken as stock market indicators and GDP as indicator for economic growth for the study.Across 40 countries Beck and Levine (2004) conducted a study to examine impact of banks and stock market on economic growth. By considering market capitalisation, value of shares traded and liquidity as stock market indicators and GDP per capita for economic growth, OLS panel regression analysis was done. They concluded that though stock markets and banks provide different financial services, yet both promote economic growth positively. In their study on 27 emerging economies, using VAR and considering capitalisation, aggregate price level, investment rate and GDP as variables for stock market and economic growth respectively, a strong and long term relationship between the two was found by Ibrahim (2011) in his study in Thailand .N'Zu´e (2006) concluded that stock markets help in jobs creation both directly and indirectly. A good telecommunication systems, developed financial institutions and banks are prerequisites for a well developed stock market.

3.2. NEGATIVE IMPACT

The existence of any kind of correlation between stock market development and economic growth was denied by traditional growth theorists. The direction of causality between economic growth and financial development was not very clearly explained in the studies. (Robinson,1952 and Lucas, 1988). The volatility of stock market resulted in market failure in developing countries, thus retarding the pace of economic development. The growth of economic development is prevented because of expansion of stock market activities. (Singh,1997). He further concludes that arbitrariness and high volatility in stock prices deter efficient allocation of resources for investment. Akyuz (1993) concluded that neither markets necessarily channelize resources to only productive uses nor financial deepening always leads to economic growth. It tends to increase speculation in the economy and may further retard economic growth as financial deepening may have negative impact beyond a certain extent.

Owusu and Odhiambo (2014) conducted a study in Ghana using ARDL and Wald statistics and didn't find any positive effect on economic growth as a result of development in stock market in long run. Ake and Ognaligui (2010) in their study based on time series data considered turnover ratio, total shares traded value , and stock market trade value as indicators of stock market and GDP for economic growth respectively. Using Granger Causality test, no influence and impact of Cameroon stock exchange on its economic growth was seen. By taking Wholesale price Index, stock price Index ,GDP and gross fixed capital formation of over half a century in India as variables for study, Sarkar (2006) in his study concluded of no long term relationship between total gross capital formation expressed as percentage of GDP and share prices both in real and nominal terms. In similar lines, Nagaraj (1996) in comprehensive study in Indian context empirically proved that rise in stock market activity is no way correlated to either the increase in financial or gross domestic savings. It was also found that post 1980s a decline in corporate profitability was witnessed and strangely the performance of small firms with no access to stock market was far better than large firms with access to the stock market.

4. DISCUSSION AND FINDINGS

From the extant literature review conducted, it was discovered that several variables were used to measure stock market development. It was found from the literature review that stock market capitalisation was most frequently used for measuring development of stock market . The total market value of all listed shares divided by GDP can be defined as stock market capitalisation. (Demirguc-Kunt & Levine, 1996). The market capitalisation was chosen as a variable because of its ability to not only diversify risk but also for mobilising capital positively.(Felix, 2006).Several authors like (Jahfer and Inoue , 2014, Ikikii & Nzomoi ,2013; Hossain and Kamal, 2010; Agrawalla and Tuteja ,2007;)have used this as an indicator in their study. Liquidity was the second major variable chosen for measuring the development of stock market. Liquidity could be defined as ease and speed with which investors can indulge in the act of buying and selling securities. (Levine and Zervos, 1996).Liquidity is strongly correlated with development of stock market.(Agarwalla and Tuteja,2007) . It was measured in two ways in the studies:

a) Total value of shares traded- It is nothing but total number of shares traded in stock market multiplied by their respective prices. (Ahmad .et.al, 2011) The justification given by researchers for selecting it as a measure of liquidity was because the size of the stock market transactions with respect to economy as a whole was represented through it. (Cavenaile et .al, 2014). Since liquidity measures the share of organised trading of equities, in the total national output , therefore it is also representative of liquidity on a economy wide basis positively.(Bismal and Kamaiah, 2000)

b) Turnover ratio. – In the studies, it was arrived by dividing the total shares traded value by market capitalisation (Atapathu and Prabhath, 2012). In the studies, it was also used as an indicator for comparing market liquidity and for representing the level of transaction costs. It was also believed to measure the size

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of securities market in relation to the stock market. (Ake and Ognaligui, 2010). Turnover ratio is a better representative of liquidity of stock market as compared to total shares traded value.(Bismal and Kamaiah, 2000).Some of the authors who have used liquidity as a measure of stock market development are (Agrawalla and Tuteja ,2007;;Ahmad et al ,2011; Paudel,2005; Benchivenga, Smith and Starr 1996; Deb and Mukherjee, 2008; Atje and Jovanovic, 1993; Nowbutsing and Odit, 2009; Carp 2012; Beck and Levine, 2004; Naik and Padhi , 2015). Benceivenga.et.al (1995) and Kyle(1994) stated that because of liquidity investors are motivated to invest in projects with short term duration which can be easily sold off before maturity, if the need arises. However (Bhide,1993 and Shleifer and Vishny, 1986) argue that increased liquidity lowers investors' incentive as they have to bear the increased cost of paying portfolio managers.

Few authors have also used Stock Market Index as a variable for measuring development of stock market. (Liua and Sinclair, 2008). It is a statistic representing the composite value of its components and representing the listing of stocks. The justification for choosing this as an indicator was that stock market could not be presented in a better way than any other financial indices. There is some commonality between the characteristics of all the component stocks. (Tettey,2008).

Volatility is another variable used by some of the researchers to measure growth of stock market. It is measured by fluctuations in the stock prices. The reason for considering it as a variable is that increasing volatility in the market discourages investors and firms to invest in the stock market. Few researchers like (Deb and Mukherjee, 2008; Singh, 1997) used volatility as an indicator for measuring stock market development. The increased liquidity causes volatility which prevents investment thereby reducing growth. The higher volatility increases the risk and causes upward pressure on prevailing interest rates. (Delong.et.al, 1989 and Federer ,1993)

The most commonly used variable by several researchers for measuring the economic growth was GDP. The annual growth in GDP at market prices expressed in local currency is called the GDP growth rate (Carp, 2012). GDP was taken as an indicator of economic growth as it measured the annual growth in standard of living of people of a country. Some researchers who have used GDP as an indicator for economic growth in their studies are (Naik and Padhi , 2015; Jahfer and Inoue ,2014; Carp, 2012; Antonios ,2010; Nowbusting and Odit,2009; Deb and Mukherjee, 2008; Liua and Sinclair, 2008; Bahadur G.C.and Neupane, 2006; Beck and Levine, 2004; Beck and Levine, 2003; Jefferis & Okeahalam , 2000; Rousseau and Wachtel , 2000; Atje and Jovanovic,1993).Index of Industrial Production as a measure of economic growth wherein the data of GDP was not available. (Gupta and Paramati, 2011; Hussainey and Ngoc, 2009; Ahmad 2008; Agrawalla and Tuteja 2007; Padhan, 2007; Neupane, 2006; Adjasi and Biekpe, 2005; Dritsaki and Bargiota , 2005)

For assessing association and causality between growth of economy and stock market Granger causality test was used by most of the researchers in their studies. (Naik and Padhi ,2015; Ikikii& Nzomoi, 2013; Carp ,2012; Lean and Song, 2009; Liua and Sinclair,2008 ; Agrawalla and Tuteja ,2007; Felix ,2006; Dritsaki and Bargiota, 2005; Filer.et.al .,2000) .The causality between prices of stock and economy was statistically tested through "Granger-causality" test which was given by C. J. Granger in the year 1969. He proposes that, Y would be caused due to X causes Y, provided past values of X predict Y's value better than by just using the past values of Y.(Comoncioli, 1995).

Engle and Granger developed error correction mechanism (ECM) for reconciling short and long run behavior of an economic variable .(Gujrati, 2009).If the variables are co integrated error correction mechanism can be used to model the long-run relationship between them.

(Atapathu and Prabhath, 2012).When a linear combination of two or more time series is stationary despite being non stationary individually ,there is an existence of co integration. So to study the long term or equilibrium relationship researchers have also used VECM and Co integration to test the nature of relationship. (Matadeen and Seetanah ,2015; Cavenaile .et.al., 2014; Jahfer and Inoue ,2014; Carp, 2012; Hossain and Kamal , 2010; Lean and Song , 2009; Liua and Sinclair,2008; Agrawalla and Tuteja , 2007; Felix , 2006; Jefferis & Okeahalam , 2000) The kind of relationship present between stock market and economic growth has also been found using panel regression analysis by some of the researchers.

Some studies conducted to study the causal relationship conclude development of stock market has positive impact on economic growth while few studies conclude that stock market negatively impacts economic growth.

Table-1: Studies on Impact of Stock Market Development on Economic Growth

Impact of Stock market development on Economic growth	Literature Support
Stock market's development Positive Impact on Economic Growth	Naik and Padhi (2015); Cavenaile, Gengenbach and Palm (2014); Ikikii & Nzomoi (2013); Kim.et.al (2012); Ibrahim (2011); Ahmad et al (2011); Anyamele (2010); Aboudou(2009); Vazakidis and Adamopoulos(2009); Brasoveanu .et al (2008); Deb and Mukherjee (2008); Amaral and Quintin (2007); Naceur (2007); Shahbaz (2007); Capasso (2006); Carporale, Howello and Soliman (2005); Dritsaki and Bargiota (2005); Paudel(2005); Blackburn et. al (2005); Mohtadi and Agarwal (2004); Beck and Levine (2004); Carlin and Mayer(2003); Calderon and Liu (2003); Creane et al (2003) ; Arestis et al. (2001); Rousseau andWachtel (2000), Tsuru (2000); Rajan and Zingales (1998); Greenwood and Smith (1997); Friedman and Schwartz (1963)
Stock market's development Negative Impact on Economic Growth	Owusu and Odhiambo (2014) ; Ake and Ognaligui (2010); Halkos and Trigoni (2010); Sarkar (2007); He (2006); Ram (1999); Singh (1997); Fry (1997); Corbett and Jenkinson (1994) ; Stiglitz (1994); Jappeli and Pagano(1994); Bhide (1993); Mayer (1988) ; Shleifer and Vishny (1986); Pearce (1983); McKinnon (1973); Shaw (1973)

5. CONCLUSION

A lack of consensus still persists among researchers regarding impact stock market development has on economic growth in different nations. A positive impact of development of stock market on economic growth was concluded in majority of the papers considered for study. Gurley and Shaw (1955) opined that capital accumulation was promoted by well developed stock markets, thereby promoting efficient allocation of resources, thus accelerating the process of economic growth. With the growth in economy, demand for financial services and institutions increases, further boosting the financial markets' development along with the stock markets. A different view regarding the relationship between stock market development and economic growth was also suggested through the review of literature conducted for the study. It was argued by some researchers that development of stock market has a negative or no affects whatsoever on the economic growth of the country. As Singh (1997) stated that arbitrariness and high volatility in prices of stock deter the long term economic growth in developing countries by preventing efficient allocation of resources. Moreover Morck .et.al (1990) believed that by promoting counterproductive corporate takeovers that stock market development, negatively affects economic growth. Further, investment and growth are discouraged as a consequence of excessive liquidity and volatility of stock market, which reduces the incentives available for investors. (DeLong.et.al. 1989)

The direction of causality between development of stock market and economic growth has not been clearly defined, as suggested by empirical literature considered for the study. There had been variation in results because of the differences in methods applied, context and data used for the study. The choice of time period and country also resulted in variation of results. (Odhiambo, 2008). Further studies can be undertaken to find the direction of causality between the two , as this would be really be helpful for policymakers in decision making. Researchers and academia have become inquisitive to assess their relationship in emerging economies. El-Wassal (2005) stated in his paper that stock market capitalisation in emerging economies have rapidly increased (nearly by 32 times) in comparison to only (11 times) in developed economies between 1980-2000. The activities of stock market have rapidly increased in the last two decades, making stock markets an integral part of the world. More theoretical and empirical studies are required to be conducted to assess the causality and direction of relationship between stock market and economic growth, especially in emerging economies like India.

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ASSESSING PREDICTIVE POWER OF MACROECONOMIC VARIABLES FOR STOCK PRICES: ARTIFICIAL NEURAL NETWORKS APPROACH IN INDIAN CONTEXT

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ABSTRACT
Stock market can be used as yardstick for assessing economy. Stock movement and volatility indicate the direction of the economy. Therefore, the relationship between stock prices and macro-economic factors is extremely vital for policy makers, researchers and market investors alike. Macroeconomic variables provide direction for the economy and good macroeconomic fundamentals has positive bearing on GDP growth and stock index returns. The present study attempts to assess the impact of macroeconomic variables on stock returns in India. The study proposes to use various macroeconomic factors (Gold Price, Index of industrial production, USD INR Exchange rate, 10 years Government bond yield, Price of Brent Crude, Money Supply) to study their effect on the Indian Stock market using various artificial neural networks algorithms. The results show that artificial neural network machine learning algorithms have high efficiency in predicting stock returns in India using macroeconomic variables.

Keywords: Stock Prices, Macro Economic Variables, NSE, Artificial Neural Network

INTRODUCTION
Stock market is a 'barometer' of economy and stock movement and volatility reflects the change and direction of the economy. Therefore the relationship between stock market and macro-economic factors is very important for policy makers and researchers. The classical asset pricing models do not take into account the fundamental macroeconomic factors that affect stock market. However modern financial theory since early 1970s (Merton), asset pricing economists realized the need of factors beyond the performance of the market portfolio. CAPM uses a time-series regression to measure beta, which is a portfolio's tendency to align with the market as a whole. Multifactor models extend this theory by including more variables. Multifactor models use multiple time series regression variables to quantify an asset's tendency to move with multiple risk factors.

There is a strong intuition to believe that a relationships exist between macroeconomic fundamentals and equity returns. The intuition however lacks strong empirical support. Macroeconomic variables are measures reflecting general economic conditions (IIP, Unemployment rate), interest rate, monetary policy (term spread, money supply), price level (WPI,CPI)and country's foreign trade variables (FDI, Forex reserves). The paper aims to study different macroeconomic variables to examine which factors have the most critical impact upon stock returns. Financial literature is replete with studies that assess how stock returns get influenced, most of which is based presumptuously on the fact that macroeconomic indicators are highly influential in predicting stock returns and asset prices.

The present study attempts to assess the impact of macroeconomic variables on stock returns in India. The study proposes to use various Indian macroeconomic variables to predict the stock returns in India. Macroeconomic variables have a large impact on stock returns in India. In the long run the studies have shown that stock returns are based on a variety of fundamental economic factors. In short run however, the stock returns may deviate to a large extent due to an unexpected change in a single factor. This provides further cause for study as this relationship can be different from the fundamental relationship in the past.

The study proposes to use various macroeconomic factors (Gold Price, Index of industrial production, USD INR Exchange rate, 10 years Government bond yield, Price of Brent Crude, Money Supply) to study their effect on the Indian Stock market. In view of that, the study tries to address this issue through assessing the returns, correlation and prediction using artificial neural networks. Recent research activities in artificial neural networks (ANNs) have shown that ANNs have powerful pattern recognition capabilities (Widrow et al., 1994). This leads to enabling us to model relationships where no linear relationship exists.

LITERATURE REVIEW
Forecasting financial time series could involve use of several models. Number of tools have beendeveloped since this discipline has gained attention. It was **Bachelier (1914)** who firstly proposed the theory of random walk to characterise the changes of security prices through time and ever since the Efficient Market Hypothesis has received a lot of empirical support employing classical statistical linear tests. However the inability to capture the complex patterns of these linear models has made EMH receiving a lot of scepticism.

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Egeli et al (2003) conducted study on ISE stock market values and build an ANN model that uses previous day's index value, exchange rate and simple interest rate as input to forecast ISE price fluctuations. They constructed a model with the previous day's index value, the previous day's Turkish Lira/USD exchange rate, the previous day's overnight interest rate and 5 dummy variables each representing the working days of the week. They tried three different numbers of hidden layers (1, 2 and 4) and acquired the lowest error rate and the highest accuracy using a single hidden layer. They concluded that ANN models have been superior to the 5-day/10-day moving averages model.

Yumlu et al (2004) compared ANN with conventional autoregressive model. The authors studied 12 years of financial data (a set of ISE index closing values, USD values and two interest rates) using a modular ANN model. The authors concluded that the model outperformed the conventional autoregressive model used qfor comparison. They stated that the model introduces a powerful way to predict the volatility of financial time series data, contradicting EMH.

Chancharat et al. (2007)detected the existence of cointegration and causality between the stock market price indices of Thailand and concluded thatregional South East Asian stock markets and oil prices influences stock returns in Thailand.

Gregoriou et al. (2009) concluded that a negative relationship exists between interest rate changes and British stock markets**. Li et al. (2010)** on the other hand used key policy rates i.e. US's Federal fund rate and Canada's overnight rate and studied the effect of policy shock on stock prices.

Zakrajsek (2009) suggested that economic theory often suggests that certain pairs of economic or financial variables should be linked by a long term economic relationship and many economic or financial time series appear to be cointegrated. He provided few examples to support his arguments such as permanent income hypothesis, money demand model and purchasing power parity.

Buyuksalvarci (2010)found that macroeconomic variables are significant in for stock prices in Turkey, however no significant relationship was found between stock prices and gold prices**. Özlen and Ergun (2012)** examined the relationship for Bosnia and Herzegovina stock market and macro variables using ARDL technique and evidenced that interest rate and exchange rate have significant factor in stock prices fluctuations and stock returns are sensitive to changes in factors.

OBJECTIVES OF THE STUDY

The study proposes following objectives

- To study the linear relationship between selected macroeconomic variables and stock prices.
- To model stock prices using the given macroeconomic variables through neural networktraining.
- To compare the neural network prediction accuracy with linear prediction model.

METHODOLOGY

Data

The variables used for the study, from April 2005 to September 2017 are:

Variable	Frequency	Source
Spot gold Price	Monthly	World Gold Council website
Index of Industrial production	Monthly	RBI Website
USD INR exchange rate	Monthly	RBI Website
Spot price of Brent Crude	Monthly	CBOT website
Money Supply	Monthly	RBI Website
10 year Indian Govt Bond yield	Monthly	RBI Website

The dependent variable is CNX 500 from April 2005 to September 2017 for which monthly data is retrieved from NSE website.

Regression

A linear regression is performed using the Gold Price, Index of industrial production, USD INR Exchange rate, 10 years Government bond yield, Price of Brent Crude, Money Supply on CNX 500 index return from April 2005 to September 2017

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Table-1: Summary of regression result

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
0.161	0.401.	.363	677.89075

As per Table 1 it is evident that the independent variables (Gold Price, Index of industrial production, USD INR Exchange rate, 10 years Government bond yield, Price of Brent Crude, Money Supply) do a good job of predicting dependent variable (CNX 500). This is due to the fact that regression yielded a high R-Squared value of 40.1%

Table-2: Regression ANOVA

ANOVA					
Model	Sum of Squares	df	MSE	F-statistic	p-value
Regression	374341009.717	6	62390168.286	135.768	.000
Residual	65713629.288	143	459535.869		
Total	440054639.005	149			

The p value in table 2 suggests that the regression is highly significant even at more than 99% level.

Table-3: Regression constant and and coefficients:

Regression Summary					
Model	Unstandardized Coefficients		Standardized Coefficients	t-statistic	p-value
	B	Standard Error	Beta		
(Constant)	2834.299	1199.891		2.362	.020
Gold	-2.002	.313	-.414	-6.406	.000
IIP	23.127	5.950	.334	3.887	.000
Exchange rate	-49.556	15.988	-.266	-3.100	.002
10 yr yield	-261.155	124.062	-.105	-2.105	.037
Crude	1.562	4.572	.021	.342	.733
M3	.380	.043	1.117	8.758	.000

We can infer from table 3 that all the variables except spot price of crude oil are significant at 95% level.

Artificial neural networks

Artificial neural networks are statistical learning algorithms which are akin to biological neurons in their functioning. Similar to biological neurons ANNs also have Synapse which are the connections between different neurons. Each synapse has a weight associated which determines the strength of the input signal.

A Multilayered Perceptron is a feed forward ANN model with a single hidden layer having H hidden units and a single output, y, which can be expressed as follows:

$$y = F(W_o + \sum_{h=1}^{H} W_h Z_h)$$

$$Z_h = F(\beta_{oh} + \sum_{j=1}^{n} \beta_{jh} X_j)$$

WhereZ_h is the output of the hth hidden unit, W_h is the weight between the hth hidden and the output unit, and W_0 is the output bias. There are N sensory inputs, Xj. The jth input is weighted by an amount β_j in the hth hidden unit. An MLP uses a supervised learning technique called back-propagation for training the network (Rumelhart et al., 1986).
The simplest back propagation algorithm follows the direction in which the error function decreases most rapidly (negative gradient) to update weights and biases. Thus, a single iteration can be written as:

$$x_{k+1} = x_k - \alpha_k g_k$$

Where x_{k+1} is the vector of weights and biases.

The back propagation algorithm looks for the minimum error function on the regressional gradient. The weights are initially assigned randomly. The output of an MLP is compared to a target output and an error is calculated.

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This error is back-propagated to the neural network and used to adjust the weights. This process aims at minimizing the error function between the network's prediction output and the target output. This is an iterative process which is repeated several times until the error is minimized. The most common error function is the mean squared error (MSE) which can be expressed as follows:

$$MSE = \frac{1}{n}\sum_{i=1}^{n}(O - T)^2$$

Where O is the output of the network and T is the target value.

The activation function of input node defines the output of that node. The activation function determines the output value of a neuron on the basis of net input and bias. The training data is 705 of the total macroeconomic time series data while the rest of it is used as testing data. For the study the authors have used different neural learning functions.functions.

- **The Hyperbolic Tangential:** function is a function with the range (-1, 1). The domain of Hyperbolic Tangential function is (-1, 1) hence large values are scaled down to the limits of the functions. This removes the effect of outliers in the data set to a considerable extent. It can be mathematically expressed as follows:

$$\varphi(u) = \tan\frac{u}{2}$$

- **Sigmoid function:** produces an S-shaped curve and is essentially an extension of Hyperbolic tangential function. It will yield more better results by smoothing the outliers and hence is considered more accurate than the Hyperbolic tangential function. It can be mathematically represented as:

$$\varphi(u) = 1/(1 + e^{-t})$$

- **Levenberg–Marquardt algorithm**: is a form of quasi-Newton function and was designed to approach second-order training speed without having to compute the Hessian matrix. When the performance function has the form of a sum of squares (as is typical in training feedforward networks) it provides better training and thereby more accurate results.

The present study uses Neural network package of IBM-SPSS and MATLAB neural network tool. These functions apply artificial intelligence techniques to automatically find the efficient neural network architecture. The data for the variables is fed into the neural network prediction tool. The structure is determined automatically by the neural network tools which works on the principle of Keep the best model (KTB). In order to assess the accuracy of forecast, Mean Squared Error (MSE) has been used as measures of fit (Zhang et al. 2004).

Table-4: Neural network training results

Neural Algorithm	MSE	RMSE	Error %
Hyperbolic Tangential	1178.35	34.33	9.87%
Sigmoid Function	806.78	28.40	8.74%
Levenberg–Marquardt algorithm	709.85	26.64	6.98%

We can observe from Table 4 the accuracy of different neural network function performance. As it is evident from literature, Levenberg–Marquardt algorithm performs best training as measured using MSE as benchmark. Levenberg–Marquardt algorithm has the least MSE of 709.85 and the least percentage error of 6.98% measured as a proportion of RMSE over SSE of the testing data. This is a high increase in predictive power over suggested by linear regression.

CONCLUSION

As per the results of regression between macroeconomic variables and stock index, which registers a high R-squared of 40.1%, it can be concluded that macroeconomic variables do a good job of explaining the index movements. Individual variables are also significant in case of their relationship with CNX 500 index.

The study further provides prediction accuracy for different neural network functions. Levenberg–Marquardt algorithm performs best with the least MSE of 709.85 while other functions also provide significantly good prediction performance. The study is vital for market participants. The growth of any stock market is related to overall growth of the fundamentals of the economy. Macroeconomic variables play a vital role in economy of any country which provides for GDP growth. This GDP growth is reflected into stock prices to a considerable extent.

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BILATERAL TRADE BETWEEN INDIA- EU: WITH SPECIAL REFERENCE TO GARMENT EXPORTS TO EU IN THE MFA TRANSITION PERIOD

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ABSTRACT
The bilateral trade between India and EU has been immensefrom decades. The garment export from India toEU isa peculiar case where the market potential is booster for Indian producers. India being a labour intensive nation, garment sector isan appropriate example where manpower/women power is engaged in enormous amount . The present paper aims to address the pre and post MFA (MultiFibre Agreement) situations, as the period takeninto consideration is between 2000- 2010 where it can be said as Pre- during and post MFA period.Another dimension to explore is the GSP (Generalized System of Preferences) which enables developing nations such as India to pay less duty or duty free exports to EU. The trade blocs across globe are highly in dynamic relations and sustain to maintain the competitiveness. Every nation and blocs aspire to sustain their bilateral relations. The EU – India trade relations need to be studied in the time of Post MFA situation as India's external trade to EU in general and garments in particular is enormous. The methodology adopted is descriptive in nature with both primary as well secondary data sources taken into account

Keywords: *India, EU, bilateral Trade, Garments Exports.*

INTRODUCTION
India gains significant foreign revenue through garment exports. European countries have been potential markets for Indian apparels industry for quite long time; the bilateral trade relation between India and EU[1] (27)[2] and the GSP (Generalized System of Preferences) which is non- reciprocal support which makes developing nations such as India to have less duty or duty free exports to EU. The neo-liberal economy has created competitive business environment in the world, where the capital flights move from developed nations to developing countries. In order to make the production in labour intensive nations and export to Europe and United States, the quota system which was prevalent in the past periods has been eliminated in order to make more liberalization of apparels trade. India, one of the Asian nations has got benefits as well as threats in the post Quota apparel trade because of the less updated industrialization to cope up with the export orders. This study is an attempt to analyze the status of Indian apparel trade to EU from the period of 2000-2010. The preferential treatment given by EU to Indian apparels shifts the growth rate of Indian exports on the higher side, almost all the branded RMG retailers started camping at Indian production sites.

The Indian Export to EU
Garment has been one of the sectors of revenue expansion for India. The Industrial clusters across Indian sub continent, which specializes in garment / apparel trade are the main focus of many researchers of International Business in the era of neo-liberal globalization.EU and USA are the two major regions for which Indian production houses aredestined.The 27 membered EU community makes inter as well as Intra –EU trades after obtaining the products from India.

Quota categories / Category Definition

4 (incl. 4C)	T Shirts, knit
5	Jerseys, Pullovers, knit
6 (Incl. 6C)	M&B shorts/ trousers
7	Ladies Blouses
8	Gents Shirts, woven
15	W&G woven overcoat, ctn/ mmf

[1] European Union.

[2] 27 denotes here the European nations, those are member countries in EU.

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26 W&G dresses

27 W&G skirts

29 W&G[3] suits, woven[4].

During the decade 1990-2000, textile trade grew at a cagr of 4%, after having grown at a rapid 15% annually during the quinquennium of 1985-90. The growth rate turned negative in 1998 and in 1999 following the East Asian crisis, but resumed to a robust growth of 7% in 2000. Clothing trade grew at a faster rate compared to textile, and clocked 6% annual average rate during the ten years period from 1990-2000. It is noticeable that, *on an average,* clothing trade grew at least as rapidly as textile trade in all years since 1980. It is therefore not surprising that the share of clothing trade in total textile and clothing trade has been rising and now stands at 56%, higher than 50% in 1990.[5]

During the MFA period, the textile exporters from industrial countries and those from developing countries merely changed shares between themselves during the 24 years period. The share of industrial countries declined by almost as much (19.2%) as was the gain in the share of developing countries (18.8%). Clothing exporters13, however, exhibit significant changes, with the share of top 13 exporters having declined by 13.8%. New entrants have come in in addition to some old ones have been knocked out. Of these new entrants, most- if not all- are from developing countries, since the share of industrial countries has declined during the period, and that of developing countries has increased. The countries that are gaining share in clothing exports are the ones whose industries are integrated to one or the other advanced country through some policy-induced preferential arrangements. Mexico, Caribbean region, East European countries and Mediterranean countries are capturing much of the space vacated. There has been a much deeper globalization in clothing than in textiles. Indeed, that has been one of the principal reasons for the developed countries agreeing to an eventual phase-out of MFA quota in the UR of negotiations.

However, it would be useful to mention here that the protection by quotas does not imply assured export growth, as is often (mis)understood. Exports are a function of export order. However, quotas provide protection in an indirect fashion, by prohibiting other supplier from exporting more than they are competitively capable of. From an importer's perspective therefore, all the order that the importer may like to place with an exporter may not be importable from that exporter due to quota limits on the exporter. The importer would therefore be compelled to place the 'overspill' order with someone who is second most competitive in the product. In this sense, the second most competitive suppliers' exports are "protected" to the extent of the limited quota supply with the most competitive supplier[6].

EUROPE IMPORT STATUS

The potential market for Indian apparels are EU and USA in which EU(27) has been dominent market, though EU has various sources of obtaining the imports, India gained momentum in the recent past, there are ample chances to blame the pre 90s for the less connected markets than what we see in the 2000s integrated markets across globe.

Of the US$ 65.9 billion textile and clothing (T&C) imported by EU15 from extra- EU sources in the year 2000, US$ 23.5 billion (36%) was imports of textiles and US$ 42.5 billion (64%) was import of clothing. Out of the total T&C imports, US$ 29.4 billion (45%) was from restrained suppliers, while US$ 20.9 billion (32%) was from preferential suppliers. Interesting point to observe here is the annual change in EU imports from these sources. While the total EU imports increased by 4.39% during 1990-2000, its imports from preferential suppliers grew by 8.95%, while that from restrained sources grew only by 4.9% (reflecting quota restraints). Clearly, the preferential suppliers are eating away the share of non-preferential suppliers[7].

LIFTING OF QUOTA SYSTEM

[3] Women and Gents.

[4]See.Appendix.A, Verma, Samar, Export Competitiveness of Indian Textile and Garment Industry, working paper no.94, Indian council for research on International Economic Relations(ICRIER), New Delhi, 2002.

[5]Verma, Samar, Export Competitiveness of Indian Textile and Garment Industry, working paper no.94, Indian council for research on International Economic Relations(ICRIER), New Delhi, 2002, p.5.

[6] Ibid. p.8.

[7] Ibid . P. 11.

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The interesting aspects of this work is to address the post quota- garment trade situations in developing nations, the period given in this research work is 2000- 2010, which shows the global economic crisis at the start of 2004 and its impact in 2008, how the US economy downplayed which caused the currency fluctuations across globe; the apparels export is not exceptional. The Asian region has become boiling point, where each nation wanted to stimulate the export industries related with apparels. The competition between countries such as India, Bangladesh, China, Pakistan, and Sri-Lankan are at our vicinity to study.

Directorate General for Trade of the European Commission in January 2000, argued that, "following elimination of textile quotas, a shift in production from industrialized countries to developing countries would create negative environmental impacts in the form of increased water and air pollution". The paper advocated "flanking measures" to avoid such perceived negative impacts; Over and above these is a growing trend of private initiatives because of who the non-price factors of competitiveness are becoming more and more important. Worldwide Responsible Apparel Production (WRAP) and Apparel Industry Initiative (AIP) are some of the global movements towards **cleansing the global manufacturing and trade** in textile and clothing sectors. And this post-consumerism demand has begun to force a large number of developing country exporters to adhere to such norms and get their factories and systems 'ethically certified' before they could be eligible to supply some of the world's biggest retailers. It is in this 'buyer-driven global commodity chain' that India has to position itself[8].

GARMENT AND INDIAN ECONOMY

Indian Economy is the second largest producer of textiles and garments after China, Second largest producer of cotton in the world, Second largest employer in India after agriculture–Direct Employment to35 mn people. Textile and garment sector constitutes about 12%of India's exports, Contributes about14% to Industrial production, Contributes about 4% to GDP, Investment made in Textile sector since launch of TUFs scheme is Rs. 208000 crore still June 2010. There has been drastic growth of India's garment trade to Europe. The statistics about the same is given in this study.

India is one of the few countries that own the complete supply chain in close proximity from diverse fibres to a large market. It is capable of delivering packaged products to customers comprising a variety of fibres, diverse count sizes, cloths of different weight and weave, and a panoply of finishes. This permits the supply chain to mix and match variety in different segments to deliver new products and applications. This advantage is further accentuated by cost based advantages and diverse traditions in textiles[9].

Scale: Except for spinning, all other sectors suffer from the problem of scale. Indian firms are typically smaller than their Chinese or Thai counterparts and there are fewer large firms in India.

Some of the Chinese large firms have 1.5 times higher spinning capacity, 1.25 times denim (and

2 times gray fabric) capacity and about 6 times more revenue in garment than their counterparts in India thereby affecting the cost structure as well as ability to attract customers with large orders.

Skills: Three issues must be mentioned here : (a) there is a paucity of technical manpower –there exist barely 30 programmes at graduate engineering (including diploma) levels graduating about 1000 students – this is insufficient for bringing about technological change in the sector; (b) Indian firms invest very little in training its existing workforce and the skills are limited to existing proceses (Chandra 1998); (c) there is an acute shortage of trained operators and supervisors in India. It is expected that Indian firms will have to invest close to Rs. 1400 bn by year 2010 to increase its global trade to $ 50 bn[10].

This study aims to record the events in Indian exports of garment to European Union. India has its Asian competitors such as China, Bangladesh, Sri-Lanka etc., it's interesting to note that GSP scheme of EU to India and other developing nations played crucial role in the growth of exports.

REVIEW OF LITREATUTURE

1.*Chandra, P. (1999), competing Through Capabilities, Economic and Political Weekly, 27 February:*Successful firms are changing their *technology stock* and the *organizational structure* that uses this technology simultaneously. The former includes updating machinery, plant infrastructure, transport &handling

[8] Ibid. p.16.

[9]Chandra, P., "Competitiveness of Indian Textiles & Garment Industry: Some Perspectives," apresentation, Indian Institute of Management, Ahmedabad,.2006.

[10]Ibid.p. 8.

equipment, storage facilities, process control, ventilation & environment control systems, effluent generation & treatment systems, etc. The later includes reporting &communication structures, manufacturing management practices, data collection & planning Mechanisms, training & evaluation, grievance handling process, process & product innovation, Subcontracting networks etc. It is now well established that firms that pursue technological change along with organizational changes get maximum advantage of investment in technology.

In other words, technology (or codified knowledge) that is not developed in-house is accessible to all competitors and it does not provide a distinctive advantage to a firm. However, managerial Practices (or tacit knowledge) that are uniquely designed to take advantage of technology can be

Copied less easily and hence provides competitive advantage. Toyota's development &implementation of the JIT is once such example. In textile industry, these managerial practices form the important link between technology adoption and competitiveness. The key issue is the

Ability of firms to increase their productivity between two epochs of technology acquisition[11].

2.*McCurry (1997):*points out that the textile worker, in times to come, cannot afford to remain uneducated as new technology demands new skills. He points that successful firms in the US are

holding extensive education programs for their workers and managers. For example, establishing

process capability of machines has become necessary to control defects. This requires operators to plot statistical charts, interpret them and then modify process parameters accordingly. Many computer assisted machines generate and capture such performance data automatically. The ability of firms to use such a technology (and consequently produce a value adding product mix).

3. *Andriamananjara, S. (1999), On the Size and Number of regional Integration Arrangements: A political Economy model, World Bank Working paper Series .2117:*Will the current wave of regional integration arrangements lead to the world being divided into competing inward-looking trading blocs? Or will it lead to a more open multilateral trading system? Using a multi-country political economy model, and after having shown that global free trade is optimal, the author investigates the possibility of achieving it through regionalism. An outsider country considering entering a trading bloc must weigh the tradeoff between the costs of opening its own market to more foreign competition and the gains from getting better access to the bloc's preferential market. The gain of access is always larger, so an outsider would always want to apply for membership in the existing bloc. If the bloc policy is open membership, its expansion would result in global free trade. But if member countries can accept or reject new members, expansion of the bloc is unlikely to yield global free trade.

4. *AnuradhaBalaram, Surendra S. Yadav and Rajat K. Baisya, Competitiveness of Indian Apparel Export Firms: An Analysis of Select Delhi-based Firms, global business review,No.1, Vol.4, 2003:* Indian apparel exporting firms have proved their competitiveness in some market segments in recent years. Global trade in apparel is likely to change significantly due to major changes in the international business environment. The paper takes a view that Indian apparel export firms will have the opportunity to increase their global market share provided they take the necessary steps to make themselves competitive in a quota- free world after 31 December 2004. The analysis is based on a survey of leading Delhi-based apparel exporting firms. Since the Delhi region accounts for India's largest apparel export trade, these firms are among the top firms in the country in terms of apparel export sales turnover. The paper studies select structural and operational parameters of Delhi firms that could impact their performance in future and brings out critical issues that require immediate attention. The paper also offers suggestions on how the government can facilitate better management practices in apparel exporting firms so that they become globally competitive.

5. *Ketels, C.H.M. 2006. 'Michael Porter's competitiveness framework: recent learnings and new research priorities', Journal of Industrial Trade and Competition, 6: 63–66.*

Micheal Porter uses verbal descriptions of the different trade theories based on logical reasoning instead of the mathematical models that dominate the economic profession[12]. This is easier for policy-makers to understand

[11]Pankaj Chandra, Competing through capabilities Strategies for global competitiveness of the Indian textile Industry, ECONOMIC & POLITICAL WEEKLY" vol.XXXIV, no. 9, M17-M24,

1999.p.

[12]Ketels, C.H.M. 2006. 'Michael Porter's competitiveness framework: recent learningsandnew research priorities', *Journal of Industrial Trade and Competition*, 6: 63–66.

and thus creates the impression that the Diamond Framework can be utilized to enhance the international competitiveness of countries. The main risk of this is that competitiveness of countries may be understood as a negative sum game, whereas, according to international trade theory, it is a positive sum game. The last section draws some generalizations about the validity of Porter's Diamond Framework as a theory of the international competitiveness of countries and explains the significant contribution of the framework towards our understanding of the international competitiveness of firms.

6. *RashmiTaneja, Indian Textile Exports: Past and Present, International Journal in Multidisciplinary and Academic Research (SSIJMAR) Vol. 2, No. 2, March-April (ISSN 2278 – 5973):*Textile sector is India's second largest manufacturing sector. The textile sector contributes about 4% to the gross domestic product; about 14% of the total industrial output; 21% of the workforce and about 14% of the gross export earnings. But in the present scenario non conventional sectors viz engineering, chemicals are replacing this sector especially in terms of export performance. Textile sector, including apparel, which was the largest export sector and accounted for almost a quarter of our exports has dropped to being fifth in rank and less than half its earlier share. This is despite dismantling of the textile quota regime in the developed markets from 01.01.2005 as per the World Trade Organization (WTO) Agreement on Textiles and Clothing (ATC).In this study, aim is to analyze the export trend of textile sector in the past and present and would try to identify the possible reasons of falling exports of one of our key sectors. On the basis of the study, we will make an effort to put certain suggestions to revive its export growth which might contribute to growth of the Indian Economy.

7. *India's Textile and Apparel Industry: The views expressed in this staff study are those of the Office of Industries, U.S. International Trade Commission. They are not necessarily the views of the U.S. International Trade Commission as a whole or any individual commissioner.Growth Potential and Trade and March 2001,Publication 3401.Investment Opportunities Staff Research,* India has the second-largest yarn-spinning capacity in the world (after China),accounting for roughly 20 percent of the world's spindle capacity. India's spinning segment is fairly modernized; approximately 35 to 40 percent of India's spindles are lessthan10yearsold. During1989-98, India was the leading buyer of spinning machinery, accounting for 28 percent of world shipments. India's production of spun yarn is accounted for almost entirely by the "organized mill sector," which includes 285 large vertically-integrated "composite mills" and nearly 2,500 spinning mills. India has the largest number of looms in place to weave fabrics, accounting for64percent of the worlds installed looms. However, 98 percent of the looms are accounted for by India's power loom and handloom sectors, which use mostly out dated equipment and produce mostly low-value unfinished fabrics. Composite mills account for 2 percent of India's installed looms and 4 percent of India's fabric output.

8. *Note on Textiles & Clothing Exports of India., Government of India Ministry of Textiles(International Trade Section):*India's Textiles & Clothing (T&C) exports registered a robust growth of 25% in2005-06, recording a growth of US$ 3.5 billion over 2004-05 in value terms thereby reaching a level of US$ 17.52 billion and the growth continued in 2006-07 with T&C exports of US$19.15 billion recording a increase of 9.28% over the previous year and reached USD 22.15 billion in 2007-08 denoting an increase of 15.7% but declined by over 5% in 2008-09. Exports of Textiles & Clothing grew from USD 21.22 billion in 2008-09 to USD 22.41 billion in 2009-10 and has touched USD 27.47 billion in 2010-11. In the financial year 2011-12(P), exports of textiles and clothing, has grown by 20.05% over the financial year 2010-11 to touch USD 33.31 billion. Textiles exports in the period 2012-13 are witnessing a (-) 4.82 percent growth in dollar terms although there is 8.10 percent growth in rupee terms[13].

HYPOTHESIS

1. Indian garment trade has been influenced by GSP mechanism, which enhances the export growth in European Union.

2. Trade Liberalization had paved path to Indian garment trade to EU moreefficiently than the past.

3. Elimination of Quota (QR) in the Textile and Clothing had stimulated the Asian apparel exporting nations to have competitive business sustenance.

OBJECTIVES

1. To record the status of Indian garment exports to European Union (EU).

2. To study the changing trends in Indian garment exports.

[13] Government of IndiaMinistry of Textiles (International Trade Section)

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3. To analyze the role of GSP (Generalized System of Preferences) in Indian garment Export to European Union.

4. To measure the impact of Quota elimination on India garment trade.

5. To analyze the competitive business sustenance in India's garment trade to International market.

RESEARCH METHODOLOGY

Descriptive in nature, the study primarily focuses on trade history in the mentioned time period. Both Primary and secondary data are used, by following the unpublished as well as published trade statistics in India and EU. The sources are primarily 1. Major garment clusters in India. 2. Star garment export houses in India 3. The authoritative of EPCs (Export Promotion Council)4. The retailers from European Countries. 5. EU- Indian bilateral mission, the reports of EU frm 2000 to 2010. The test is expected to demonstrate how the period of MFA abolition does affected the trade relation between India and EU.

ANALYSIS AND CONCLUSION

The MFA and its aftermath have shown mixed reaction among the Trading partners. EU being one of the largest importers of Indian garments has shown huge competition due to the abolition of MFA agreement. As per the trade data of EU " The EU is India's largest trading partner, accounting for €85 billion worth of trade in goods in 2017 or 13.1% of total India trade, ahead of China (11.4%) and the USA (9.5%).India is the EU's 9th largest trading partner, accounting for 2.3% of EU's total trade in goods, well behind the USA (16.9%) and China (15.3%).Trade in goods between the EU and India almost doubled in the last decade. Trade in services between the EU and India increased from €23 billion in 2010. India is now the 4th largest service exporter to the EU and the 6th largest destination for EU services exports. The EU's share in foreign investment inflows to India more than doubled from 8% to 18% in the last decade, making the EU the first foreign investor in India.EU foreign direct investment stocks in its high, which is significant but well way below EU foreign investment stocks in China (€178 billion).Some 6,000 EU companies are present in India, providing directly 1.7 million jobs and indirectly 5 million jobs in a broad range of sectors. Indian companies invested over €50 billion in Europe since 2000"[14]. The competition from the Asian countries when come to garment exports are high every time in the post MFA situation. India being the GSP member of the EU,has its stake but the neighboring nations such as Bangladesh, Pakistan, Sri- Lanka and China are rivals who are actually enjoying high level of GSP and differential treatment by the European Union.

There is growth in garment trade in the post MFA compared to pre MFA period. The increase value during the post MFA period can be attributed to the positive side of volume of trade after the post quota situation. The observation here is that there are no restrictions on the volume of exports among the trading partners; and developing economies of Asia, such as India is highly reliable on EU and USA when it comes to garments and textiles in special and others in general.

The transition period of MFA and its abolition have created huge scope of research and analysis; hence there is an ample opportunity to study with different dimension. Indi- EU bilateral relation has been very successful which need to be sustained and boosted against heaviest odds and competition from the neighboring nations. The garment and textile trade is the most happening between Asia and Europe, the most populated twin nations in Asia, China and India respectively are potential competitors when come to labour intensive trade sector such as garments and textiles.

India continued to enjoy the GSP and other differential treatment from EU. WTO if not mandatorily forces EU to follow GSP, the growth rate, development index, and per capita income of India will continue to the humble which indirectly connects with GSP. But India being aspiring nation to be in the top 10 economies and top 5 in near future, is only possible when favorable balance of Trade and sustain markets such as EU are maintained.

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DETERMINING THE OUTCOME OF NEWS ON THE STOCK MARKETS OF EMERGING ECONOMIES: A CASE OF BRICS

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ABSTRACT
BRICS nations are one of the emerging economies that are attaining a high growth rate. The study models the volatility of BRICS stock markets to comprehend their volatility patterns so as to inform investors about higher returns and diversification opportunities .The data employed is from the period ranging 1 January 2006 to 31 December 2016. The tools used for the analysis are Unit Root test namely Augmented Dickey Fuller test which determines whether the series is stationary or not. To model the time varying features of volatility such as persistence of volatility and asymmetric responses to the information, GARCH (1,1) and EGARCH models are employed. The results suggest that China's SSE is most volatile among its peer countries in the BRICS.

Keywords: BRICS, GARCH, EGARCH, Stationary, Volatility

1. INTRODUCTION

The World Bank distinguishes countries by measuring their GNI per capita (Fantom and Serajuddin, 2016). The emerging economies are characterized by high growth as compared to developed markets and in the recent years the research in this area has proliferated. A bloc comprising of five emerging markets was formed in 2008 which came to be known as BRIC and this included Brazil, Russia, India and China. In the year 2010 South Africa joined the bloc. The combined contribution of its members is directed towards political as well as economic association and growth.

Modelling of volatility facilitates understanding of the risk and return derived from the stock markets. Moreover the role that information plays in changing the preference of investors is undeniable. Engle and Ng (1993) identified that the effect of good news and bad news reflect a different pattern. To comprehend the emerging markets this study explores the BRICS for in depth analysis of volatility as Goldman Sachs (2010) pointed that "Although BRIC equity markets outperformed significantly but the outperformance seems much less likely, even if the BRICS deliver solid returns".

To estimate volatility clustering GARCH (1, 1) model has been adopted which has been used highly in the financial literature to model conditional variance and for investigating the impact of news on returns EGARCH (1, 1) model is used.

2. LITERATURE REVIEW

Baig and Goldfajn (1999) explain the causes of Asian crisis by empirically examining the source that led to such a major crisis. They determine that whether the news from other markets played any role in emancipating of this crisis at the regional level. The conclusion of the study states that there was no major contagion in Asian stock markets.

Kaur (2004) applied GARCH class of models to indices such as S&P CNX Nifty and SENSEX to find any day of a week or month of a year effect as identified developed markets and whether it has significant impact on the level of volatility of these indices and also analyzed the effect of volatility from NASDAQ exchange on these Indian indices using EGARCH model..

Bhar (2009) investigated BOVESPA, Ak &M composite, SENSEX and Shanghai composite for their degree of interdependence with the geographical area within which they exist as well as with the whole world equity markets. The results depict that BRICS have no impact on the regional markets after applying EGARCH model.

Hsing (2011) studied the interactions among market fundamentals of South Africa and their stock exchange and the impact of former on latter.

Venkatesh (2013) explored the capability of BRICS in terms of their "market capitalization ", "listed securities ", Circuit breakers" and verify that these markets affect each other after 2000.

Zhang et al (2013) explore the BRICS and G-7 bond and stock markets for spillovers. They argue that the univariate GARCH and dynamic multivariate models have limitations in estimating spillovers therefore they followed the LM GARCH approach for estimation which is simply based on LM test. The results suggest there is unidirectional in some and bidirectional spillovers in markets except Russia.

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Nguyen (2014) studied volatility in stock and exchange rates of BRICS market to analyze their behaviour and find causality among them using a regime switching model. The sample is taken from 1997 to 2013.The outcome suggests that exchange rates cause changes in equity markets.

Theodore et al., (2015) analyzed the trends in BRICS economies by scrutinizing their equity markets. They employed VAR (1) - GARCH (1, 1) model and observed that these markets are affected by U.S stock market in the short- run.

Siddiqui and Siddiqui (2015) analyzed the spot and future indices of Indian commodity market, the study examines whether the volatility as well as the effect of news is symmetrical or not on the indices. GARCH family models are used to conclude that there is high persistence of volatility along with traces of leverage effect on Energy spot, Agriculture spot and Metal future.

Kishore and Singh (2016) examined the BRICS stock markets and their linkage with the US economy during and after the meltdown of 2008.GARCH model is put to use for analyzing the return behaviour. The series starts from January 2007 till December 2013. The conclusion of the study is that there exists asymmetric relationship between BRICS stock market and global equity market and Brazil and China are least affected by the new information.

Siddiqui and Khan (2017) estimated the volatility of the stock markets of two biggest markets, China's SSE and India's NSE. For the modelling of volatility GARCH (1,1) model was used as this model captures the persistence financial series and satisfies the condition of parsimony. The conclusions made were about the stability of the volatility process of both SSE and NSE.

3. RESEARCH GAP AND SCOPE

The overview of literature suggests that although there have been numerous studies on BRICS stock markets and their linkages with other developed markets and others have endeavoured to estimate the relationship of BRICS equity returns with commodity prices and exchange rates but very few have examined the linkages within the BRICS block equity returns. Moreover the impact of news plays an immense role in the smooth flow of financial markets and this aspect is relatively scarce in the written works of BRICS therefore present study undertakes the examination of leverage effect in these emerging stock markets.

4. OBJECTIVES OF THE STUDY

- To model the volatility prevailing in the BRICS bloc.
- To identify the presence of leverage effect occurring at the arrival of new information.

5. HYPOTHESIS OF THE STUDY

H0: There exists no volatility clustering in the BRICS stock markets.

H1: There exists volatility clustering in the BRICS stock markets.

H0: There exists no leverage effect in BRICS stock markets.

H1: There exists leverage effect in BRICS stock markets.

6. RESEARCH METHODOLOGY

The study uses daily returns of major indices of BRICS for the period of 1 January 2005 to 31 December 2016. BOVESPA from Brazil, MOEX from Russia, SSE from China and Nifty from Indian subcontinent as well as FTSE/JSE All Share Index, derived from South Africa are used. The daily returns are calculated with the help of closing prices without bonus, right issue and dividend adjustments. Large sample data is taken to eliminate the thin trading bias. The returns are calculated with the help of following equation:-

$Rt = \ln(Pt/Pt-1)*100$

The tool used for analyzing volatility witnessed by these exchanges is GARCH (1, 1) model which is parsimonious and efficient in the modelling and EGARCH model which explains that the effect of bad news is more on returns than good news. It allows negative sign to be captured in the estimation.

7. EMPIRICAL ANALYSIS-

Table-1: Descriptive Statistics

	Brazil	Russia	India	China	South Africa
Mean	52000.51	1432.453	5365.457	2642.371	33624.77
Median	53735.90	1470.350	5285.000	2535.830	31187.70
Std Dev	11654.27	353.0041	1845.206	942.7254	12012.70

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Skewness	-0.568198	-0.833357	0.131603	0.825002	0.248334
Jarque Bera	174.2135	369.0027	77.06142	484.5962	181.0020
Prob	0.000000	0.000000	0.000000	0.000000	1.903945

As per Table1- The descriptive statistics show that Russia is the least volatile market as compared to other BRICS nations with the lowest standard deviation. Moreover all the series are positively skewed except Brazil and Russia.

UNIT ROOT TEST OF STATIONARITY

Table-2: Augmented Dickey Fuller Test

	At level		**At first difference**	
	t stat	**Prob**	**t stat**	**Prob**
BOVESPA	-2.613042	0.0904	-55.82169	0.0001
MOEX	-2.068090	0.2579	-55.08940	0.0001
NIFTY	-1.294869	0.6341	-50.93246	0.0001
SSE	-2.054559	0.2636	-24.07470	0.0000
JSE	-1.164611	0.6918	-41.21617	0.0000

Table-2 shows that all the series of BRICS stock exchanges are non stationary at level but became stationary at First difference, as all the P values are less than 0.05. It can be concluded that the series are stationary at first difference.

GARCH model

ARCH model was established by Robert Angle and then one of the most sought after model in time series forecasting is GARCH (p, q) model which was pioneered by Bollerslev (1986)

A general GARCH specification of the model can be written as under:-

$$\sigma 2_t = \omega 0 + \sum_{i=1}^{q} \alpha i \, \varepsilon 2_{t-i} + \sum_{j=1}^{p} \beta j \, \sigma 2_{t-j} + Vt$$

"Where $\sigma 2_t$ denotes the variance. The number of lags is represented by i and j. The term $\varepsilon 2_{t-I}$ is the squared error term for period t-i." Hartman and Wiklander (2012)

The persistence of volatility can be estimated by the sum of parameter estimates α & β, closer it is to one higher the persistence. Volatility effect due to a shock dies out at (1- α- β)

GARCH ANALYSIS OF BRICS

Table-3

Variable	**Brazil**	**Russia**	**India**	**China**	**S.Africa**
Ω	0.000000613 (0)	0.000000683 (0)	0.000000287 (0)	0.000000166 (0)	0.00000198 (0)
A	-0.069222 (0)	0.101741 (0)	0.090189 (0)	0.057319 (0)	0.094709 (0)
B	0.90822 (0)	0.878377 (0)	0.896941 (0)	0.938393 (0)	0.892565 (0)

Table-3 illustrates parameters attained through GARCH model. Estimates of coefficients facilitate in better understanding of volatility. For BOVESPA sum of the parameters is (α+ β) = 0.977. For MICEX the same is (α+ β) 0.979, in case of NIFTY it is 0.987. For SSE the sum is 0.995. For FTSE/JSE α+ β is 0.987. The conclusion can be drawn that the persistence of volatility is more in SSE as compared to other BRICS nations as the sum of α & β is the closest to one

EGARCH MODEL

Nelson (1991) set the ball rolling for EGARCH model. He highlighted the fact that markets have a different reaction towards positive and negative news. There is more effect on volatility during the decrease in prices as compared to the increase of same magnitude.

$$\log(\sigma_t^2) = \varpi + \alpha \left| \frac{\varepsilon_{t-1}}{\sigma_t} \right| + \lambda \left(\frac{\varepsilon_{t-1}}{\sigma_t} \right) + \beta \ \log(\sigma_{t-1}^2)$$

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Poon and Granger (2003) conclude that the asymmetric models yield good results.

EGARCH ANALYSIS OF BRICS

Table-4

Variable	Brazil	Russia	India	China	S.Africa
Ω	-0.261894 (0)	-0.34417 (0)	-0.353129 (0)	-0.16948 (0)	-0.258015 (0)
A	0.121861 (0)	0.205886 (0)	0.193155 (0)	0.132849 (0)	0.127832 (0)
ƛ	-0.072907 (0)	-0.06174 (0)	-0.081448 (0)	-0.005908 (0.204)	-0.103259 (0)
B	0.979784 (0)	0.976989 (0)	0.976483 (0)	0.991456 (0)	0.0982707 (0)

Table -4 depicts the parameter that is obtained after application of EGARCH model which is λ. The parameter captures the asymmetric effect of volatility. All markets except China have significant p values. Moreover there is negative sign along with the coefficients of λ implying the effect of bad news is more than good news

8. CONCLUSION

This study assists in the comprehension of the volatility among the BRICS stock markets as these are the major transitional economies and their contribution and impact to the world economy is huge. As history has shown there have been many economic crises in the past originating in the developing economies, such as, Asian crises therefore it becomes imperative to study the volatility experienced by such economies. The sample consists of returns from 1 January 2005 to 31 December 2016. For estimation of variability of returns or volatility GARCH model was employed which is efficient and parsimonious and Exponential GARCH model was employed to assess the leverage effect on market returns. The results show that China's SSE is most volatile and leverage effect is experienced by all BRICS countries as their estimates show negative sign.

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E-COMMERCE AND THE GROWTH OF GLOBAL RETAIL BUSINESS - A CASE STUDY OF AMAZON.COM, INC

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ABSTRACT
E-commerce is a buzzword in the Indian markets since the last decade. However, in context of developed world, its existence can be witnessed since late 1970s when few multinational companies used it for electronic fund transfers or electronic data interchange. E-commerce has changed ones perspective of doing business today. Speaking of E-commerce industry, the first name that obviously emerges in mind is Amazon.com, Inc (Amazon) which has earned its recognition as the oldest and biggest E-tailor in the industry, globally. Amazon could reach where it stands today probably because of the razor-sharp entrepreneurship skills and foresightedness of its founder and CEO, Jeff Bezos, who acknowledged the strength of Internet and used it in the most intelligent and explicit way. In the fast growing consumer market, E-commerce boasts to offer wide range of benefits to every participating country in economic and business terms by removing the geographical barriers. Owing to its immense expediency, it has become the engine of international (retail) business in the contemporary world. The purpose of this study is to recognize the role played by E-commerce in promoting and developing international retail trade and analyse the design of E-commerce system with the help of a case study of Amazon.com, Inc., the E-commerce giant. The study attempts to document how Amazon has revolutionized the E-commerce industry at the international front and contributed towards the growth of retail business globally.

Keywords: Amazon, E-commerce, Global retail business

1. INTRODUCTION

How often do we feel the need to take a stroll through various markets and explore all of options of mobile phones available? For obvious reasons, it is not possible physically, but the world of internet has given us power to get access to anything and everything that we wish to buy, in just a click. Wide array of products ranging from home appliances to books, consumer electronic goods to apparels, household related services like cleaning to travelling packages etc are virtually available to any consumer who is having an electronic device in hand with internet accessibility. It won't be inappropriate to state that a consumer can carry 'the globe' in its pocket. This is the sorcery of E-commerce.

1.1 What is E-commerce?

E-commerce is acronym for electronic commerce and it caters to exchange of goods and services through internet and electronic devices such as computer networks, laptops, mobile phones etc. It uses technologies like Information and communication technology(ICT) to create a virtual platform for consumers and business organizations, where they can connect with one another, interact and give way to business transactions between them.

Since its inception, it has come a long way. Electronic Data Interchange (EDI) is changing the face of e-commerce lately. It has unleashed the scope of e-commerce. Today there is not a single arena where e-commerce doesn't have its footprints. It has revolutionized the way businesses or professional carry their daily activities, while also easing the way for shoppers. E-commerce provides a safe and secure way to business-business commerce, consumer and business commerce and consumer to consumer business as well. It has considerably changed the face of commerce; specially the ways of managing market places and shopping. At one hand, e-commerce has opened vast avenues for sellers to display their products on any websites across globes or the other hand, virtual stores have scored points over brick and mortal shopping in aspects of convenience, prices as well as variety.

Today roughly about 3.8 billion people are using internet facility across the globe, which signifies the humungous opportunity for retail sectors to sell goods and services through electronic medium. It is setting up a new industrial order for the retail sector. Vice President Albert Gore Ir. put it thus:

We are on the verge of a revolution that is just as profound as the change in the economy that came with the industrial revolution. Soon electronic networks will allow people to transcend the barriers of time and distance and take advantage ofglobal markets and business opportunities not even imaginable today, opening up a new world of economic possibility and progress.

Talking about the retail sector and e-commerce together, we can't afford to miss the innovation of Jeff Bezos, the founder and CEO of Amazon. Amazon was the first online firm to execute secured online transactions. Jeff

Bezos has embarked its name as the most farsighted entrepreneur. Tracing some steps back, few of the western institutes started exchanging data electronically by the late 1970s. However, the shacklesin online trading of goods were first broken by Jeff Bezos in the late 1990swith the introduction of his e-commerce website Cadabra.com, now popularly known as Amazon.com.

The aim of this paper is to learn what e-commerce is; how it has stimulated the growth and development of retail sector at international front with help of the case study of Amazon.com, Inc.

1.2 Amazon: The Breakthrough Beginner

Amazon was the first online store to execute secured online transactions. Started as an online bookstore, it soon expanded to trading in a variety of products such as music, CDs/DVDs, electronics, MP3s, videogames, apparels, furniture, food, toys, and jewelry. The company also produces consumer electronics—Kindle e-readers, Fire tablets, Fire TV, and Echo—and is the world's largest cloud infrastructure services (IaaS and PaaS) provider. It also sells certain low-end products like USB cables under its in-house brand AmazonBasics. Running successfully, round-the-clock since 1994, astonishingly so, Amazon recorded its first profit in the year 2003 only.

2. LITERATURE REVIEW

A lot of research has been done to describe the concept and scope of e-commerce which helped formulate the base for this study. Extracts from few of the studies are as follows:-

Sheth and Sonal P (2015) aimed their study to describe how e-commerce is being conducted and managed, what are its major opportunities, limitations, issues and its implications for India. They opined that E-commerce is interdisciplinary, and, therefore, it should be of interest to managers and professional people in any functional area of the business world.

ShahrzadShahriari et al. (2015) concluded that E-commerce can conduct any business online and via the Internet. They listed out few advantages of e-commerce such as cost savings, increased efficiency, and customization. They believe that in order to understand electronic commerce it is important to identify the different terms that are used, and to assess their origin and usage. These include information overload, reliability and security issues, and cost of access, social divisions and difficulties in policing the Internet. Successful e-commerce involves understanding the limitations and minimizing the negative impact."

D. K. Gangeshwer (2013) studied about future aspects of e-commerce in Indian context. The paper discussed about the top motivating factors of shopping online.

Amit Saha (2015) highlighted the impact of the increasing trend of online shopping over the various fixed shop retailers. He focused on the advent of e-stores with their attractive incentives and wide varieties. The study looked into the various aspects about how retail businesses are being affected and also the various recovery mechanisms they are coming up with to counter those e-stores in their race of survival. This paper also unraveled the effect upon the profitability of the various concerns due to increasing trend for online shopping."

3. OBJECTIVES OF THE STUDY

This research paper has following objectives: -

1. To examine the E-commerce revolution
2. To judge the impact of e-commerce in the growth of global retail sector through case study.

4. METHODOLOGY OF THE STUDY

Besides, literature review, case study method has been used to learn about the impact of E-commerce on global markets, especially retail sector at international front.

5. CASE STUDY: - AMAZON.COM, INC.

Amazon.com strives to be the e-commerce destination where consumers can find and discover anything they want to buy online.- Jeff Bezos

As the e-commerce has started to take over a good proportion of selling of goods there has been a constant competition between the two concepts of doing business. While retailing has its existence since many centuries, the concept of electronic mode of exchange of goods in only two decades old. While many businessmen saw great potential in e-commerce as a way to expand their business, it became a threat to those who resented it. Re-tailing and E-tailing are at a constant fight for consumers. However, one person who didn't feel the worry and took initiative to invest in an online book store about 20 years ago, was Jeff Bezos. Initially named as Cadabra.com, a tiny setup operated through a second-hand computer selling books to becoming a global

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company, Amazon has come a long way, in retailing sector. It is regarded as the world's largest online retailer. It made $107 billion in revenue in 2015. The speed at which their Founder, Jeff Bezos, grew his empire is unparalleled.

Today, Amazon.com may account for around a third of all U.S. e-commerce sales and boast over 33,000 employees around the world.

5.1 Amazon's Journey from Small Bookstore to Global E-commerce Giant

In 1994, Jeff Bezos left his job on Wall Street to start an internet company. At the time, the internet was this foreign thing which few people understood. He started off sellingbooks due to their high demand and low cost. In just four months of operation, Amazon.com became a very popular site on the Web, making high marks on several Internet rankings.

Just one year after founding Amazon, Jeff Bezos was able to get $8 million in funding. Impressively, this investment was worth 55,000 times just 4 years later.

Amazon's growth has been based on a willingness to reinvest profits and push the boundaries. Unlike some tech companies, it was willing to test things out and push into new markets. For instance, the Amazon Fire Phone was widely regarded as a failure; however, they were able to learn from it and feed it into developing the wildly successful Kindle Fire Tablets.

He has an uncanny ability to spot companies which are likely to be successful. For instance, he holds investments in Twitter, AirBnB and the Washington Post.

Bezos thinks of everything in a highly analytical fashion. While working on Wall Street, he took ballroom classes in order to increase his "women flow".

Moreover, Amazon places a lot of pressure on their employees. To call Jeff Bezos a perfectionist would be putting it mildly. According to an investigative piece by the New York Times, it isn't uncommon for employees to be sacked for being ill. Moreover, their system of reward and punishment could be argued as reducing employees to mere numbers. Jeff Bezos simply expects certain targets to be hit. This ruthless way of running a company has meant that Amazon has been able to get back-to-back wins.

5.2 Few landmarks in epic Amazon's journey

1994- a small online start-up selling books CDs and videos- called Cadabra.com

1995- name changed to Amazon.com, Inc.

1997- issued initial Public Offer on 15th, May,1997 at $18.00 per share

2000- new logotype featuring a curved smile with an arrow leading from A to Z, representing that the company carries every product from A to Z.

2011-bought digital rights of DC comics such as Superman, Batman, Green Lantern etc. forcing bookstores like Barnes & Noble to remove these titles from their shelves.

2013-announced a partnership with the United States Postal Service to begin delivering orders on Sundays.

2015-surpassed Walmart as most valuable retailer in the US by market capitalisation.

2016-Amazon announced plans to build convenience stores and develop curbside pickup locations for food. Amazon.com announced a partnership with the U.K. Civil Aviation Authority to test some of the technologies and may use delivery service via prime air drone in the future.

2017-Amazon announced that it would acquire Whole Foods, a high-end supermarket chain with over 400 stores, for $13.4 billion. Nike confirmed a partnership with Amazon, stating it to be in an initial phase where they'll be selling goods on Amazon.

5.3 How Amazon achieved the pioneer level

Five years ago, amazon was at 15th position in the National Retails Foundation's list of top 100 retailers with $26 billion sales. Today, Amazon tops the list with $80 billion in online sales, leaving Walmart at second place with $13 billion of sales. Amazon rose up with 16% growth. Amazon has established itself as the most relevant brand to millions of customers across the world.

The relentless efforts manifested by its founder and CEO, Jeff Bezos is to be appreciated. His innovative ideas - from the widely popular Amazon Prime subscription service and free two-day shipping to one-click purchases -

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- has played a key role in winning the hearts and wallets of more than 300 million Amazon customers worldwide.

He simply identified and studied the human behaviour. He developed a three dimension consumer-centred strategy which is as follows:-

- ✓ easing the purchase process by prioritizing social proof
- ✓ shortening the amount of effort required for repeat purchases
- ✓ tightly connecting experiences across devices

He coined the above 3-way strategy through which online retailers can significantly boost sales and effectively grow and retain their customer base at scale.

Some of his other propositions that helped him bag huge success are as follows:-

- **Create a community of (data) givers**

Bezos not just focused on gathering customer data but his genius lies inwhat his team does with it. They build such aura around potential customers to activate interest and covert it into actual sales with ease. For example, Amazon continuously finds unique ways to use members' saved credit card information to eliminate the need to put in card details thus leading to a faster checkout process. American Express members can even easily click on a button to pay for cart items with rewards points.

In addition, Amazon has played the ace card by giving utmost place to the customer reviews on its website. activated their customer base to willingly provide data because it returns significant value. Most of the customers buying decisions are influenced by online reviews. Amazon thus created a platform for its community of customerswhere they willingly put product reviews which fuels up others customers' mood for buying a product. Customers also have freedom to put questions about a particular product which may answered by any other customer or the seller. Such interactions remove buying dilemma of customers and they complete the buying procedure with higher credence.

- **Study behavioural patterns of customers to increase conversions**

Customers many times keep products in their shopping cart and tend to forget them. While other times customers keep switching from website to website in supposition to find better deals.

Amazon has come up with an innovative way of tracking customers behavioural patterns which helps them to know which customer is exploring which products and buying them regularly. The"Subscribe&Save"option given by amazon on their websitehelps to accelerate sales and retain loyal customers. For example, if data shows that a consumer orders food items, toiletries or pet food every other month on a regular basis, why not simplify the buyer's process via subscriptions? Online retailers that adopt this way of thinking where customers can"set it and forget it" -- not only enhances convenience in shopping, but also automatically retains customers without any additional expenditure on promotions and acquisition of customers.

- **Strengthening customer connections and experiences online**

Amazon believes in keeping its customers connected with themselves. It also recognizes how digitization and automation is becoming a normal part of our daily lives where we love to use smart electronic devices. With this approach Amazon has now launched Alexa voice which is a customer-centric technology where customers can direct the device to perform a particular action such as putting a particular product to the cart or asking about details of a product. Alexa is a smart home device which can be connected to various other apps such as our mobile phones, music systems etc.

Amazon's kindle is yet another great invention for avid readers on the go where online soft versions of their favourite books, magazines, newspapers etc can be easily accessed at a touch.

- **Efficient Delivery mechanism**

Bezos identified what are customers' fears while doing online shopping. One such hassle is late deliveries and return procedures. Amazon has given top most priority by proving its customers options of one-day delivery and two-day-delivery on a payment of a very nominal amount. In fact, return pick ups are also very smooth without any annoyance.

Amazon Prime Air is a service that will deliver packages up to five pounds in 30 minutes or less using small drones. Amazon is further working upon its idea of using drones for delivering the packing in the US.

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- **Third-party sellers**

As the logo of amazon promises to deliver products ranging from A to Z, it has connected with itself a vast number of third-party sellers who sell products on Amazon (around 40% in 2008).Amazon has a tie up with various other websites which place links to amazon n their websites and whenever a referral results in sales, amazon pays commission to those associates.

Worldwide, Amazon has "over 900,000 members" in its affiliate programs. In the middle of 2014, the Amazon Affiliate Program is used by 1.2% of all websites and it is the second most popular advertising network after Google Ads.(Bezos, J. et all.*(2014))* Amazon reported over 1.3 million sellers sold products through Amazon's websites in 2007. Unlike eBay, Amazon sellers do not have to maintain separate payment accounts; all payments are handled by Amazon.

- **Multilevel sales strategy**

Initially what started as B2C and B2B commerce, gradually moved to C2C commerce as well amazon today is that common marketplace where anyone can sell nearly anything. Bezos took advantage of his supremacy in the online retailing market, he allowed other e-commerce sellers to use Amazon as a platform to sell their goods. The sales are processed through Amazon in return of some lease amount for the space they are using at Amazon's website. One would agree that not just customers, but Bezos knows how to allure his competitors in his master plan.

Such innovations and steadfast commitments of Amazon have helped it gain the highest brand loyalty. Bezos keeps exploring the potential of technology in all aspects which gains him the extra mile to maintain its position as top online retailer since last five years consecutively.

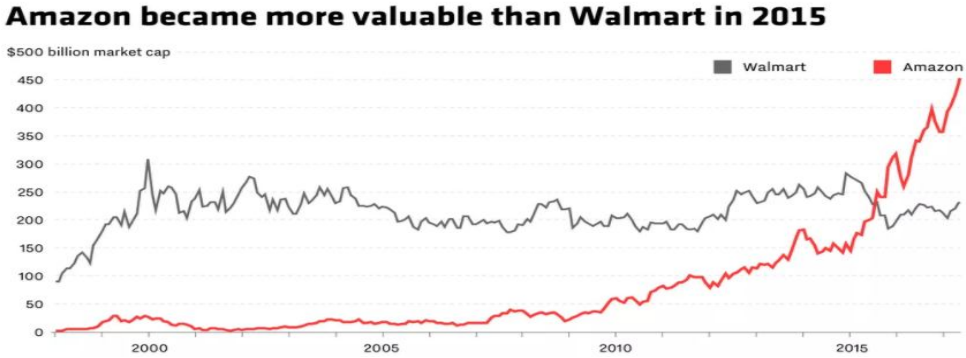
5.4Amazon's herculean 20-year run as a public company, explained in five charts

In May, 1997, a small online bookstore went public on the Nasdaq in an IPO with a valued of $438 million.Twenty years later, that little startup from Bezos's garage — called Amazon.com — is worth nearly $460 billion.

Amazon stock prices have increased 600 times than what it was on its IPO day

Source: https://www.recode.net/2017/5/15/15610786/
Fig-1

It took Amazon 18 years to come at par with Walmart in market cap, and further took only two years more to double it.



Source: https://www.recode.net/2017/5/15/15610786/
Fig-2

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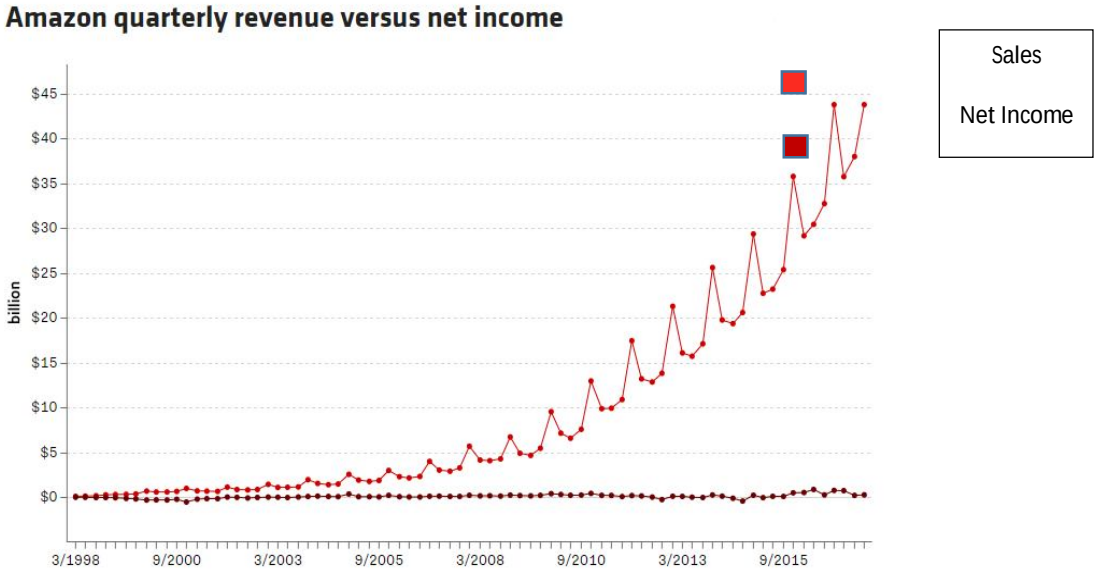
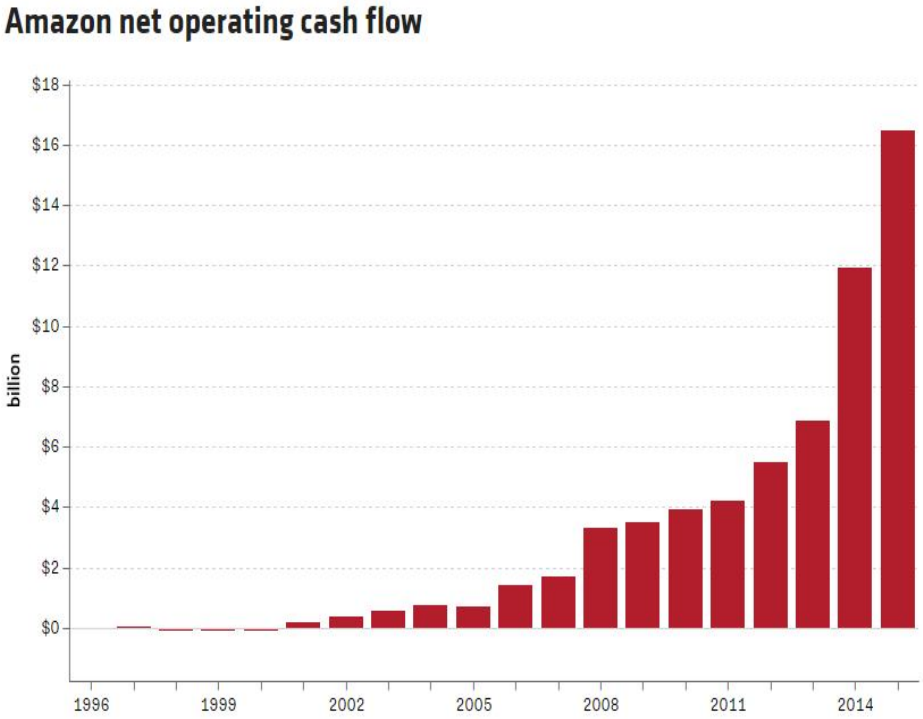
Revenue generation of a company is one of the most important aspect for investors to continue with their investments. Amazon though, held a different approach towards its revenue and sales growth. Its focus was to earn low but stable revenue, creating am image of money loser, while actually eating up all the market share from its competitors.



Source: https://www.recode.net/2017/5/15/15610786/
Fig-3

The impact of Bezos's approach has been that he could manage to gain enough operating cash flow the company needed to invest in everythingwas needed to keep itselfway ahead of its competitors, and shootup and to the right.



Source: https://www.recode.net/2017/5/15/15610786/
Fig-4

5.5 Amazon vs. other e-commerce merchants growth in 2016

While in 2015, Amazon accounted for 40 percent growth share in e-commerce market, last year it acquired a whooping 53 percent growth in US e-commerce market. It's also more than half of the 11.4 percent gain reported by the Commerce Department over the 12 months ended Dec. 31. (The Commerce Department figures apply to non-store sales, which also include catalogs and TV orders.)

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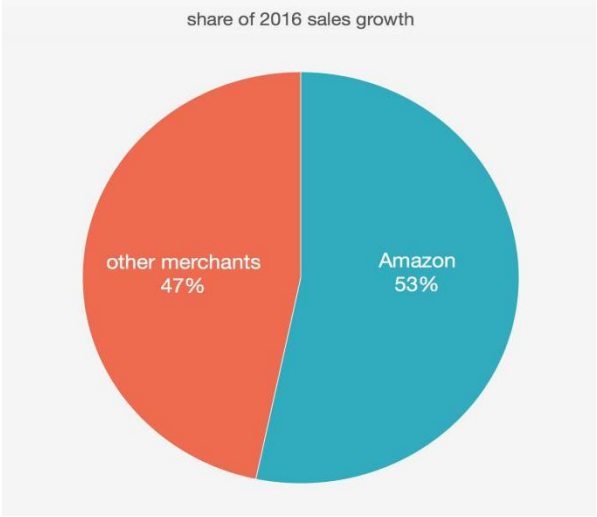


Source- https://www.cnbc.com/2017/02/01/
Fig-5

Amazon's presence worldwide

Amazon understands that people from different backgrounds and cultures may have difference in choices of products. So, in purview of that Amazon has set up separate retail websites for each of the following countries- the United States, the United Kingdom and Ireland, France, Canada, Germany, Italy, Spain, Netherlands, Australia, Brazil, Japan, China, India, and Mexico. In 2016, Dutch, Polish, and Turkish language versions of the German Amazon website were also launched. In order to meet the cross border demand of consumers, Amazon now offers international shipping to certain other countries for some of its products.

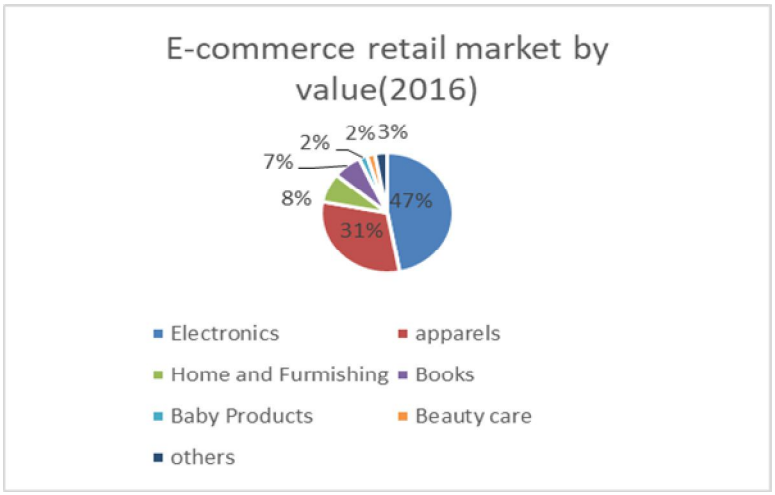
6. E-COMMERCE IN INDIA

E-commerce in India is still at beginning stages. First few Indian e-commerce company being Indiamart, flipkart, which followed similar footsteps of Amazon, i.e starting as a book store now is a big name in Indian E-tailing sector.

By 2014, the Indian online retail pie was an estimated size of $ 2.3 billion, which was 0.4% of the total retailing industry in the country. But the growth of online retail is impressive and the industry is expected to reach the size of $32 billion by 2020 - a significant 3% of the total retail industry.(Srivastava, Pallavi(2014))

Amazon has identified good potential in India and has been on its heels to revolutionize the entire Indian e-tailing space.

- Electronics is currently the largest segment in e-commerce in India with a share of 47 per cent and is expected to grow at a CAGR of 43 per cent by 2020.
- The apparel segment has the second highest share of 31 per cent in the e-commerce retail industry.
- Currently, there are 1-1.2 million transactions per day in e-commerce retailing.



Source-KPMG report-E-commerce retaillogistics India
Fig-6

E-tailing in Rural India

- **Vakrangee** is a "technology driven company, focusing on creating India's largest network of last-mile retail points-of-sale, to potentially enable every Indian to seamlessly benefit from financial inclusion, social inclusion, Digital India, Skill Development, Employment, Government programmes and a wider access to basic goods and services."It has entered into a strategic tie-up with Amazon India to provide marketing, promotional and other services through 'Vakrangee Kendras'. Vakrangee has been building an ecosystem of small outlets to fill the last-mile gap for retail firms in rural areas. The company has over 35,000 business correspondent bank branches through which it also offers insurance, e-commerce and e-governance services.
- Amazon initiated another scheme for the rural poor in India. More than online existence its focusing on offline availability in rural ares as it acknowledged the fact that people in backwards ares are not versed with technology at all. Project UDAAN was initiated in 2015. It aims at partnering with local sellers to enable offline buyers to make purchases through the website. Amazon conducts training for those sellers who are willing to be associated, and for every dale made through them, they are paid certain amount of commission. As people are more comfortable with offline merchants their stores act as product delivery and pick-up points. This makes is far easier to sell in rural areas.

Such extra efforts made by Amazon towards the rural and less-privileged people of the third world countries, reveals how well it is managing to become global in true sense.

7. CONCLUSION

Internet commerce has enabled businesses with new technology andcapabilities. It has automatedthe operations of business. It is creatinginter-dependencies between company's value chain, in terms of its suppliers, logistic chains, operating cycles, payment mechanisms etc.Any company incorporatinginternet technologies easily scores a competitive advantage. E-commerce is easily bringing the world closer as the whole world becomes a customer or a supplier to those having presence in the cloud. Amazon.com, Inc is the biggest name in the E-tailing industry today. Bezos can be described as a serial entrepreneur. Amazon wasn't the first online retailer during 1990s; however, it was the first one to emphasize on customer needs and expectations. He emphasized on studying the behavioural patterns of customers and give them what they want, and the way they want. His innovative schemes such as multilevel sales strategy, creating discussion boards on the websites etc can become learning module for other players in this sector. Amazon has turned the tables of e-commerce industry at the global level. Its founder, Jeff Bezos truly recognized the zenith of internet power. Despite hardly having any physical stores, it managed to grab and stay at top position for five consecutive years. Today e-commerce is inviting every offline business to make its presence online as well because of the increased awareness of customers. It is easier to reach customers without any geographical boundaries; all niche companies have their presence online. E-commerce is also attracting FDI from around the world due to its wide range benefits, and lastly all variety of products from pin to plane can be bought online hassle-free due to transparency of operation models on e-commerce websites. If the power of internet is utilized in the correct direction, it has promising prospective to further boost the international business. As e-commerce is also reaching underdeveloped and third world countries, it is uniting the rural areas which is an important aspect for inclusive growth and development of the world economy.

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EFFECTIVE DECISION MAKING USING ADVANCEMENTS IN BUSINESS ANALYTICS WITH MACHINE LEARNING MODELS: IMPLICATION TO SPORTS ANALYTICS

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ABSTRACT
Business Analytics, since its inception had Sport Analytics as its major and most resourceful proliferation inreal life scenario. Sporting industry had an analytical point of view ever since 1870's yet usage of advanced technological and analytical skills such as data mining and machine learning to obtain fine grained data and in turn use it to obtain better predictions, possibilities and improvisations have started off much recently. This paper elucidates how varied business insights and aspects along with the overview of the game have apparently contributed in making decisions that builds a team as a potential game changer.

What would it be to predict a player's defense? To optimize attack and scrutinize thedefense? What if there is an analytic and predicative model to understand the pitch of a cricket field, different combinations of fielding setup and their possible outcomes? All these are possible due to Sport Analytics with strengthened with advanced machine learning. This research renders to explore the insights of how sports analytics can fetch the audience an inquisitiveness,a businessperson to have a better chance of gaining more money on the game he sponsored and the player to have a better chance of giving his team a cutting edge over an un-analytical approach towards the game.

This paper also ponders over how machine learning in sports analytics can actually change the phase of game play analysis and provide an insightfulness into the game. This research tries to figure out the possible scope for advancement in the machine learning algorithms, which can provide limitless advantages and extremely efficient possibilities in turn changing the game play and plan for a player, manager, coach and even audience who have the major stake of investment into the game.

Keywords: Analytics, Data,Decision, Prediction, Sports.

1. INTRODUCTION

Data Analytics and Data science words have been quite a buzz for the past couple of years. It is not something exaggerating as data is the future and without the right data and right structuring of this data, one could terribly fall behind in this fast-paced business world. Hence, collecting the data and analyzing the data to obtain meaningful insight is the key to success in any field these days.

To geta basic idea about Data Analytics,one requires knowing what Analytics is in the first place. It can be delineated as'manipulation and filtering data to obtain the essence of any raw informational data'. According to Robert Woz, "Analytics is the discovery and communication of meaningful patterns in data"*[Data Analytics for Beginners: A Beginner's Guide to Learn and Master Data Analytics, 2017].*

Analytics can be seen as a process rather than an individual entity. It is a continuous flow of information to filter and bring the necessary output. It is interdisciplinary process, which brings together mathematics, predictive methods, Artificial Intelligence and data visualization. What would it be to imagine your players'defense? To optimize your attack and scrutinizeyour defense What if there is an analysis and predicative model to show the different combinations of fielding setup and their possible outcomes. All these are today possible due to Sport Analytics with machine learning field. This can fetch the audience an inquisitiveness,a businessperson to have a better chance of gaining more money on the game he sponsored and the player to have a better chance of giving his team a cutting edge over a normal un-analytical approach towards the game.

Many recent modifications have come up in this Sport Analytics field such as Ghosting and deep learning through which making simulations of the predictive game models are also possible today.

2. LITERATURE REVIEW

Over the past few years, world has experienced an explosion in the field of sports and is still trying to update and add new methods and algorithms to the library to make things more and more accurate and effective. Sports Analytics field has been busy quite lately in predicting the future of the games, sports and analyzing the current states of sports which has been a great help to the field.

Defining Sports Analytics is quite complex however it can defined as'The Management of Structured Historical Data and the application of predictive analysis and its models to utilize the data and use of information systems to Inform decision makers and enable the organizations to gain a competitive advantage over others in the industry without this' *[Sport Analytics: A data-driven approach to sport business and management, 2016]*

In simple language, it is processing of Sports-Related data to find meaningful patterns. It can used to find hidden trends and player statistics. This analytics is also used to communicate those patterns and help make decisions.

We know that this field is still naive and is mostly unstructured. Interest and insight into this field has been booming in recent years. Therefore, it is a good idea, good business to get into this field way before the competition gets much larger, and before it gets much bulkier with more ambiguities. Data Analytics and its innovative technological advancements are soon going to change the way a game is reviewed and change the way it is being perceived by those who own and make money from it.

Even before we go there, we need to understand couple of terms and key operations in sports analytics to understand this field better.

Data management is the process of acquiring, storing, processing and verifying the data. It is mostly about extracting the data's key points and modelling it using present algorithms. There are numerous models out there in the market. Few models are extensively used and few are based on their accuracy and the skill to use such tools. There are high gradient tools present however, the knowledge to use them or skill to use them is lacking and there is a huge gap in the market and industry. The use of analytical models and tools to forecast a game's result, a players performance is mostly the purpose, of course by no means a necessity. It can be taken as describing the data present in a presentable way to make an understanding out of it.

Information systems unlike the above two attributes, is slightly abstract and vague. These are prominently used to effectively extract the model results of any project.

Decision-making is the final part of any analytics process. This can be seen as at the end goal of the whole process. This is where he extracted analytical information starts to make sense. The decision makers in modern sports are mostly coaching staff or management.

It is not bad if players themselves use this data to understand the whole game and make informed and well thought of decisions.

In terms of data, we can say that this is the most interesting type of data any data scientist can get in this field. It is data rich and there can be no better than analysis hundreds of games of players playing a game. Yes, due to millions of possibilities of permutations and combinations of player placing and strategies, this has high, vast and rigorous amounts of unstructured data. Yet, again, what better use can be done of a data analyst than refining, filtering and brining in the right data to the right requirement.

Previously, we know that players used to watch hundreds of hours of game play films to understand opponent's movements and their strategies. With the help of Sport Analytics, one can actually get maximum efficiency with minimum effort. Machine learning in Sport analytics can actually change the phase of game play analysis and provide an insightfulness into the game. Over giga bytes of data from hundreds of games, a well-developed machine-learning algorithm can provide limitless advantages and extremely efficient possibilities in turn changing the game play and plan in day-to-day life of a player, manager, coach and even audience who have the major stake of investment into the game.

3. EVOLUTION AND INITIAL PHASES OF SPORTS ANALYTICS

A very recently born field is what most people think of this, however studies applying mathematical and statistical models to professional sports data can be referred back to as far as more than 50 years. It is very crucial to remember what the world looked like in the 2000's when people we just starting to use the data to understand the data rather than make analysis out of it. At that time, in the west, where statistics was taking off and there itself the industry was pretty much just using this study in 2 or 3 NBA teams.

Pretty much later, in the recent 21st century near to 2010 -2012 when people thought motion capture technology is far myth and that we are far from discovering and making it work in the industry. Just five to six years later, more than 60% of the teams in NBA are using these tools to increase the team side operations and management side operations as well.

The general ideation is that the sports analytics began sometime in the 19th century with baseball. The data was collected with good old pencil and paper. This was them used to create scouting reports which a coach or

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manager would use to make decisions about their team. Ben Alamar, a European Authorproposes this technique in his book'*Sports Analytics – A Guide for Coaches, Managers, and Other Decision Makers'*and gave a logical flow toward the decision maker.

4. SPORTS ANALYTICS IN BUSINESS: CONTEMPORARY CONTEXT

Data inside a sports organization used to consist of individual box scores and player, team statistics summary. Text based scouting reports were drawn and raw game films were used. The last 15 years has drastically changed the world of sports with the introduction of analytics into it.The first and most important part of the game is always the audience.

Fans are the reason for a game to keep running for years. Fan engagement off the field to enhanced on-field experiences driven by VR & AR, Oakland team ushered in the era of big data in sports.

Leading to its rise in academic research as well with hosting an annual sports conference MIT Sports Analytics Conference brings top minds from the sporting world such as team leads, coaches, players and journalists to discuss cutting-edge analytics solutions for sports landscape.

International cricketing bodies are also quick to embrace technology. Case in point, Australian Cricket teamed up Microsoft that has launched Fair Play Athlete Management System, which will unlock insights from vast amounts of player data. The platform powered by powered by Microsoft's Cloud and Cortana(The Artificial intelligence end of Microsoft) Analytics Suite uses machine learning, predictive analytics and visualizations to help data scientists better manage the huge volume of performance data tracking.

There is Bengaluru based startup in India for Analytics powering ESPN cricket points. It delights fans with visual appealing data and statistically enthusiastic videos. The videos give information about strike rates, poor team performance and best bowlers etc. For example, It can say how Sachin Tendulkar has batted against home spinners versus how he reacted to overseas spinners and what are his weak pitch points and balls. A well-developed model can easily predict the number of runs that are likely to be scored in a particular match.

The ICC and Intel partnership is also a step in that direction. Statistical predictors are in no way a sure shot way to success, but they help in eliminating doubt.

There is a Chennai-based company, which is one of the Indian pioneers in sports analytics space with being Indian team's first sports analyst company. They are the first ones to introduce video analysis to Indian cricket; the company is also the performance analyst of Indian team since 2003 and helped achieve the World Cup title in 2003. The Company transitioned cricket analysis from predictive to descriptive. With such use of Analysis in India sports, we can see India in the next top most countries using Analytics to redefine sports. The company also lent its expertise in helping Kolkata Knight Riders form a team with auction insights. The company offers data analysis to sports like hockey and badminton and opponent critical understanding analysis to badminton player too. The company's real-time decision-making system that analysts enable a coach to survey all the possible options that are feasible during a game.

Not just limited to professional sports, analytics has made inroads into training academies, helping root out bias and uncertainty. Over the coming years, sports analytics will for sure continue to evolve with greater adoption and integration.

Adaption of Analytics into cricket mainly into Indian sports has been a new thing. The work of Analytics has been three dimensional like data, analysis and advanced metric related data. Past couple of years, there is ball-by-ball data being collected of all the International Cricket matches that have been played in the last fifteen years. There is also data collected for T20 matches, which are very popular.

There is an exhaustive database for both T20 and Indian premier leagues. There is Ball to ball data being collected against for each match for fielding placement and its output. These techniques are something beyond the traditional way of determining the success of a match and this is the future.

5. MACHINE LEARNING – EFFECTS ON ANALYTICS

Before Big Data analytics for Sports, there was the system of coaches watching over the tapes again and again to find the weak spot of an opponent and then guide the player to win-win situation which of course was completely based on the coach's intuition and instinct. Now, there are hundreds of models, which determine the result of a match with historical data, giga bytes of data surmounting to huge traction and efficiency. Hence there are companies coming up and even the leagues are looking out for such machine supported suggestions and advices instead of raw and un-supported assumptions.

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Using Machine learning, the data is accurate and is based on facts and figures instead of vague ideologies and thoughts.The future is in the Data visualizations. This will totally change the way we see a game. This gives real time accusations, which are high in quality and efficiency instead of risk taking assumptions.

In Basketball,different players have different shooting ability. Analytics with right amount of data can find the right shooter for the right corner. Analytics can also sometimes find the hidden or secretly good player based on the shots he covered from the distance and the corner he was standing. Data is just magic when in the right tool. All it takes is analysis to pop out once the data is given and that's the end of discussion as there would be N-number of permutations and combinations given out by the predictive models. This totally re-defines the statistics. It gives all the information based on experiences and shots taken by the player against different defenders and with particular styles of dribbling.

6. CONCLUSION AND AVENUES FOR FURTHER RESEARCH

The future of Machine Learning is to predict the game with the mental status and body language of the player, which will play a pivotal role in the team selection and informed decisions about the game. This can happen probably in the coming decade or two.

Deep Learning is a part of Machine Learning, which allows the architect of the data to obtain it with higher accuracy and clarity. Imagine being able to model the opponents defense with just 3-D mapping. Imagine to optimize your attack or to determine the placement of players for rebounds and catches in basketball and cricket. All this is possible with the help of Deep Learning. Lately Ghosting was invented that can accurately learn and predict how an actual professional player can play and learn from thousands of raw data and matches.

The visual nature of this ghosting protocol system could provide direct and indirect benefits to teams that invest in it.A paradigm shift is about to happen in the field of sports analytics, and many companies hope to be at the center of it. Recent advances in deep learning and machine learning are giving coaches and professional athletes insights that previously required watching hundreds of hours of game film. With ghosting systems, teams can show players how to position themselves to maximize the potential for a positive outcome.

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FACTORS AFFECTING FEMALE EXPATRIATES: A REVIEW OF LITERATURE

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ABSTRACT
Women today have successfully marked their places in the world with firm steps in all areas and sectors despite the odds. From setting foot on the moon to shattering the glass ceiling to climb corporate ladders to achieve their organizational career goals, women have been making their mark continuously. Female success stories continue to flood in from all parts of the world today and nowhere do they lag behind in bringing profits to the organizations, heading teams and achieving targets and goals.

Despite showing success and performance that are at par with their male colleagues, why are the women not able to break through the 'glass borders'? Do women not want international careers or a place in the top management positions? Can they, with all the required skills and experiences, not succeed internationally? When even on international assignments, women have shown as much job commitment and bagged the same supervisor ratings as male expatriates, why do glass borders still prevent them from moving globally? The purpose of this study is to review and list the factors affecting female expatriates.

Keywords: Female expatriates, factors affecting female expatriates, gender bias, culture

INTRODUCTION
Expatriates play a very crucial role in the performance of an organisation in the arena of international business (Tung, 1981). The increase in globalisation is causing more and more employees to be sent on long-term international assignments than ever before, which clearly indicates how the use of expatriates, male as well as female will continue to grow in the 21st century (Dolins, 1999). Research has seen how initially only male employees were entrusted with international assignments as against the female counterparts in the organizations (Vance et al, 2006; Taylor et al 2002). Although in the recent decades the percentage of female expatriates being sent on international assignments has considerably increased from 3% in 1990 to 20% in 2009 (Brookfield Global Relocation Services, 2009), the females in the area of international business still stand under-represented. In spite of a considerable increase in the female expatriation, women are still found to be one-fifth of the total expats being sent on international assignments (Brookfield, 2012). Research puts forth what we know as 'gender structures' in the labour market, suggesting the lower the percentage of women in a profession, the lower will be the chances of their reaching the top (Blackburn and Jarman, 2005; Jarman and Blackburn, 1995).

However, there is somewhat a change in the scenario of female expatriates in the global front in light of the recent happenings that have caused organisations to expand their pool of international managers and has resulted in the inclusion of females in the pool as well. The post 9/11 concern for security (Cox et al, 2007; Suder, 2004), relocation of families, trailing partners, education and development of children and dual career families (Harvey et al, 1999 and Permits Foundation, 2009) have caused a decrease in the number of managers willing to take up international assignments and hence, female expats have become an important source of talent in the arena of international business (Nina Cole and Yvonne McNulty, 2011). Yet, in the light of all these research findings it remains very challenging for women to find place among and equal to their male counterparts in the organization in the arena of international business. They face an array of social, cultural and gender based challenges on their way to paving a global career for themselves.

FACTORS AFFECTING FEMALE EXPATRIATES
Female expatiates have been found to be as successful at international assignments as their male counter parts (Caliguiri and Tung, 1999; Napier and Taylor, 2002; Sinangil and Ones, 2003). Altman and Shortland, 2008, carried out a review of research only to find out how women are able to adjust and adapt better than men in cross-cultural assignments. Female expatriates, despite being exposed to not only work related but also non-work challenges, like working with host country nationals (who due to the cultural and social differences, find it difficult to accept the deployment of female managers on cross border assignments) are successful (Janssens et al. 2006; Paik and Vance, 2002; Westwood and Leung, 1994). This success despite hardships can be owed to the suitable characteristics like building and maintaining cross-cultural relationships (Gordon and Teagarden, 1992). Also, their skills with languages, clarity of job roles (Taylor and Napier, 1996) and their way with words lead to a better work as well as interaction adjustment (Selmer and Leung, 2003b).

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In 2007, Desvaux et al presented a research suggesting that gender diversity could be a driver for corporate performance. There are empirical evidences to show that females exhibit personality traits and characteristics that are better associated with expat success (Guthrie et al, 2003). The ability of females to show a greater spirit and performance for co-operating, arriving at a consensus and exceptional capabilities at multi-tasking, emotional sensitivity as well as emotional intelligence and a great way with words grants them an edge or what Helgeson (1990) termed as 'female advantage' in managing assignments (Adler, 1979; Fisher, 1999).

Despite the success of female expatiates, there is a paucity in the number of women being sent on global assignments. This paper is an attempt to list the factors affecting female expatriation at the different stages of the expatriation process.

GENDER BIAS AFFECTING FEMALE EXPATRIATION

Gender bias harms the entire process of female expatriation right from selection of females for international assignments, to the outcomes those assignments also taking their cross-cultural adjustment in the host-county by the stride. There is witnessed stereotyping and gender bias against females in organizations which is known to limit their careers and result in an unequal treatment (Auster, 1993). Women's career growth and development is put to halt by what is long known to us as the 'glass ceiling'- an invisible but impermeable barrier that limits the career advancement of women (Berke and Vinnicombe, 2005, p165). Likewise, in case of international career growth, females face what is termed as 'glass border' preventing mobility across borders (Linehan and Walsh, 1999a). The 'glass border' strengthens the 'glass ceiling' and vice versa (Haines and Saba, 1999), putting impediments in their career growth.

Westwood and Leung point out the two ways organizations have while going for filling expat positions; one by advertising all the vacancies and testing the candidates formally, and another by informal targeting. However organizations do not mostly go for open and announced open expatriate positions but rather an informal targeting of candidates takes place (Westwood and Leung, 1992). There are closed circles from which referrals come and the candidate pool is formed from which women are excluded, whether directly or indirectly, mostly on the misconceived assumption about their unwillingness to take up international assignments because of their working husbands and children (Chan and Smith, 2000). Also, women are not a part of these networks; they cannot assess these networks well and are ignorant of such opportunities, which causes their exclusion from being considered to be sent on expatriate assignments (Westwood and Leung, 1994). Women not only lag behind in assessing networks within the organizations but also in finding mentors that could help them devise growth plans for their international career (Linehan and Walsh, 1999b). Remaining professionally isolated, they fail to fetch international career opportunities (Shortland, 2011). One important finding here is that women need more mentors to enhance their self confidence, their assessment of professional networks, identifying promotional prospects and career advancements (Linehan and Walsh, 1999c).

Four factors are very important and uniquely associated in the case of female expatriation and subsequently their adjustment, namely, creating career options for their male trailing spouse; difficulty in striking a balance between their career and personal relationships; child-care and raising and lastly explicit and implicit biases associated with international assignments and women and hence the negative impact of gender bias on the international career of female managers. There is seen a clear bias against selecting female managers for international assignments (Insch et al, 2008; Verma et al., 2006; Kollinger, 2005). Researchers have identified gender stereotyping as the most emphatic theoretical explanation for the under-represented involvement of females in international assignments (Shortland, 2009). Female expatriates are seen holding lower positions than their male counterparts despite serving the same tenure in the organisation and similar and equal experience in international assignments (Selmer and Leung, 2003b). Also, while in the case of male managers, international assignments create a fast track career growth plan; in case of female managers any such fast track growth is not found to occur. This causes the females expats to see expatriation assignments as lesser successful career paths since they are not at all or lesser often able to meet their career goals in comparison to their male counterparts (Selmer and Leung, 2002). Men tend to hold top positions in organizations and maintain a much closed network and a circle of individuals to be trusted with international assignments (Schein, 1973). Women are deprived of such opportunities that require them to move laterally across borders into international divisions (Thal and Cateora, 1979). Since its very important to have some level of international experience to be promoted to strategic levels in an organization, women's chances get limited as far as opportunities to reach the top levels in management are concerned (Edstrom and Galbraith, 1977).

Nancy J. Adler provides one explanation to the paucity of female expatriates based on the principle of supply and demand of female labour. Women were assumed to restrict themselves from taking up or coming forward to apply for international assignments. The females that do volunteer for such opportunities are termed

unsuitable or turned down by employers or rejected by host country officials on account of negative perceptions regarding deployment of female expatiates (J. Adler, 1979). We see a consistency in the factors limiting women from taking up international assignments over the decades, the main being, the choices made by women, their familial concerns, their perception and a lack of respect and confidence shown by the host country and employers. This prejudice of foreigners against female expats, the loneliness to be dealt with, difficulties to be faced and most importantly their trailing male spouses in case of married women and children's education in case of women with children hinder their international mobility (Izraeli et al, 1980). In dual career families it is even more difficult to make such decisions (Luthans, Chew and Li, 2006). Getting the male spouse to trail behind a female expat to look for a career there in the host country puts restrictions on the female concerned (Hardill and Donald, 1998). Married women, especially those with children find great difficulties showing international mobility (Linehan, 2000). Therefore, they take up fewer such assignments than those who are unmarried or have non-working partners (Stroh et al, 2000a, 2000b) while, on the contrary, refusal of relocation by a male manager due to an impact on the female spouse's career is seen as 'career suicide' (Linehan and Scullion, 2001a).

Women do want expatriate careers but it doesn't always translate into reality since it comes second to family responsibility (Akim, 2000; Shortland, 2011). The intention of male partner here plays a very important role in deciding if the female will take up the international opportunity or not (Makela, Kansala and Suutari, 2001; Haines and Saba, 2008, Brett and Stroh, 1995). Acceptance as well as success of such assignments depends largely on spousal support and happiness and their willingness to adjust in the host-country (Tung, 1982). Marriage is seen as one reason that increases the risk of failure for such assignments for female expats (Shortland, 2011). Its right to say that unmarried women exhibit greater mobility with regards to international assignments as for married women prioritising their marriage and familial responsibilities comes first. Care of elders and education of children plays a significant impediment hindering a successful international career (Tzeng, 2006; Zheo et al., 2006, Tharenou, 2003).

SOCIAL INTERACTION AND CULTURE AFFECTING FEMALE EXPATRIATION

Social support and interaction create a sense of belongingness and connection; develop feelings of security and self-esteem hence enhancing self-confidence of female expatriates. Organizations need to encourage such opportunities for them to prevent negative feelings like loneliness and isolation from creeping up, thereby, shooting up chances of success of female expat assignments (Caliguiri and Lazarova, 2002). Women are found to be less adjusted cross-culturally than men in nations where there is a lesser participation from female workforce and lesser number of women managers (Caliguiri and Tung, 1999).

Female expats undergo a constant pressure to build relationships to reduce social isolation especially in countries and cultures where women are not found in higher ranks in the hierarchies (Taylor and Napier, 2001). They find difficulties gelling in the expatriate networks as they are mostly male dominated (Lineham and Walsh, 2000b). A research conducted on the experiences of American women sent to Turkey revealed the difficulties faced on this front; the discomfort felt by juniors in interacting and socializing with higher rank officials while local married women viewed them as a threat because of their 'foreigner and single' status (Taylor and Napier, 2001; Napier and Taylor, 2002). Social support, social interaction and building a relationship is very crucial for cross cultural expatriate adjustment (Adelman, 1988; Aycan, 1997a, 1997b; Black, 1990; Black et al. 1991; Briody and Chrisman, 1991; Church, 1982; Feldman and Bolino, 1999; Ward and Chang, 1997). In case of females it is even more so. Females lacking family support (Caliguiri et al., 1999) and not very interactive socially and those who find it difficult to make friends adjust lesser and slower on international assignments (Westwood and Leung, 1994).

Caliguiri and Lazarova, 2002, proposed a model to explain how female expatriates develop relationships and as a result adjust cross-culturally. This model threw Social interaction and social support is very important in cross-cultural adjustment, both in terms of work adjustment as well as interaction adjustment (Caliguiri and Lazarova, 2002). Social support and interaction helps to co-ordinate feelings and psychological processes and renders a stable state of mind to develop recognition and connection in the host country (Fontaine 1986; Rook, 1984) which helps in expatriates' adjustment and reduces stress and uncertainty during the assignment (Aycan 1997a, 1997b; Black et al. 1990).

There are sometimes societal and cultural norms that limit the chances of female expatriates and opportunities of social interaction (Westwood and Leung, 1994). For example in case of social interaction of single expatriate women, which might carry a negative connotation in certain countries (Caliguiri et al., 1999). This leaves female expats in a fixed state and feelings of isolation and loneliness are reported hence affecting the outcomes

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of their assignments (Napier and Taylor, 1995). On occasions female expats are known to have bought dogs for companionship (Caliguiri et al., 1999).

The challenges are not for single women alone. Caliguiri and Lazarova suggest that culturally, even married women face many challenges like the social stigma associated with having cross-gender relationships. There are problems due to hierarchical set up in organizational relations e.g. befriending a senior manager irrespective of gender has a discomfort associated with it. Also there prevails a negative 'foreigner' status among the host country nationals towards the expatriates leaving them socially challenged (Caliguiri and Lazarova, 2002).

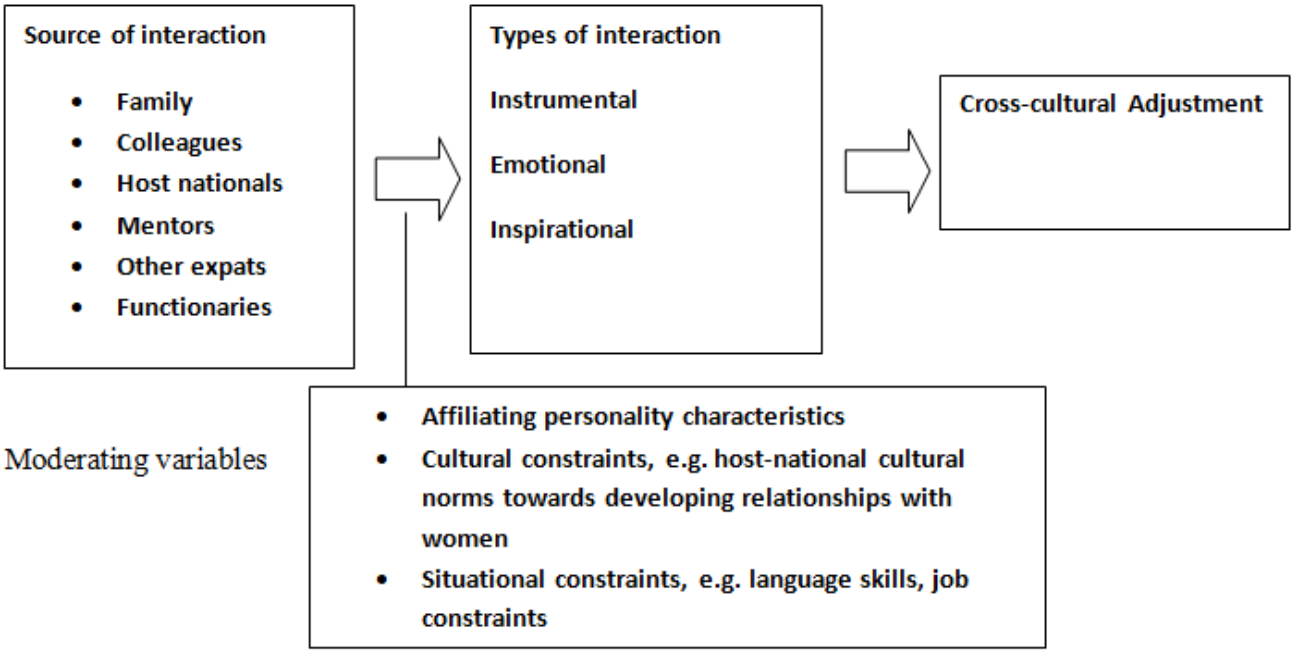

Fig: *Social interaction and social support as antecedents to female expatriates' cross-cultural adjustment as given by Caliguiri and Lazarova(2002)*

Organizations should create and encourage opportunities for such social interactions. For example, now that we know how important contact of expatriates with host-national colleagues is, organizations should train the host-country nationals to positively influence their perceptions of the female expatriate. This training may enhance the cultural awareness among host-country nationals and confront their biases and stereotypes (Aycan, 1997a; Florkowski and Fogel, 1999; Vance and Paik, 1995). Such training will also facilitate the interaction and socialization between host nationals and female expatriates and increase the social support for them. It is particularly important in case of nations where strong biases against women workforce (Aycan, 1997a, 1997b; Caligiuri and Cascio, 1998).

INSTITUTIONAL EFFECTS ON FEMALE EXPATRIATION

Employees discriminate between male and female employees when it comes to choosing the right candidates for global assignments. This is because it is seen as an established fact that sending male members of an organization on international assignments involves lower costs as compared to expatriating their female counterparts and to establish women as more suitable for the same purpose will involve incurring higher costs (Becker, 2001). So organizations have chosen to live on with the on-going bias. However, there are employers that have well in time let go off the bias and have been able to reduce costs and increase returns on international assignments (Anker, 2001).

Labour markets see a segregation of jobs on the basis of gender structures (Blackburn and Jarman, 2005a; Siltanen, Jarman and Blackburn, 1995). In case of expatriates, horizontal

gender segregation is found which means smaller the percentage of women in a profession, smaller will be the number of females reaching the top positions in the hierarchy (Blackburn and Jarman, 2005b; Wirth, 2001). This is the reason why the chances of women holding top positions in management in male dominated sectors is minuscule for example women's presence as heads of multinationals (Klenke, 1999).

DISCUSSION

The above study reveals how female expatriation needs a lot of attention in all the stages right from selection of candidates to their relocation in the host-country and further to repatriation if any meaningful change is to be

brought about and to increase gender diversity in expatriation (Susan Shortland, 2011). The most important factor affecting female expatriation and resulting in the paucity of females on global assignments is the gender bias and stereotyping starting right from the home-country to the host country. This is the first and foremost issue that needs to be addressed in order to be able to send the right candidates on the bases of merit and not network based targeting. Organizations need to declare openly the vacancies and carry out formal tests to choose from the unbiased candidate pool. In the hot-country, there has to be encouraged an open and more flexible attitude of respect and acceptance for women expats being deployed. This has to be the starting point if some meaningful change is needed to be brought about. Having the requisite international experience will grant the women in organizations the required qualification for top management level positions hence breaking the glass-border and glass-ceiling.

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FINANCIAL INCLUSION THROUGH BUSINESS CORRESPONDENT MODEL-OPPORTUNITIES AND OPERATIONAL ISSUES OF CUSTOMER SERVICE PROVIDERS

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ABSTRACT
Pace of global development has made achieving advancement of every section of the society imperative. While doing so the focus now has shifted to the rural segment which remains excluded from the formal source of financial service. India, where a majority part resides in rural areas is still not aware of financial services provided and including these segments within the ambit of financial services is known as financial inclusion. The Reserve Bank permitted banks to utilize the services of intermediaries in providing banking services through the use of Business Correspondents (BC), also known as branchless banking. The service providers or the Bank Mitra operating at the Customer Service Point (CSP) acts as the pillar of the Business Correspondent model. The service providers are the one which act as the link between the bank and the customers, since it is physically not viable to set a bank branch in every area. Inspite of the importance of CSP, there are some operational issues which act as hurdle in the success of the BC Model. This paper has focused on the operational issues faced by the service providers and conducted a study in the Kamrup district of Assam.

Keywords: Financial Services, Financial Inclusion, Business Correspondent, Branchless banking, Customer Service Point.

1. INTRODUCTION

With the increasing pace of global development it has become imperative to achieve advancement of every section of the society. While doing so the focus now has shifted to that section of society which remains excluded from the formal source of financial service i.e. the rural segment. Lack of access to financial services in developing countries for a section of the society is considered as a serious threat to the overall progress of the economy. If we look into the figures of households availing banking service as per the Census 2011, 58.69% households in India and 45.36% in Kamrup district have availed banking services, which shows the need to amplify the reach of banking services.

The process of including these segments within the ambit of financial services is known as financial inclusion. Towards broader financial inclusion the access to a transaction account is a vital step since it allows people to store money, send and receive payments. The focus of the World Bank Group's Universal Financial Access 2020 initiative is to ensure that people worldwide can have access to a transaction account since it can be considered as a gateway to other financial services[15].

Reserve Bank of India (RBI) defines financial inclusion as "a process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular, at an affordable cost in a fair and transparent manner by regulated mainstream institutional players".

Banks play a vital role in the process of financial inclusion. Banks ensured achievement of financial inclusion through various services such as opening of no-frills accounts, relaxation on know-your-customer norms, opening of branches in unbanked rural centers, GCC and KCC, engaging business correspondents. In 2004 Khan Commission was set up by the RBI in order to look into financial inclusion and accordingly as per the recommendations in January 2006, the Reserve Bank permitted banks to utilize the services of intermediaries in providing banking services.

2. THE BUSINESS CORRESPONDENT MODEL

With the view to promote financial inclusion amongst the unbanked, a set of guidelines were developed by the RBI to formalize branchless banking and extending financial services specially in geographically detached areas, which they called the Business Correspondent (BC) model, introduced in January 2006. The Reserve Bank permitted commercial banks to make use of the services of NGOs, SHGs, Micro-finance Institutions, Societies registered under Mutually Aided Cooperative Societies Acts or the Cooperative Societies Acts of States, Post Offices, Retired bank employees, ex-servicemen and retired government employees as intermediaries to act as Business Correspondent for providing financial and banking services.

[15] https://www.worldbank.org/en/topic/financialinclusion/overview

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Business Correspondents (BC) are the retail agents engaged by banks for providing banking services at locations other than a bank branch/ATM. The BC arrangement essentially means enrolling customers and enabling the transactions of the customers at the Customer Service Points (CSPs) on their behalf commonly known as branchless banking. BC enable a bank to expand its outreach and offer limited range of banking services at low cost, as setting up a branch may not be viable in all cases. Without an inclusive financial system, poor individuals and small enterprises have to rely on their own limited savings and earnings to invest in their education and entrepreneurship, to take advantage of growth opportunities[16]. Certain segments of the population have to resort to high cost informal sources such as moneylenders since they experience difficulties in obtaining appropriate access to financial services. The BC model has been considered as the most important initiative of the Reserve Bank.

State bank of India has been a front runner in introducing BC model in Assam. With 90.62% of rural population (as per 2011 census) in Kamrup district it is the prime necessity to link this section to the main stream banking services.

3. CUSTOMER SERVICE POINT

Customer Service Point (CSP) acts as the pillar of the Business Correspondent model. The service providers are the one which act as the link between the bank and the customers. The services provided through CSP includes opening of saving a/c, deposit, withdrawal, availing schemes of government (including the Pradhan Mantri Jan Dhan Yojna, Pradhan Mantri Suraksha Bima Yojna, Pradhan Mantri Jeevan Jyoti Bima Yojna, Atal Pension Yojna). CSPs are entrusted with a unique CSP code by the head office which marks their identity and are linked with the bank branch on behalf of which banking activities will be provided. The CSP server used for functioning is connected to the core banking server of the bank. The CSP outlet undertakes banking activity through any one of the various technologies adopted by the bank such as Kiosk Banking, Mobile Rural Banking solution, Card based technology, Cell phone messaging technology. Out of the mentioned technologies the most widely used technique at present is Kiosk banking. In Kiosk banking, the CSP can enroll customers and open accounts using a Finger Print capturing device supplied by the Bank and using the internet connectivity.

The various role to be performed by the CSP's are:

- Verification of applicants details and identification of customer
- Forwarding of completed account opening forms with KYC documents to Link Branch.
- Provide permitted banking services
- Maintain records and registers
- Ensure uniform branding of outlets
- Contact customers to fund their Zero balance accounts
- Issue system generated receipts

The contribution of the BC model can be understood by the amount of accounts operating under the model. Table 1.1 shows the total number of Basic Saving Bank Deposit Account through branch and the BC model.

Table 1.1: Total number of BSBDA (in millions)

Particulars	2010	2011	2012	2013	2014	2015	2016
BSBDA through branches (No. in million)	60	73	81	101	126	210.3	238
BSBDA through BCs (No. in million)	13	32	57	81	116.9	187.8	231
BSBDA Total (in million)	73	105	139	182	243	398.1	469

(*Source*: Statistical table relating to banks in India, RBI)

From the table it is observed that the number of accounts under the BC model has made a significant increase from 13 million in 2010 to 231 million in 2016. A major increase is noticed in the year 2014, bringing the number of accounts from 81 million in 2013 to 116.9 million in 2014. If we have a look in the year 2016, we can observe almost equal contribution of branch and BC model in the total number of accounts. We can rightfully assume that the BC model has the scope of further achievement.

[16] RBI Publications, Financial Inclusion, Sep 04, 2008

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4. LITERATURE REVIEW

Consequences of financial exclusion can be complicated day-to-day cash flow management and limits the option for providing people in the unorganized sector security in their old age (Rakesh Mohan, 2006). Broadening the availability of financial services to the financially excluded population of the country is the purpose of financial inclusion in order to open its development prospective and striving towards inclusive growth of nation by making financing available to the poor and needful (Pradnya.P.Meshram, Prajakta Yawalkar,2016). The enhancement of economic opportunities through banking inclusion has an indirect effect upon the attainment of education and health opportunities and this in turn induces the level of human development (Dr. Rajeshwari M. Shettar, 2016). Financial inclusion broadens the resource base of the financial system by developing a culture of savings among large segment of rural population and plays its own role in the process of economic development (Dr. Sudhinder Singh Chowhan, Dr. J.C. Pande, 2014). Dr. Raghuram Rajan, Ex-Governor, Reserve Bank of India mentioned information, incentives and transaction costs as hindrance in the way of inclusion of rural people. People in rural areas mostly resort to informal economic activity due to which they sometimes lack documentation which stands as an information barrier in offering financial products by the banker. The uncertainty in the mind of lender with regard to repayment of loan from the borrower makes the lender not to offer any loan which falls as hindrance under incentive. Lastly the transactions by poor section usually are small in size which makes the fixed cost relatively high. So it can be assumed that any banker would focus on large size transaction instead of small (Dr. Rajan, 2016)

5. OBJECTIVE OF THE RESEARCH

- To give an overview of the Business Correspondent model.
- To study the operational issues faced by the Service Providers.

6. RESEARCH METHODOLOGY

This paper is mainly descriptive in nature. Boko development block and Chaygaon development block of Kamrup district of Assam has been selected for the purpose of this study. Primary data has been collected through schedule from 30 randomly selected CSPs operating under the Business Correspondent Company appointed by State Bank of India. Secondary data has also been collected from bank website, E-Journals, reports and published journals. The selected CSP of SBI in Kamrup district operates under the following BC Company i.e. Drishtee, Zero Mass Foundation, NICT Technologies Pvt Ltd, Arth-Rural Connect Services Pvt Ltd.

7. ANALYSIS OF THE DATA

An analysis of the data collected through primary study is presented below.

7.1 Table 1.2 displays some of the aspects of operation of CSPs under the BC Model.

Table-1.2: Aspects of CSP operation

Parameters		Yes	%	No	%
i.	Engagement in other service	22	73	08	27
ii.	Training provided	27	90	03	10
iii.	Satisfaction with commission pattern	02	7	28	93
iv.	Benefit from grant of loan through CSP	30	100	0	0

(Source: field survey)

The following interpretations can be made from the table

a) 73% of CSP is engaged in other occupation apart from serving at CSP. Within this segment, some of the CSP's have undertaken this service as a side business in their existing shop/store whereas a majority of them have ventured in other services. 27% are solely active as CSP.

b) Training of the CSP is essential to operate the BC business efficiently. The above table illustrate that 90% of the respondent CSP were provided training whereas 10% of them did not go through any such training. Further enquiry showed that majority of the respondents felt the requirement for further training particularly in computer operation.

c) 93% of the CSP are not satisfied with the commission and consider that the commission structure is not adequately designed to serve the purpose of their work. They stated that the amount of commission paid is low and the segregation of commission received is not presented clearly.

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d) Since the grant of loan is still not available through the CSP, the sanction of same would prove beneficial for the customers, as agreed by all the respondents since customers would be able to avail the services of micro credit from the CSP instead of resorting to other sources.

7.2 Table 1.3 displays the various services provided by the CSP in the study area.

Table-1.3: Services provided

Services	Respondents	%
Deposits	30	100
Withdrawal	30	100
Micro Credit	Nil	Nil
Insurance	27	90
Others	15	50

(Source: field survey)

Table 1.3 shows that service commonly provided by all the CSP's is deposits and withdrawal of money. Insurance service is gaining momentum with Mantri Suraksha Bima Yojana. Other services provided are SBI account opening (through Pradhan Mantri Jan Dhan Yojana), pension (through Atal Pension Yojana), recurring deposit and transfer of money. Bank is yet to approve the grant of micro credit through CSP, therefore such service is not offered through the model.

7.3 Table 1.4 shows various factors which stand as obstacle towards better performance of CSP.

Table-1.4: Problem faced by CSP

Factors	Respondents	%
Lack of coordination with branches	19	63
Lack of coordination with BC	25	83
Staff shortage at the CSP	07	23
Lack of training	12	40
Lack of customers knowledge	08	27
Technical problem with device	26	87

(Source: field survey)

Following are the interpretations derived from table 1.4:

a) It is evident from the above table that 87% of the CSP faced the problem of network breakdown due to which they were unable to process customer's requirements within reasonable duration resulting to loss in business.

b) Lack of coordination with BC as well as the link branches acts as obstacle in the service of CSP. The service provider urged that the members from the BC Company should make frequent visits at the service points in order to have a better understanding of the problems faced by the CSP's. The time taken by the link branch for processing the work of CSP is sometimes more due to which the customers have to face inconvenience. In some of the centre the rush of customers are more to be handled by one service provider, due to which they had to seek help from other people. 40% CSP considered lack of training as an obstacle since they had difficulty in operating computers.

c) Service providers informed that for some of the customers the motive behind having an account is to withdraw the subsidy or benefits credited to their account. There are instances where the customer withdraws the entire amount making their balance nil. One of the reasons behind accounts remaining inoperative may be the fact that customers are still unaware of the benefits of having a bank account.

8. SUMMARY OF FINDINGS

93% of CSP informed that the amount of commission received is not viable due to which some of the service provider had to resort to other service. Since the services provided through CSP is for the low income group the service provider is unable to consider the service as profit making. The grant of micro credit through the CSP would prove beneficial for the rural people as opinioned by 100% CSP. Other operational issues faced by the CSP are lack of better coordination between the BC Company and the link branch. Technical trouble with server remains an obstacle towards firm operation as per 87% of the CSP. The lack of customer's knowledge can be overcome through more workshops and providing a better insight into the financial services so that the customers are well aware of the benefits of operating an account and they can demand for better products. The

CSP's in the study area are keen towards providing better quality service and considered the service as opportunity in uplifting the weaker section of the society and providing a channelized way of financial service.

9. CONCLUSION

The BC model can be viewed as a source of employment since 52,340 service outlets has been set up under SBI till 31.3.2017 as per the Sustainability Report 2016-2017, SBI. The communication of BC Company, link branch and CSP should be improved so that better plans can be made for a greater reach of the BC Model. The BC model has been a boon for the financial inclusion drive but there are instance where people are still not aware of the model. The bank and BC Company should make reasonable effort towards promoting this model in the utmost rural areas in order to cover a huge customer base. One of the important concerns of the rural people is availing credit. Banks can make improvements in the model by allowing the CSPs to grant loan within a specific limit which can be kept under the scrutiny of the link branch. Since the number of CSPs enrolled in the BC Model is on rise, it can be interpreted that this structure of branchless banking has ample scope in achieving new heights in financial inclusion through the operation of the Customer Service Providers.

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IMPACT OF CAPITAL STRUCTURE ON PROFITABILITY AND MARKET VALUE: STUDY OF BSE S&P 100 LISTED FIRMS

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ABSTRACT
Profitability is matter of great concern for all the stakeholders in the firm and theory reveals that it is the leverage decision that has significant impact on profitability as well market value of a firm. Therefore, the purpose of this study is to assess the relationship between capital structure and profitability and market value of BSE S&P 100 listed firms capital and also to investigate the extent of impact of capital structure on the profitability and market value.

In this analytical study data for the period of seven years (from 2011 to 2017) has been collected from CMIE PROWESS database and the same has been using descriptive statistics, Pearson correlation and multiple regression analyses. Findings of the present study show that leverage has positive significant upon return on assets and leverage has no any significant impact on market value. The findings of the present study will definitely contribute the existing literature as well provide a sound base for decision making to the firms under study concomitant to capital structure decisions.

Keywords: BSE 100, Financial Leverage, Market value, ROA.

1. INTRODUCTION

Firm performance is always a matter of concern for every business concern, and there are so many variables (qualitative as well quantitative both) which have direct and indirect effect on the performance of the business firm e.g. cost of capital, capital structure, size of the firm, business risk etc. And it is the capital structure decisions which contribute in firm performance. Initially, Modigiani and Miller (1958) there is no significant relation between CS and firm performance but later in the year 1963 explained that value of the firm increases with the higher debt ratio.

Literature too, up to some extent depicts that capital structure decisions do impact significantly the firm value. Therefore, in the present study, author investigated empirically the impact of capital structure on firm performance pertaining Bombay Stock Exchange listed 100 firms (from 2011 to 2017). This paper has three sections, first section is about the literature review pertaining to the relationship between CS and firm performance, third section is about objectives and methodology, in fourth section, analysis, results and discussion of results and lastly the conclusions and future research.

2. LITERATURE REVIEW

In the year 2004, Baur in his study pertaining to Czech Republic found that debt to equity ratio is negatively correlated with profitability and tangibility but positively correlated size of the firm. Further, in a study, Chen and Strange (2005) conducted study Chinese listed companies and found that profitability is negatively correlated with debt ratio while size of firm, risk and age are positively correlated with debt ratio. Huang and Song (2006) found no negative correlations between leverage and the performance of the Chinese firms. Zeitun and Tian (2007), investigated the impact of capital structure on financial performance of companies from Jordan. And in their study, they concluded that CS has negative contribution in the financial performance of firms.

Onaolapo and Kajola (2010) also checked the relationship between CS and financial performance pertaining to 30 non –financial Nigerian firms and result of OLS regression shows that CS is negatively related to financial performance. In another study of Ong and Teh (2011), they explored the relationship between capital structure and corporate performance of Malaysian firms and findings shows that there is significant relationship between capital structure and corporate performance.

Saeedi and Mahmoodi (2011) checked the relation between CS and financial performance of Iranian companies and found that ROA has negative significant relationship with capital structure. Salim and Yadav (2012) in their study pertaining to Malaysian listed firms found that short term debt, long term debt and total debt are negative correlated with return on assets, return on equity and earnings per share. But they found positive relationship between market value and short term debt and long term debt. Muhammad, et. al. (2014), too found significant negative correlation among CS and firm performance of cement companies listed on Karachi Stock Exchange. Akeem, et. al. (2014) conducted a study manufacturing companies of Nigeria in order to ascertain the effects of capital structure on firm's performance and findings of their study shows that total debt and debt to equity ratio

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have negative significant relationship with firm performance. And they concluded that firm should use more of equity component and less of debt component in their CS in order to enhance the firm performance.

In another study, Banerjee and De (2015) investigated the impact of CS on financial performance of BSE 500 firms in which return on assets as dependent and business risk, size, sales, growth rate, leverage, interest coverage ratio, tangibility and non-debt tax shield as independent variables. Findings of the study shows that in pre-recession period sales (log of sales) and interest coverage ratio has positive significant relationship with profitability and leverage and size has negative impact. In post recession period, only log of sales has posive impact and size, leverage and interest coverage ratio has significant negative impact upon profitability. Findings shows that rest of the independent variables have no significant relationship with profitability. IsolaWakeel and AkanniLateef (2015) in their study found significant effect of capital structure on firm performance. Further, in a study by Vatavu, (2015) found that it is the shareholder's equity that is having positive impact on the performance indicators of the Romanian firms and "total debt" and "short-term debt" is having negative relation with "return on assets" and "return on equity". In the year 2016, Nassar also investigated the impact of CS on financial performance of 136 industrial companies listed on Istanbul Stock Exchange, findings of his study shows that capital structure and firm performance have negative significant relationship.

2.1 Research Gap and Theoretical framework

Review of literature has provided mixed of opinion pertaining to the relation between "CS" and "firm performance". Some studies are showing significant positive relation between the CS but some studies are showing no significant positive relation between capital structure and firm performance. In result, we cannot derive any inferences from the literature available. Hence, researcher has made an attempt to empirically investigate the relationship between the capital structure and firm performance of BSE 100 firms.

About BSE 100: This broad based index was launched in the year 1989 and uses 1983-84 as the base year. This index is having 100 scrips.

3. METHODOLOGY

In this analytical research pertaining to capital structure and firm value BSE S&P 100 firms, data has been collected form "Centre for Monitoring Indian Economy PROWESS" database for a period of 7 years from 2011 to 2017. A total of 98 firms were studied using descriptive statistics, Pearson correlation and multiple regression analysis. In order to check the problem of multi- collinearity among independent and control variables, Variance Inflation Factor (VIF) has been used by the researcher.

Variables used in the study:

Dependent Variable: 1. Return on Assets

2. M/B ratio

Independent Variables: 1. Leverage (Debt to Equity Ratio)

Control Variables: 1. Tangibility (Net fixed assets/Total assets)

2. Size of the firm_1 (log of Total sales)

3. Size of the firm_2 (log of Total assets)

Regression Model used:

1. $ROA = \alpha + \beta_1 (leverage) + \beta_2 (Tangibility) + \beta_3 (Size\ of\ the\ firm\ 1) + \beta_4 (size\ of\ the\ firm\_2) + €$
2. $M/B\ ratio = \alpha + \beta_1 (leverage) + \beta_2 (Tangibility) + \beta_3 (Size\ of\ the\ firm\ 1) + \beta_4 (size\ of\ the\ firm\_2) + €$

3. RESULT AND ANALYSIS

Analysis of the present study starts with checking the multi-collinearity problem among the independent variables namely: leverage, Tangibility, Size of the firm_1 (log of total sales) and Size of the firm_2 (log of total assets). Multi-collinearity problem means correlation between various independent variables used in the study. In table no. 1, all the values of VIF are smaller than the 5 which infers that problem of multi-collinearity is not there among independent variables.

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Table-1: Collinearity Diagnostic (through VIF)

Coefficients[a]		
Model	Collinearity Statistics	
	Tolerance	VIF
Leverage	.321	3.117
Tangibility	.776	1.288
size_1	.390	2.567
sales_1	.256	3.902
a. Dependent Variable: ROA		

Descriptive Analysis: In Table 2 the descriptive statistics pertaining to the variables under the present study e.g. ROA, leverage, Tangibility, Size of the firm_1 (log of total sales) and Size of the firm_2 (log of total assets). Mean and standard deviation have been included to show the descriptive statistics.

Table No. 2 Descriptive Statistics			
	Mean	Std. Deviation	N
ROA	9.2373	9.11752	686
Leverage	.9721	1.79758	686
Tangibility	.2027	.16751	686
size_1	5.2886	.62353	686
sales_1	4.9426	.89906	581

*Correlation Analysis:*The below table No. 3 shows that result of Pearson correlation among the "dependent variables" (Return on assets and M/B ratio) and "Independent variables" (leverage) and control variables namely, {(Tangibility, Size of the firm_1 (log of total sales) and Size of the firm_2 (log of total assets)}.

Table No-3: Correlations

		ROA	MV_BV	Leverage	Tangibility	size_1	sales_1
ROA	Pearson Correlation	1					
MV_BV	Pearson Correlation	-.079	1				
Leverage	Pearson Correlation	-.352**	-.025	1			
Tangibility	Pearson Correlation	.055	-.027	-.315**	1		
size_1	Pearson Correlation	-.368**	.043	.268**	-.121**	1	
sales_1	Pearson Correlation	.014	.018	-.551**	.406**	.415**	1
**. Correlation is significant at the 0.01 level (2-tailed).							

There is significant positive correlation between ROA and leverage, and Size of the firm_2 (log of total assets) at 0.01 level of significance which means all the independent variables are contributes positively in the financial performance. And M/B ratio has no significant relationship with any of the independent variables.

Multiple Regression Analysis

Table No-4: Regression Analysis pertaining Profitability

Model-1: ROA= $\alpha + \beta_1$ (leverage) + β_2 (Tangibility) + β_3(Size of the firm 1) + β_4 (size of the firm_2) + €		
Independent Variable	Coefficient	t-statistic
Intercept		8.028*
Leverage	-.295	-4.357*
Tangibility	-.155	-3.554*
Size_1	-.145	-2.361*
Size_2	-.024	-.322
Notes: *Shows α= 0.05 level is significant, Adjusted R^2 = .121 (changed Adj. R^2= .147), F-Value = 25.9, p-value = <0.0001		

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Table No-5: Regression Analysis pertaining M/B ratio

Model-2: ROA= α + β_1 (leverage) + β_2 (Tangibility) + β_3(Size of the firm 1) + β_4 (size of the firm_2) + €		
IDV	Coefficient	t-statistic
Intercept		-.612
Leverage	-.015	-.165
Tangibility	-.068	-1.326
Size_1	.060	.748
Size_2	.013	.133
Notes: * Shows α= 0.05 level is significant, Adjusted R^2 = .121 (changed Adj. R^2= .147), F-Value = .766, p-value = <0.0001		

In the above table No. 4 and 5, results pertaining to the regression analysis have been presented, In the table no. 4, results are significant as Adjusted R^2 = .121.in the first model (pertaining to control variable) and changed statistics of Adjusted R^2 =. 147 (pertaining to leverage) are showing significant P-Values. This infers that, leverage does have some impact upon financial performance (return on assets) of the firms under the study and 14.7% of the variations in the ROA is because of leverage. But results of second model are not showing any significant impact. All beta coefficients are showing no significant coefficient value which infers that leverage has no impact upon MV of the firms..

5. DISCUSSION

In the present study, relationship between capital structure (leverage) and firm performance have been investigated using BSE 100 firms. Correlations analysis findings depicts that all the leverage has positive significant relationship with financial performance and in case of market to book value, there is no such any relationship exists between MB ratio and leverage.

Findings of the regression analysis show that 14.7 percent of variations in the return on assets are because of leverage and which is significant but results are quite contradictory in model 2.

The major findings of this study are quite similar with the previous researches in which there exists a positive relation between CS and financial performance like in the study of Baur (2004), Ong and Teh (2011), Salim and Yadav (2012), Banerjee and De (2015), IsolaWakeel and AkanniLateef (2015), and Vatavu, (2015).

No doubt, majority of studies {Modigiani and Miller (1958), Chen and Strange (2005), Huang and Song (2006), Zeitun and Tian (2007), Onaolapo and Kajola (2010), Saeedi and Mahmoodi (2011) Salim and Yadav (2012), Muhammad, et. al. (2014), Akeem, et. al. (2014) and Nassar (2016)} in the literature are showing negative relationship between capital structure and financial performance.

In context of market value and capital structure, findings of the present of the study showing no significant relationship as well impact of CS on MV but, in literature a study by Salim and Yadav (2012) shows positive relation between market value and STD and LTD.

And in the model 1, the beta coefficient value of leverage, tangibility and Size of the firm_1 (log of total sales) is quite good except size of the firm_2 (log of total assets). But in model 2, beta coefficient is showing very bad result in context of all independent variables. Findings of this study clearly confirm that decisions pertaining CS do have on impact financial performance which infers that increasing proportion of leverage will increase financial performance but results are contradictory in context of market value and capital structure.

6. CONCLUSIONS

In the present study pertaining to ascertaining the impact of capital structure on financial performance and market value of BSE 100 firms. Findings clearly concludes that as the proportion of leverage increases, the financial performance excels and scenario is quite opposite in context of market value and capital structure.

LIMITATIONS AND FUTURE DIRECTIONS

In the present study, only three control variables are taken by the researcher because of the problem of multi-collinearity but there are certain other variables which directly or indirectly impact the firm value. So further research can be performed using those variables e.g. business risk, interest coverage ratio,etc. And in this present study macro level work has been done by the researcher by taking whole BSE 100 index, further study can be done at micro level by selecting few firms.

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TRENDS AND PATTERNS OF INDIAN OUTWARD FOREIGN DIRECT INVESTMENT

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ABSTRACT
During late 90's the Indian Government adopted the open market strategy, in the course of which Indian multinationals were encouraged to invest abroad in a global quest for dominance. Multinationals rising from the emerging countries is cutting a larger share of the world market each passing day and Indian multinationals are an integral part of this rising global champions group. The importance of these investments is to substantiate India's economic growth and enforce the country's strategic goals; thissuggests the significance of studying their recent trends and patterns.

Building on a firm-level monthly dataon overseas investments of Indian entities,collected from RBI over a period of ten years, we handpicked a top ten list of India's largest investors. We would explore their choices of mode of entry, financingchannels and destinations.The finalresults should give us a good glimpse of Indian OFDI characteristics on a micro-level.

Keywords: Outward FDI, Indian multinationals, entry modes, financing channels, destination

INTRODUCTION
From Birla Group setting up a textile mill in Ethiopia in 1959 to Bharti Airtel acquiring Zain Africa, the Indian multinationals have come a long way. Recently, a group of multinationals; incorporated during the import distribution era or well before during the colonial era, and others which were born after the year 1991under a new liberalization scheme, which has put India on the list of the top 20 nations in terms of the size of its outward FDI (UNCTAD, 2011).

In 2014, MNEs from developing Asia became the world's largest investing group for the first time, accounting for almost one third of the total 432 billion $. In South Asia, FDI outflows from India reversed the slide of 2013, increasing fivefold to $10 billion in 2014, as large Indian MNEs resumed their international expansion. (UNCTAD, 2015).These shifts in the landscape of global economy toward Asiahave urged similar shifts in focus of international business literature. For a long time the literature has been heavily centred on western multinationals, theories were built by identifying their characteristics, patterns of their overseas investments and destinations. As another type of multinationals has emerged during the 1990's, these multinationals are different from their counterparts in developed economies. They have different investment patterns, trends and different destinations. This necessitated more attention to be directed to study this phenomenon.India provides a proper field to study the outward FDI from developing countries. Indian multinationals have been expanding abroad increasingly along with the gradual relaxation of controls on capital outflows. Outward FDI has grown from $ 12842 million in 2006 to $ 25547 million in 2016. This outward FDI was directed to different countries using various financing channels and entry modes.

The structure of paper is as follows: the next section introduces us the research design and data. Section 3 presents general trends and patterns in Indian outward FDI. The subsequent section illustrates the modes of entry and financing channels used by Indian multinationals. Sections 5 discuss the immediate destinations of outward FDI from India. Finally, the conclusion.

RESEARCH DESIGN AND DATA
This paper is an attempt to capture the idiosyncratic features of Indian outward FDI by analyzing the internationalization aspects of the top 10 Indian outward investors. Adopting the inductive approach, we depend on observations to find patterns and explanations to those patterns. Our chosen method can be called as Narrative description with elements of comparison.

Data: Since July 2011, RBI has made available a monthly firm-level data of outward direct investment along with accessibility to archives dating back to July 2007.

The data provide us with the names of the Indian Parties that made the transactions, the names of the foreign affiliate to which the flows were directed, the type of entry mode whether it is through a Wholly Owned Subsidiary (WOS) or a Joint Venture (JV), the immediate destination of the flows were where the affiliate was

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situated, the size of the transactions arein million $ in the form of equity, debt, and/or guarantee Issued. This data is made available as it is reported by the designated authorised dealers[17] to RBI.

We aggregated the data annually from July 2007 till the end of June 2017 covering a 10 year period. We select our sample as the top 10 list of Indian multinationals which have invested the most during our study period. These multinationals are responsible for almost 32% of total outward FDI. They are a diverse group of firms in term of size,age and ownership. Table 1 shows the total amounts of outward FDI conducted byeach multinational, their market capitalization as a proxy for size and the year of incorporation.

Table-1: Top 10 outward investors from July 2007 till July 2017

Name of Indian MNC	OFDI ($ million)	Market Capitalization on Jun 2017 (Rscrore)	Year of Incorporation
Bharti Airtel	32297.42	151561,42	1995
Reliance Industries	12491.68	448797,36	1966
ONGC	9915.50	201866,79	1956
Tata Motors	5034.09	124877,82	1945
Suzlon Energy	4987.11	9735,16	1995
Tata Steel	4896.55	33149,44	1907
JSW Steel	3941.60	49130,01	1982
Piramal Enterprises	3827.22	48299,55	1988
Lupin	3583.90	46997,36	1972
Reliance Communication	3579.91	5351,31	2002

General trends

Table-2: Annual size outward FDI transaction

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bharti Airtel	35.82	39.35	11110.19	1393.92	3992.96	4488.46	9905.35	0.19	0
Reliance Industries	473.23	388.57	7378.34	809.6	2205.07	165.07	301.35	277.05	477.4
ONGC	1034.38	2538.88	381.571	116.39	15	888.72	4151.54	0.25	116.7
Tata Motors	1451.3	3136.81	9.0075	267.69	46.28	27.88	35.62	10.28	40.55
Suzlon Energy	1076.34	314.78	777.8616	389.54	707.51	784.52	0	0	9.5
Tata Steel	0	65.29	1192.58	1308.20	352.63	1.71	1906.54	3.42	50
JSW Steel	147.13	91.81	466.192	350.32	479.18	695.63	441.02	249.49	265.81
Piramal Enterprises	14.1	155.85	88.3896	111.65	1817.97	432.55	181.85	226.33	223.33
Lupin	49.78	59.22	4.957	7.5	52.68	57.99	114.89	1058.7	2103.05
Reliance Communication	4	160.02	2310.00	0	0	549.81	0	21	0

OFDI flows increased steadily from 2007, it spiked in 2010 mainly supported by a more than $ 10 billion acquisition of Zain's Africa by Bharti Airtel. The flows dropped sharply in 2011, they increased a little in 2012 to drop again in 2013. The flows reached another high in 2014 then plummeted to a record low in 2015. They has started to rise in 2016, and continued to till the end of June 2017.

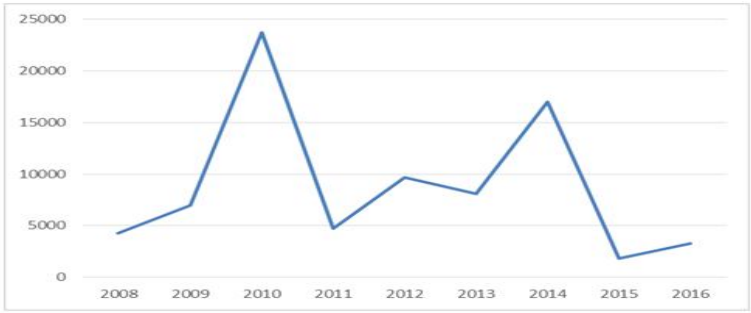

Figure-1: Annual outward FDI trends

[17]An Indian party is required to route all transactions in respect of a particular overseas JV/WOS only through one branch of an Authorized Dealer. This branch would be called the 'Designated Authorized Dealer' in respect of that JV/WOS and all transactions and communications relating to the investment in that particular JV/WOS are to be reported only through this ' designated branch' of an Authorized Dealer.

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The fact that the ups and downs in OFDI flows for these ten multinationals are in tandem to a large extent points out that it might be related to macroeconomic factors in their home country, India or the global economy.

No doubts that OFDI flows has been increasing gradually along with the increase in liberalization in foreign exchange rules. In September 2007, 100% limit of net worth was liberalized further to 300% and to 400% of the Indian party net worth in 2008.

During the second half of 2013, the Indian rupee plunged to a record low versus the dollar slumping to a 68.85 value on August 28, 2015. RBI responded in the same month tightening the control over the movements of OFDI flows. Circular no. 23, August 2014 reduced the OFDI limit back to 100% of the net worth under the automatic route.The depreciation in rupee and the setback in the liberalization route might have negatively affected the OFDI flows during 2013. Once the rupee showed signs of recovery and stabilized around 60 Rs. for USD, RBI restore the old rules and the limit is back to 400% of the net worth as long as the whole financial commitment isn't more than USD 1 billion, in July 2014. The flows reallypicked up during 2014.What might cause the huge decrease in 2015?The devaluation of the YUAN caused stock markets all over the world to go into downward spiral, this panic may have find its way to the direct investment flows too.

MODES OF ENTRY AND FINANCING CHANNELS

According to RBI guidelines "Joint Venture (JV)'' means a foreign entity formed, registered or incorporated in accordance with the laws and regulations of the host country in which the Indian party makes a direct investment." And "Wholly Owned Subsidiary (WOS)'' means a foreign entity formed, registered or incorporated in accordance with the laws and regulations of the host country, whose entire capital is held by the Indian party.

	JV	**WOS**
Bharti Airtel	27917	2986
Reliance Industries	0	12491
ONGC	5639	3868
Tata Motors	315	4759
Suzlon Energy	22	4966
Tata Steel	120	4777
JSW Steel	3151	791
Piramal Enterprises	731	3091
Lupin	105	3481
Reliance Communication	0	3580

Looking at Table 3, it's obvious that Indian multinationals prefer WOSs to JV s as an entry mode. The fact that they have equally invested comparable amounts in WOSs and JVs($ 44790 million in WOSs and $ 38000 million in JVs) is distorted by Bharti Airtel huge investments through its joint ventures in Netherlands and Singapore. This doesn't apply to the rest of MNCs in our sample or in the whole populations.

How are these MNCs funding their WOSs or JVs? They are investing more equity in their WOSs than they are investing in their JVs. The equity invested in JVs is equal to 30% of that invested in WOSs. The opposite is right for debt; JVs are more funded by debt than WOSs. The big difference is in issuing guarantees. Parent Indian companies, except for the case of Bharti Airtel don't seem willing to issue guarantees on behalf of their joint ventures.

The financing of the internationalization of MNCs is done through different channels namely equity, debt and reinvested retained earnings. These channels reflect the internal capital market transactions between an MNC and its foreign affiliates (JVs and WOSs).

Table-3: Financing channels of Indian OFDI

	Equity	**Debt**	**GI**
Bharti Airtel	2223	2428	26254
Reliance Industries	2261	416	9815
ONGC	9085	239	185
Tata Motors	3375	450	1250
Suzlon Energy	1432	485	3070
Tata Steel	1199	1792	1906
JSW Steel	263	2156	1522

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Piramal Enterprises	274	1242	2306
Lupin	786	13	2787
Reliance Communication	564	571	2445

Host countries

The disadvantage of data on overseas investments available from RBI is that countries mentioned under the label of host countries are the immediate destination of the OFDI flows and most probably not the final one. This creates a problem in recognizing the real host countries considering that more than 60% of these flow where directed toward Offshore Financial Centres (OFCs).

Table-4: Entry Modes and Host Countries

ONGC	**JV**	**RUSSIA**	**AZERBIJAN**	**MOZAMBIQUE**	**IVORY COST**	**SWEDEN**	**COLOMBIA**
		MYANMAR	SUDAN	VIETNAM	EGYPT	LYBIA	SYRIA
		SRI LANKA	KAZAKHSTAN	COOMBIA			
	WOS	IRAN	SWITZERLAND	CAYMAN ISLAN	BVI	MAURITIUS	SINGAPORE
Bharti Airtel	**JV**	NETHERLANDS	SINGAPORE	UK	UAE		
	WOS	MAURITIUS	USA	UK	HONGKONG	SINGAPORE	SRI LANKA
Reliance Industries	**JV**	USA					
	WOS	NETHERLANDS	UAE	AUSTRALIA	MAURITIUS	UK	SINGAPORE
Tata Steel	**JV**	SOUTH AFRICA	SINGAPORE				
	WOS	SINGAPORE					
Tata Motor	**JV**	THAILAND	SPAIN	SOUTH AFRICA	ITALY	INDONESIA	NIGERIA
	WOS	SINGAPORE	UK	SPAIN	MORROCO		
JSW Steel	**JV**	CHILE	USA	SINGAPORE			
	WOS	MAURITIUS	NETHERLANDS	UK			
Suzlon Energy	**JV**	NETHERLANDS					
	WOS	DENMARK	USA	GERMANY	CHINA	MAURITIUS	NETHERLANDS
Lupin	**JV**	USA					
	WOS	NETHERLANDS	SWITZERLAND	UAE	UK	AUSTRALIA	
Piramal Enterprises	**JV**	USA					
	WOS	SWITZRELAND	NETHERLANDS				
Reliance Communications	**JV**						
	WOS	MALDIVES	SINGAPORE	NETHERLANDS			

OFCs as defined by International Monetary Fund (IMF) are jurisdictions where most of the financial activity that is taking place is linking overseas lenders with overseas borrowers. A less positive definition was introduced by OECD which considers an OFC as a tax haven which is based on the existence of preferential tax regimes for financial services and limited disclosure of tax information.

Which one of these two perspectives applied more to Indian OFDI flows to OFCs? As part of the liberalization movement the Indian firms were allowed to create special purpose vehicle whether in the form of a subsidiary or a joint venture to raise foreign capital to finance their foreign investments mainly acquisitions. In 2010, Bharti Airtel acquired Zain Africa for $ 10.7 billion; the company announced that it has raised the amount as a debt form a consortium of foreign banks along with the state bank of India. The monthly data available from RBI shows that Airtel issued guarantees to its joint venture in Netherlands with the amount of $ 5462.5 million and guarantees of the exact amount on behalf of its joint venture in Singapore. Meaning that Airtel is using these joint ventures which have been set up in OFCs like Singapore and the Netherlands to raise fund. Except in few cases most of the WOSs were set up in countries knows as OFCs. We can notice possible final destinations more in the case of joint ventures. Table 6shows the share of host countries which are not classified as OFCs out ofthe total overseas investments made by multinationals in our sample. It is alarming that on average only 16% out of total outward FDI was directed to non-OFCs destinations.

Table-5: Indian OFDI in Non-OFCs destinations

	Total OFDI	**OFDI directed to a Non OFC**	**%**
ONGC	9915.5	6047.061	61%
Bharti Airtel	32297.42	134.9	0%
Tata Motors	5034.088	413.764	8%
Reliance Industries	12491.68	328.6986	3%

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JSW Steel	7111.859	3170.254	45%
Tata Steel	4896.553	81.4704	2%
Suzlon Energy	4987.109	1107.511	22%
Lupin	3583	231	6.5%
Piramal enterprises	3821	2448	65%
Reliance Communication	3579	0	0%
Total	87717.2	13962.65	16%

CONCLUSION

Considering that the 10 Indian multinationals in our sample have carried out almost 32% of total outward FDI over a decade. Generally speaking, we can say that Indian outward FDI has grown since 2007 but volatility was a feature of these flows over the years. Indian multinationals have a striking preference for WOSs as an entry mode; they have also been financing more and more of their outward FDI using Guarantees which are issued by these multinationals to their affiliate to enable them to raise money from international capital markets. Finally, the large amounts of outward FDI directed to OFCs raises concerns over tax evasion practices and require further exploration.

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NEXUS BETWEEN FINANCIAL INCLUSION AND TELECOMMUNICATION: A STRUCTURAL EQUATION MODELLING ANALYSIS WITH SPECIAL REFERENCE TO JAMMU& KASHMIR

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ABSTRACT
Financial Inclusion matters because finanancial development is a key driver for economic development. Since 2005, the Reserve Bank of India (RBI) has introduced several measures to boost the financial inclusion in India through several schemes like relaxed KYC norms, no-frills' accounts, General Credit Cards, Business Correspondent Model. Still more than 19% of the population are unbanked or financially excluded due to weak infrastructure of financial system of India. The telecom sector can act as bridge between financial institution and unbanked population to overcome the infrastructure related issues. Primary data for the study has been collected from 200 residents of Jammu and Kashmir through a schedule for conducting empirical research. The study shows a significant and positive effects of Ability of using mobile phone as well as Awareness about telecom services on Ability of using banking services and Awareness about banking services. Hence, telecom sector along with financial sector can make a joint effort through appropriately designed product.

Keywords: Financial Inclusion, Rural, Structural Equation Modelling, Telecommunication, Unbanked

INTRODUCTION
Rangarajan's committee on financial inclusion defines it as "Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost". Financial services include insurance, loans, credit, saving etc. The main motive behind financial inclusion is to improve the livelihood of low income and underprivileged. Financial Inclusion matters because finanancial development is a key driver for economic development. Since 2005, the Reserve Bank of India (RBI) has introduced several measures to boost the financial inclusion in India through several schemes like relaxed KYC norms, no-frills' accounts, General Credit Cards, Business Correspondent Model. The Government of India has also taken various steps towards financial inclusion such as Pradhan Mantri Jan Dhan Yojna, Pradhan Mantri Fasal Beema Yojna, Pradhan Mantri Jeevan Jyoti Yojna, Pradhan Mantri Mudra Yojna etc.

Still more than 19% of the population are unbanked or financially excluded due to weak infrastructure of financial system of India. Like financial sector, telecommunication is also emerging as backbone for Indian economy. India is the second largest telecommunication market and third highest number of internet users in the world. Telecom technology is changing our lives. Telecom sector is witnessing substantial growth every year. As on 31st Oct 2017, the number of telecom subcribers is 504.19 million. Telecom sector with such a large rural customer base can be an efficient channel to teach the unbanked population. The telecom sector can act as bridge between financial institution and unbanked population to overcome the infrastructure related issues.

LITERATURE REVIEW
Jin&Hundal (2007) in their paper tried to identify the factors influencing mobile service adoption in rural India. The primary data were collected from 1357 respondents who have adopted mobile phones in the rural region of the Punjab and analyzed using Principal Component Analysis. The education level of respondents below metric might be the reason that the rural respondents were not much influenced by media/advertising. The study concludes that rural people extremely desire the facilities and knowledge along with latest technology to make choice about mobile sets and service provider.

Paramasivan&Ganeshkumar (2013) in their paper scrutinized the status of financial inclusion in India. The secondary data from report of World Bank, financial access survey (2010, 2012) were used for study. They have recommended strengthening of MFI, BC or BF. They have also suggested Indian post office as a channel to provide banking services in rural India. The joint efforts of technology provider and banking channel are required to reach the unbanked. They have concluded that financial literacy is important along with the proper investment opportunities.

Mago and Chitokwindo (2014) in their article examined the impact of mobile banking on financial inclusion in Zimbabwe. The results reveals that the low income people are willing to adopt mobile bonking due to security convenience, cheap, easy to use and accessible. They recommended that the low income people of remote area can use financial services through mobile banking. Mobile banking has increased the financial activities in rural areas and boosting the economic growth.

Singh et. al (2014) in their paper focuses on the use of existing means such as mobile phones, India post office, banking technologies, fair price shops and business correspondents (BCs) for financial inclusion in India. They have collected data from field research and consultation with the members of RBI. They have analyzed the three dimension of financial inclusion i.e. branch penetration, credit penetration and deposit. Credit penetration is the major problems among all. They have concluded that lack of awareness and financial literacy among rural population are responsible for low penetration of financial services. Incentives to the BCs, use of existing network, awareness about banking technology and mobile phone will create a difference in achieving financial inclusion.

Garani&ghosh (2015) in their paper discussed the key components of financial inclusion and the related developed ICT which assists the financial inclusion as an easy apparatus. They have collected primary data from the southern part of the Assam with the sample size of 50 people. It was observed that 100% of the beneficiaries in the study were using the ATM services and 60% were using SMS alert (Mobile). The relationship between the banks ICT service and the customers' satisfactions was studied. It is clear from findings that the activity by the banks for financial inclusion is increasing considering the penetration of internet with the motto of Digital India.

Behl& Pal (2016) in their paper developed a relationship between perception of users and degree of usage of mobile banking. They have identified the barriers associated with usage of mobile banking in rural India. The primary data were collected through the structured questionnaire. They have used structured equation modeling (SEM) for analyzing the data and confirmatory factor analysis (CFA) to check the fitness of measurement model. The results reveal that usage of the mobile banking technology is largely driven by perception of users and potential users. Perception plays an important role towards degree of diffusion of mobile banking in rural area.

Ouma et al. (2017) in their study examined in selected countries in sub Saharan Africa, whether the persistent use of mobile phone to provide financial services is a boon for savings mobilization.The results show that the likelihood of saving at the household level increases with the availability and usage of mobile phones to provide financial services. Thus, Mobile phone financial services is an opportunity for promoting savings mobilization, especially among the poor and low income groups where access to formal financial services is limited.

Siddiqui & Siddiqui (2017) in their paper analyzed the impact of telecom on financial inclusion using structural equation modelling based software Smart PLS. They have collected 200 samples each from Gujarat and West Bengal. Awareness, Usability and ability of using services is the dimensions for each constructs. The results reveals that there is clear evidence of positive impact of telecom on financial inclusion in both the states irrespective of the level of growth.

Siddiqui & Siddiqui (2017) in their paper analyzed the impact of telecom on financial inclusion by moderating the effect of education. A sample of 200 were collected from Palwal district of Haryana. They have used SmartPLS to show the modelling relationship between the constructs. The results disclose that the education plays an important role in defining the relationship between telecom and financial inclusion. They have recommended that the Financial institution and telecom companies should collaborate through innovative techniques to reach the unbanked.

OBJECTIVES OF THE STUDY

1. To study the impact of Ability of using mobile phone on Ability of using banking services
2. To study the impact of Ability of using mobile phone on Awareness about banking services
3. To study the impact of Awareness about mobile services on Ability of using banking services
4. To study the impact of Awareness about mobile services on Awareness about banking services

HYPOTHESIS

H01: There is no significant impact of Ability of using mobile phone on Ability of using banking services

H02: There is no significant impact of Ability of using mobile phone on Awareness about banking services

H03: There is no significant impact of Awareness about mobile services on Ability of using banking services

H04: There is no significant impact of Awareness about mobile services on Awareness about banking services

RESEARCH METHODOLOGY

Primary data for the study has been collected from 200 residents of Jammu and Kashmir through a schedule for conducting empirical research. As the study is based on rural population, the Thahpoo and Nowgam villages have been selected from Anantnag district of Jammu and Kashmir.

Ability of using banking services and Awareness about banking services are the two dimensions representing dependent constructs named as Financial Inclusion. Similarly, Ability of using mobile phones and Awareness about mobile services are the two dimensions representing independent constructs named as Telecom. Structural Equation Modelling (SEM) has been used for analyzing the model and testing the hypothesis. Structural Equation Modelling using AMOS 21.0 was executed to observe the effect of telecom on dependent variable financial inclusion. AMOS is a covariance based Structural Equation Modelling

Analysis
Out of 23 indicators, only 12 indicators were retained in the final model. In order to fit the model, we have dropped 11 indicators based on their low outer loadings. List of all indicators are in appendix. The structural model is acceptable based on the following model fit parameters:

Absolute fit indices
It determines how well the proposed theory fits the data. Chi-Squared Test, RMSEA, GFI, AGFI, RMR and SRMR are included in this category.

Chi Squared Test:
It assesses the magnitude of discrepancy between the sample and fitted covariance matrices. (Hu and Bentler, 1999). Model fitness is examined by the value of relative chi-square (CMIN / DF) and the recommended range is between 2 to 5 (Wheaton et al, 1977). The CMIN/DF value for the current model is 3.887which indicates good model fit.

Root Mean Square Error of Approximation (RMSEA):
The RMSEA tells us how well the model, with unknown but optimally chosen parameter estimate would fit the populations covariance Matrix (Byrne, 1998). As per MacCallum et al (1996), the recommended value which shows a good fit is below 0.08. The RMSEA value for this model is 0.07.

Goodness of fit (GFI)
The cutoff value of 0.90 recommended by Bentler and Bonett (1980). GFI value for current model is 0.935 which represents a good model fit.

RMR (Root Mean Square Residual)
RMR value for the current model is 0.04 which is within recommended limit. RMR value should be less than 0.05.

Path Analysis
The relationship between different paths are estimated through Structural Equation Modelling. Table 1 represents the regression weight. All the paths are significant in the model with p value less than 0.05 and critical ratio is greater than 1.96. Hence, all the research hypothesis is supported. Ability of Using Mobile Phone (AUMP) has highest impact on ability of using banking services(AUBS) followed by Awareness about banking services (AWBS). Similarly, awareness about telecom services(AWTS) positively impact ability of using banking services(AUBS) as well as awareness about banking services (AWBS).

Table-1: Regression Weight

			Estimate	S.E.	C.R.	P	Label
AUBS	<---	AUMP	0.424	0.051	8.314	***	par_5
AWBS	<---	AUMP	0.254	0.069	3.681	***	par_6
AUBS	<---	AWTS	0.358	0.063	5.683	***	par_7
AWBS	<---	AWTS	0.364	0.071	5.127	***	par_8

Figure-1: exhibits the Structural Equation Modelling (SEM) showing the impact of telecom on financial inclusion.

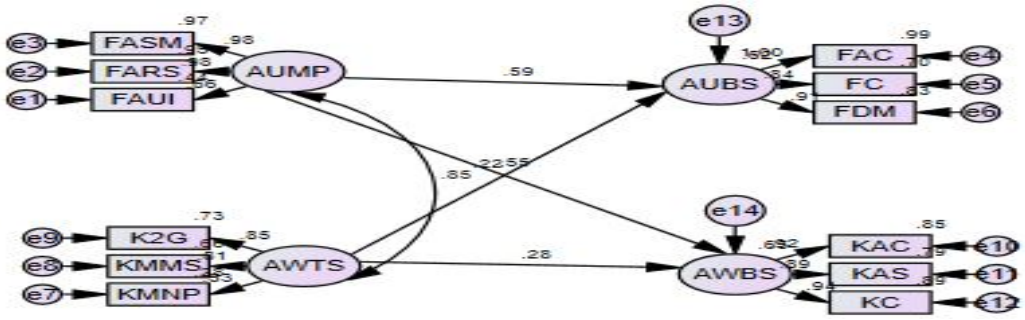

Figure-1: Path diagram

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CONCLUSION& IMPLICATIONS

This research is proposed to analyze the effect of telecom on financial inclusion. The study shows a significant and positive effects of Ability of using mobile phone (AUMP) as well as Awareness about telecom services(AWTS) on Ability of using banking services(AUBS) and Awareness about banking services(AWBS). It can be concluded from the results that the people who are able to use mobile phone services and aware about telecom services are also able to use banking services and aware about the services provided by financial institution. Hence, telecom sector along with financial sector can make a joint effort to increase their customer base through appropriately designed product. Telecom company can be effective and efficient channel to reach the unbanked population at an affordable cost.

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APPENDIX

List of Indicators			
Ability of using banking services(AUBS)		**Ability of using Mobile Phone(AUBS)**	
FAC	Family member able to use ATM card	FAMC	Family member able to make call
FCC	Family member able to use credit card	FARC	Family member able to receive call
FC	Family member able to use cheque	FASM	Family member able to send SMS
FDM	Family member able to deposit money	FARS	Family member able to receive SMS

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FWC	Family member able to withdraw cash	FAUI	Family member able to use internet
Awareness about telecom services(AWTS)		**Awareness about telecom services(AWTS)**	
KAC	Knowledge about ATM card	K2G	Knowledge of 2G
KCC	Knowledge about credit card	KMMS	Knowledge of MMS
KSA	Knowledge about saving account	KSMS	Knowledge of SMS
KAS	Knowledge about ATM services	KAR	Knowledge about roaming
KRD	Knowledge about Deposit	KSTD	knowledge about STD
KC	Knowledge about cheque	KMNP	knowledge about mobile portability
		KOTP	knowledge about OTP

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DETERMINANTS OF BANK PROFITABILITY: AN EMPIRICAL STUDY FROM INDIA

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ABSTRACT

Banks now-a-days stand-in as significant players in the monetary system of a developing country like India. Indian banks have done well during the recent global crisis, as is apparent from the yearly credit growth, profitability and trends in Non - performing assets of banks. Financial performance of a bank shows the strong point and weak points of the bank by satisfactorily creating a association among the items of a balance sheet and profit and loss account.

The banking sector of India has arose as distinct of the robust drivers of India's economic growth. Banking industry of India has finished owing progress in past few years, even through the eras when the financial meltdown was hampering whole world.Thus, the profitability position of banks acts as an vital measure to know the position of bank in the banking sector. Analysis of financial performance is a function of multiple factors such as capital adequacy, assets value, efficiency of management, liquidity and profitability position. The study was analytical in nature and was drawn on basis of secondary data only. The data was collected from reserve bank India publications and annual reports, financial reports of respective banks and various websites like World Bank, Punjab national bank and Axis Bank.

The study deals with various variables; one is the dependent named Return on asset which is a proxy measure to banks profitability and six independent variables named liquidity, cost, risk, GDP, inflation rate and interest rate, out of which the former are bank definite factors and latter are macroeconomic factors. Further for the analysis of these variables; Multivariate linear regression and correlation techniques were used. The study reflected a significant impact of all the six factors on return on asset stating the fact that the banks profitability is affected by all the six determinants and the correlation is also significant.

Keywords: *Macroeconomic, Profitability, Bank-Definite, Interest Rate, Return on Assets, Non-Performing Assets.*

INTRODUCTION

The empirical studies have found a strong relationship among economic growth and fiscal development. Finance plays a significant role in the economic growth. The charts illustrate the functioning of Banks in last 10 year and Relative functioning of BSE Banks& BSE Sensex in 2010-11. The performance of Banks hastened through the period March 2002 to March 2008. The performance of banks slowed through March 2008 – March 2009 but afterwards it has shown rising inclination till March 2011.The four-month phase (November 2010-February 2011) was clear by a constant waning in all the indices triggered by a number of universal and domestic progresses. The Sensex deteriorated by 12.4%, while the Bankex Index declined by18.3%.Some of the worldwide factors, such as increase in crude oil rates and high commodity prices contributed to inflation in thedomestic economy. High inflation together with low growth rate in the Index of Industrial Production (IIP) and tightening interest rates has caused some concerns over the short-term economic growth, hitting the stocks in each the sectors, particularly those in the fiscal services sector.

Figure No-1.4: Performance of Indian Banking Industry Source:rbi.org.in

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LITERATURE REVIEW

The review of literature is to give a theoretical foundation for the research and help regulate the nature of the research. Athanasoglou (2005) examined the significance of bank-specific macroeconomic determinants on bank profitability for the phase 1985 to 2001 and stated that both external and domestic factors moved its structure and functioning. A vitaloutcome of this study is that the trade cycle considerably affects bank profits, even after adjusting for the influence of other determinants, which have a robust correlation with the cycle.Sufian and Habibullah (2009) studied the factors of the profitability of the Chinese banking sector throughout the post-reform period of 2000–2005.Findings of the study suggested that all the factors have statistically substantial impact on China banks profitability. Flamini, Mcdonald and Schumacher (2009)analysed that credit risk, greater returns on assets are linked with big bank size, activity diversification and private ownership. They stated that bank returns are disturbed by macroeconomic variables, promoting stumpy inflation and steady output growth. The study upkeeps the policy of striking higher capital desires to strengthen financial stability.Wasiuzzaman and Tarmizi (2010) studied the influence of bank feature as well as macroeconomic factors on the profitability of Islamic banks. Dr. Gupta and Dr. Sikarwar (2014) stated the comparative analysis of growth rate analysis of two banks and to compare them in aspects of private sector bank and public sector bank. Nahang and Araghi (2015) stated the study for identification of the functioning of banks in the enactment of each of the function. The study also analysed the internal variablesmarking the profitability of city banks including deposit amount the recompense facilities, credit management, cost management and liquidity. The researcher used correlation method and regression method for the analysis. All the above stated papers related to bank explicit and macroeconomic factors stated the influence on profitability.

RESEARCH METHODOLOGY

OBJECTIVES OF THE STUDY

1. To study the influence of bank definite determinants on profitability of selected public and private banks.
2. To study the influence of macroeconomic variables on profitability of selected public and private sector banks.

SCOPE OF THE STUDY

The present analysis will be undertaken “to examine the influence of bank definite and macroeconomics variables on viability (profitability) of Punjab National Bank (Public sector bank) and Axis Bank (Private sector bank)for a phase of years ranging from (2004 to 2016)”. The research study will be supported out in India.The functional area of the analysis is Finance.The macroeconomic determinants to be considered for the analysis are such as GDP rate, inflation rate, whereas the bank definite variables would be liquidity, Cost, capital adequacy. The effectiveness of the banks will be mirrored in the form of Return on Assets (ROA).

METHODOLOGY USED FOR DATA COLLECTION

The learning is diagnostic in nature and is grounded on secondary data. The main sources for the data collected are Reserve Bank of India publications, RBI annual reports and database. Other sourcesfor the data assembly are articles, related research papers, business journals, magazines, newspaper and periodicals. The financial reports as other source in case of the banks are also studied. The sample of the analysis comprised of two banks, one public sector bank and other one is private sector bank for a period ranging from 2004 to 2016 years.

METHODOLOGY USED FOR DATA ANALYSIS

Methods used under the study are Correlation Analysis and Multivariatelinear Regression Analysis technique and tools for the dataanalysis are SPSS. The analysis is divided in two parts, Public sector banks and Private sector banks. The study considered the following variables GDP (x_1), Interest Rates (x_2), Inflation (x_3), Liquidity (x_4), Risk (x_5) and Cost (x_6). The influence of these variables is reflected on (ROA) return on assets (y). ROA is taken as a proxy for assessing the bank’s profitability. To fulfill the stated objectives, linear production function of the resulting form was formed:

$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6$

Y = Return on Assets (ROA)

X_1= Gross Domestic Product (GDP)

X_2= Interest Rates

X_3= Inflation

X_4= Risk

X_5= Liquidity

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X_6= Cost

There are some factors which are always considered as constants. In the study with the help of regression and correlation the impact of each x variables on y is studied by the researcher.

HYPOTHESIS

Hypothesis 1

H_0: There is no substantialeffect of Macroeconomic elements on profitability of Punjab National Bank.

H_1: There is substantialeffect of Macroeconomic variables on profitability of Punjab National Bank.

Hypothesis 2

H_0: There is no substantialeffect of Bank specific variables on profitability of Punjab National Bank.

H_1: There is substantialeffect of Bank specific variables on profitability of Punjab National Bank.

Hypothesis 3

H_0: There is no substantial effect of Macroeconomic variables on profitability of Axis Bank.

H_1: There is substantialeffect of Macroeconomic variables on profitability of Axis Bank.

Hypothesis 4

H_0: There is no substantialeffect of Bank explicit variables on profitability Axis Bank.

H_1: There is substantialeffect of Bank explicit variables on profitability Axis Bank**.**

DATA ANALYSIS AND INTERPRETATION

DATA PRESENTATION

The analysis studies the effect of macroeconomic and bank explicit determinants on the profitability of banks. The total of six factors is analyzed amongst which three are macroeconomic factors and the residual three are bank explicit determinants. Two banks are considered one is a public sector banks (Punjab national bank) and another is a private sector bank (Axis Bank).

Gross Domestic Product

Gross domestic product (GDP) is the market value of all formallyaccepted final goods and services manufactured within a state in a year, or other certainphase of time. GDP can be resolute in three ways; they are the production (or output) approach, the income method, or the expenditure method. The Gross Domestic Product is calculated by the given formula:

GDP = Rent + Interests + Profits + Statistical Adjustments + Wages

Years	Gross Domestic Product
2004	3.8
2005	4.8
2006	3.8
2007	7.9
2008	7.9
2009	9.3
2010	9.3
2011	9.8
2012	3.9
2013	8.5
2014	10.5
2015	6.3
2016	3.2
Mean	6.84

Table No-4.1: Percentage Growth of GDP (2004-2016)
Source: World Bank.org

The above given table displays the Gross Domestic Product (GDP) of India over a period of thirteen years. The mean value of GDP is 6.84. The lowermost value of gross domestic product

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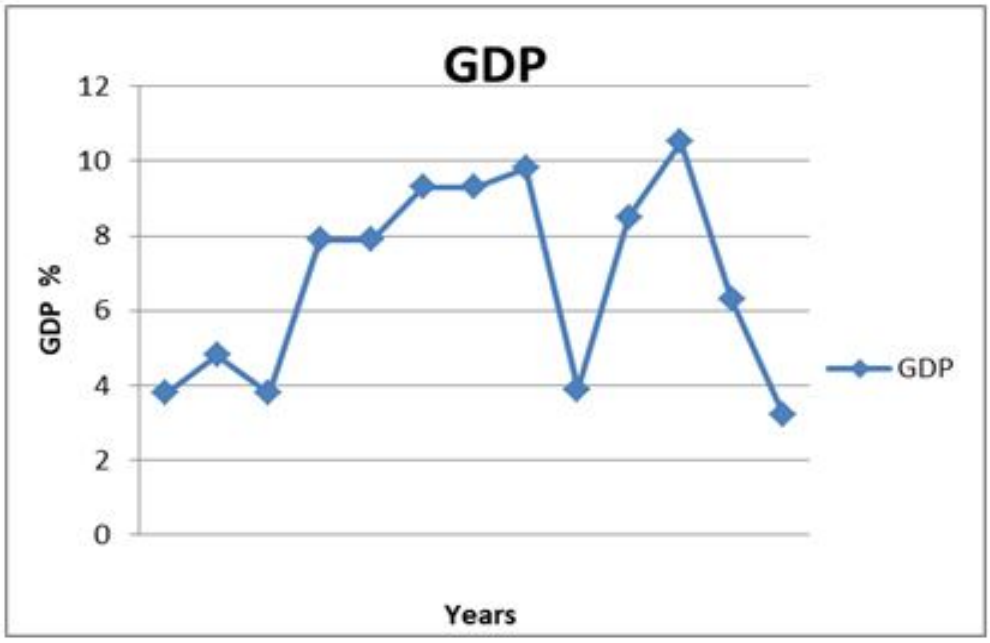

Figure No-4.1: Percentage Growth of GDP (2004-2016)

over this phase of thirteen years is 3.2 in the year 2016 whereas the maximum value of GDP is 10.5 in the year 2014.The above graph displays the movement of gross domestic product of the nation during a period of thirteen years ranging from 2004 to 2016. GDP of India presented a high digit of highs and lows in the above-mentioneddefinite period of time. GDP was maximum in the year 2014 and lowermost in the year 2016 showing a downfall.

Inflation rate

Inflation is a constantrise in the general price level of goods and services in an economy during a phase of time. When the general price level upsurges, each unit of money buys littler goods and services. There are several effects of Inflation on a country's economy and can be concurrently positive and negative. Negative effects of inflation compriseof an expansion in the opportunity cost of holding currency, ambiguity over prospected inflation which may dampen investment and savings. Positive effects include certifying that central banks can regulate real interest rates (to lessen recessions), and heartening investment in non-monetary capital projects.

Years	Inflation rate
2004	4
2005	3.7
2006	4.4
2007	3.8
2008	3.8
2009	4.2
2010	6.1
2011	6.4
2012	8.4
2013	10.9
2014	12
2015	5.9
2016	4.9
Mean	6.60

Table No-4.2: Percentage Inflation Rates (2004-2016)

The above given table shows the Inflation Rates of India during a period of thirteen years. The mean value for the Inflation Rates is 6.60. The lowermost value of Inflation Rates is 3.7 in the year 2005 whereas uppermost value during this period of thirteen years is 10.9 in 2013.

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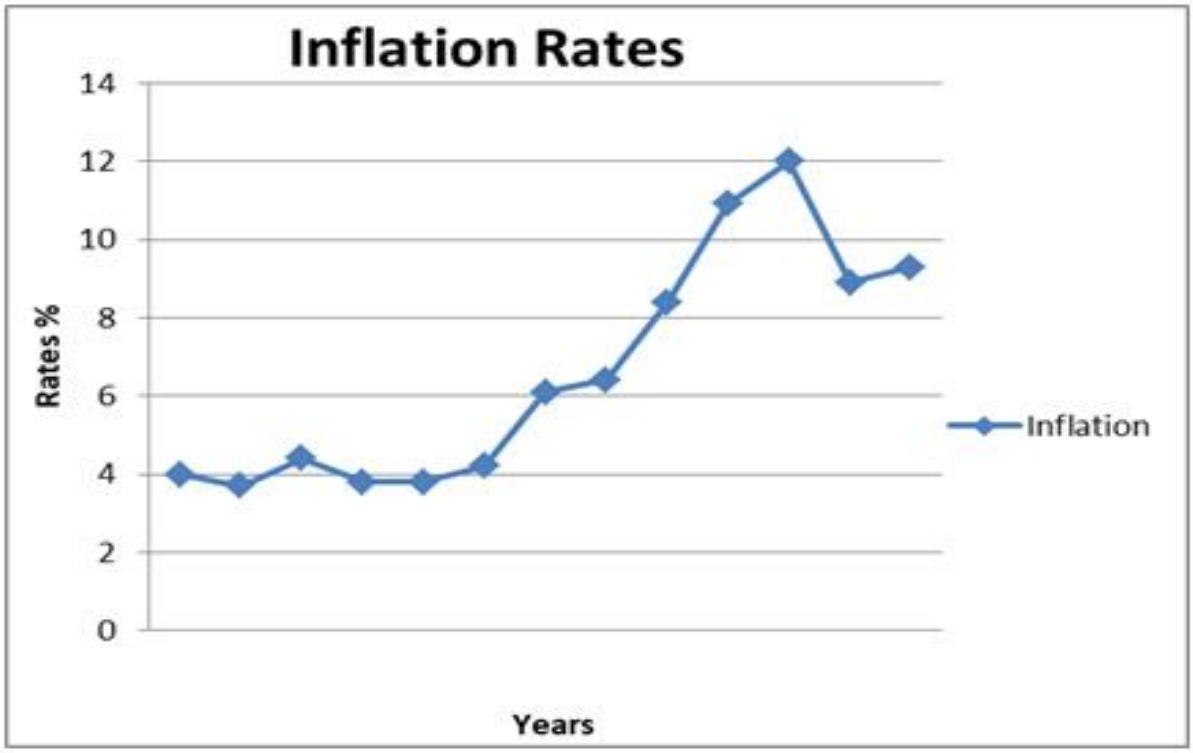

Figure No-4.2: Percentage Inflation Rates (2004-2016)

The above graph exhibits the figures of Inflation rate of the nation during a period of thirteen years stretching from 2004 to 2016. Inflation Rate of India displayed an upward drive till the year 2014 and a declining stage after 2014. Inflation Rate was uppermost in the year 2010 and lowermost in the year 2015 presenting a downfall in 2016 also.

Interest rate

An interest rate is the rate at which interest is paid by a pledger (debtor) for the use of currency that they borrow from a mortgagee (creditor). Interest-rate goals are a vibrantinstrument of monetary policy and are taken into account when dispensing with factors like investment, inflation, and unemployment.

Years	Interest rate
2004	8.3
2005	8.6
2006	7.9
2007	7.3
2008	4.9
2009	6.2
2010	4.5
2011	6.9
2012	4.3
2013	5.8
2014	-0.5
2015	1.7
2016	2.3
Mean	5.24

Table No-4.3: Percentage Interest Rates (2004-2016)

The above table displays the Interest Rates of India during a period of thirteen years. The average value for the Interest Rates is 5.24. The lowermost value of Interest Rates during this period of thirteen years is -0.5 in the year 2014 whereas on the other hand the uppermost value of Interest Rates during this period of thirteen years is 7.9 in the year 2006.

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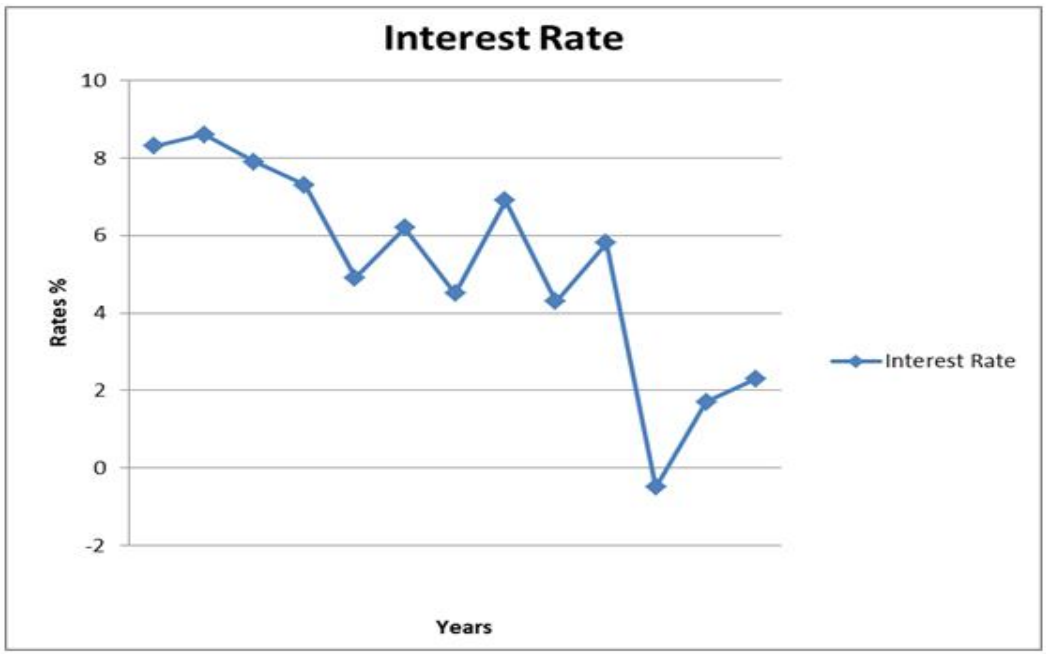

Figure No. 4.3: Percentage Interest Rates (2004-2016)

The above given graph shows the figures of Interest Rates of the country during a period of thirteen years extending from 2004 to 2016. Interest Rates of India presented downward, upward, again downward measure in the above statedexplicit period of time. Rate of Interest were steady and then decrease in 2004, after that it presented a slightgrowth till and then a constant lows or steadysituations were witnessed. The uppermost value was in the year 2006 whereas the lowermost was in the year 2014.

Credit to deposit Ratio

The CDR is nothing but the significant flow of progresses to the deposits organized by banks in terms of percentage. The credit / deposit ratio (CD ratio) is used to observe the liquidity of a bank. Larger the Credit to Deposit ratio, farther the efficiency of the bank to exploit the fund it gathered. The Credit to Deposit ratio is derived by the following formula:

Credit to Deposit = Total Credit/Total deposit collected×100

Years	Punjab National Bank	Axis Bank
2004	25.18	64.79
2005	27	50.22
2006	22.48	47.59
2007	32.48	42.84
2008	35.44	43.63
2009	30.19	47.4
2010	31.00	52.79
2011	30.30	59.85
2012	23.10	68.89
2013	21.53	64.89
2014	22.19	71.87
2015	19.95	31.57
2016	16.52	10.01
Mean	25.95	50.48

Table No-4.4: Percentage of Credit to Deposit Ratio (2004-2016)

The above table illustrates, the credit to ratio of Axis Bank and Punjab national bank for a period of thirteen years. The ratio replicates the liquidity position of banks over the period of time. The ratio of Axis Bank is superiorthan Punjab national bank. The ratio of Axis Bank is 50.48 whereas that of Punjab National Bank is 25.95 which state a better situation for Axis Bank in terms of improveduse of funds and liquidity in contrast to Punjab National Bank.

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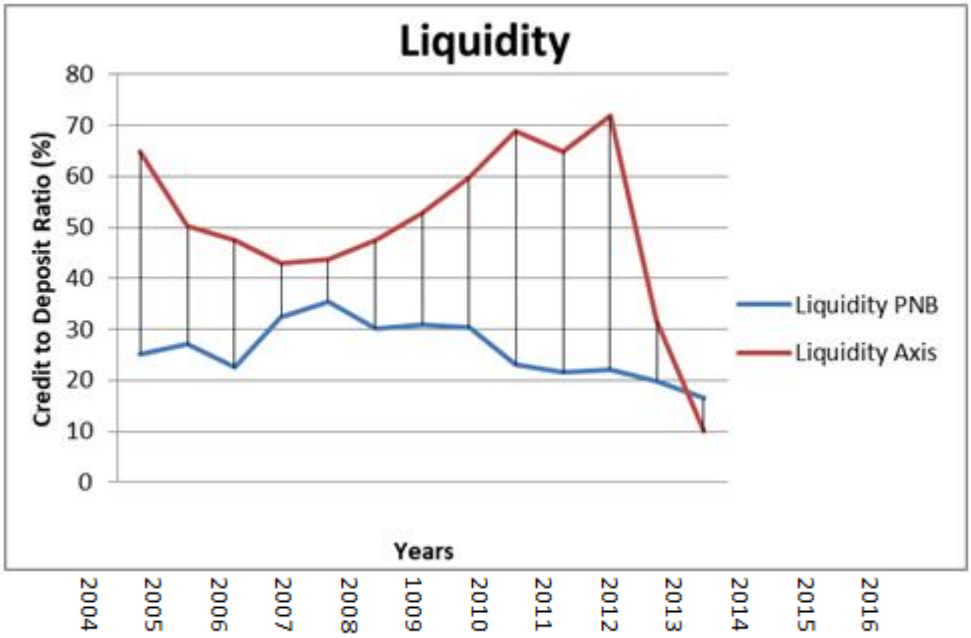

Figure No-4.4: Percentage Liquidity of Banks (2004-2016)

The above given graph exhibits the liquidity position of both mentioned banks. The liquidity is stated in terms of credit to deposit ratio. The movement of Punjab National Bank is more steady as matched to that of Axis Bank. The graph of Axis Bank after 2014 presented a breakdown in the ratio and was outpacing in the previous years. The uppermost value of Axis bank was replicated in the year 2014 and of Punjab National Bank was in the year 2008, which is much lesser than Axis Bank. The lowermost value of the credit to deposit ratio for both the banks was in the year 2016.

Capital Adequacy Ratio

It is expressed as a percentage of a bank's risk weighted credit exposures. This proportion is used to guard depositors and encourage the steadiness and effectiveness of financial systems around the world. Two kinds of capital are restrained: tier one capital, which can fascinate losses without a bank being essential to cease interchange, and tier two capital, which can engross losses in the occurrence of a winding-up and so offers a reducedmark of protection to investors. The Capital Adequacy Ratio is derived by the following formula:

Capital Adequacy Ratio = Total Capital/Risk Weighted Assets×100.

Years	Punjab National Bank	Axis Bank
2004	10.31	11.37
2005	10.24	9
2006	10.70	10.05
2007	12.02	10.9
2008	13.10	11.21
2009	14.78	12.66
2010	11.95	11.08
2011	12.29	12
2012	13.45	13.73
2013	14.03	13.69
2014	14.16	15.8
2015	14.42	12.65
2016	12.03	14
Mean	12.58	12.16

Table No-4.5: Percentage of Capital Adequacy Ratios (2004-2016)

The above given table displays the Capital Adequacy Ratio of Axis Bank and Punjab National Bank during a period of thirteen years. The ratio reveals the level of Risk of banks during the period of time. The ratio of Punjab National Bank is higher than Axis Bank. The ratio of Axis Bank is 12.16 while that of Punjab National Bank is 12.58 which state a better position for Axis Bank in terms of diverse risk connectedelementsmarking the cost of firms in contrast to Punjab National Bank.

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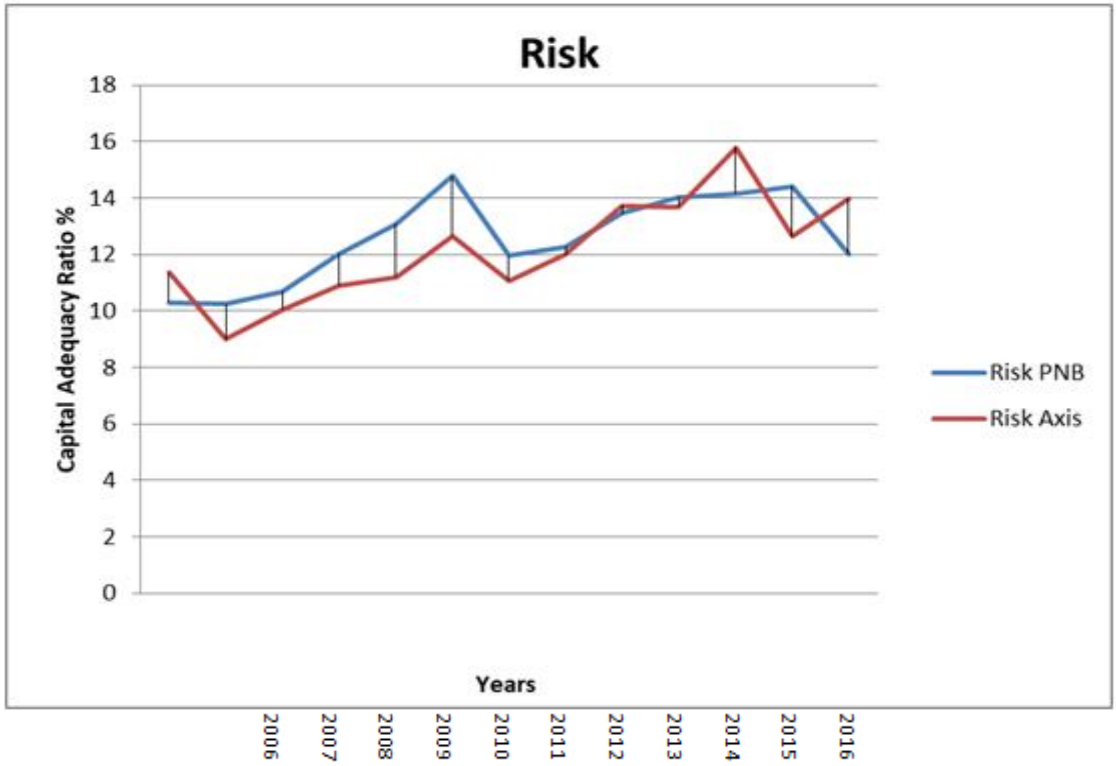

Figure No-4.5: Percentage Risk of Banks (2004-2016)

The above given graph displays the risk element of both the banks. The Risk is expressed in terms of Capital Adequacy Ratio. The movement of both the banks is steady during the period of thirteen years. The graph of Axis Bank reached the uppermost point in the year 2014 and Punjab National Bank presented the uppermost in year 2015. The inferior values of both the banks were indicated in the initial years of the data gathered.

Operating Expenses to Income Ratio: Operating expenses contains those expenses which are vital for the operation of the business. The major constitutents of operating expenses are like Payment to and provisions for employee, Rent, taxes and lighting, Printing and stationery, Advertisement and publicity, Law charges etc. The income in the ratio is the total Income containing interest incomes also. The Operating to income ratio is resulting by the following formula: **Operating Expense to Income Ratio = Total Operating expenses/Total Income×100**

Years	Punjab National Bank	Axis Bank
2004	47.15	9.39
2005	48.84	10.17
2006	51.89	10.58
2007	53.31	19.45
2008	53.41	28.38
2009	50.33	21.02
2010	60.00	23.13
2011	65.97	23.00
2012	70.55	26.20
2013	72.88	24.95
2014	74.34	30.96
2015	33.19	25.69
2016	33.10	21.95
Mean	54.99	21.14

Table No-4.6: Percentage of Operation Expense to Income Ratio of banks (2004-2016)

The above table presents the Operation Expense to Income Ratio of Axis Bank and Punjab National Bank during a period of thirteen years. The ratio suggests the level of operating expenses sustained by the banks during the period of time. The ratio of Punjab national bank is superiorthan Axis Bank. The ratio of Axis Bank is 21.14 whereas that of Punjab National Bank is 54.99 which state a better position for Axis Bank in terms of lesser operating expenses and greater total income in comparison to Punjab National Bank.

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Figure No-4.6: Percentage Cost of banks (2004-2016)

The above given graph displays the Cost factor of both the banks. The Cost is stated in terms of Operating Expenses to Income Ratio. The movement of Axis Bank is more steady as matched to Punjab National Bank over the period of thirteen years. The graph of Axis Bank reached the maximum point in the year 2014 and Punjab National Bank presented the maximum in the same year 2014 only. The lesser values of both the banks were revealed in the initial years of the data gathered but Axis Bank mirrored a low in some upcoming years also and when matched with Punjab National Bank the values are much lesser during the period of time.

Return on Asset

Return on Assets is acquired as a proxy of profitability. It is engaged as the exogenous variable or the dependent variable. It is anmarker of how profitable an organisation is relation to its total assets. ROA gives an indication as to how competent management is at using its assets to generate earnings. Computed by dividing a business's annual earnings by its total assets, ROA is presented as a percentage. Sometimes this is referred to as "return on investment". Some investors add interest expense back into net income when doing this calculation because they'd like to use operating returns before cost of borrowing. The formula for return on assets:

Return on Assets = Net Incomes/Total Assets

Years	Punjab National Bank	Axis Bank
2004	27.51	18.16
2005	27.51	22.85
2006	151.53	32.05
2007	152.01	39.89
2008	188.91	49.07
2009	258.84	87.96
2010	297.38	103.06
2011	330.97	120.80
2012	390.68	245.13
2013	464.75	284.50
2014	562.09	395.99
2015	678.91	462.77
2016	820.13	551.99
Mean	334.70	185.70

Table No-4.7: Percentage of Return on Assets of banks (2004-2016)

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The abovegiven table shows the Return on assets of Axis Bank and Punjab national bank during a period of thirteen years. ROA replicates the level of returns that the banks are receiving on the assets over the time. The value of Return on Assets of Punjab national Bank was much greater as compared to Axis Bank for all the thirteen years. The average Return on Assets of Axis Bank is 185.70 whereas that of Punjab National Bank is 334.70 which state enhanced financial position of PNB in contrast to Axis Bank.

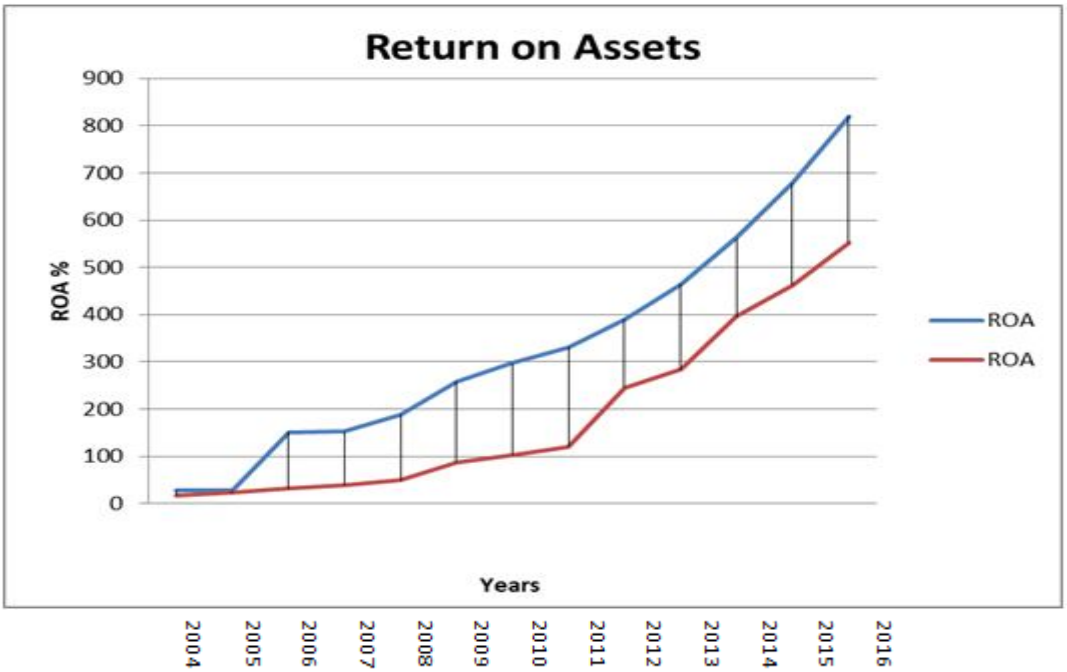

Figure No-4.7: Percentage ROA of banks (2004-2016)

The above given graph shows the Return on asset of both the banks. The Return on Assets of Axis Bank is low as matched to Punjab National Bank during the period of thirteen years ranging from 2004 to 2016.

DATA ANALYSIS: Multivariate Regression Analysis

It is a statistical procedure for assessing the relationships amongst variables and emphases on the associationamid a dependent element and one or more independent elements. It helps to appreciate the modification in the value of the dependent element when any one of the independent elements is varied. The regression equation is written as Y = a + bX +e

'Y' is the value of the Dependent Variable (Y), what is being predicted or explained.

'a' or Alpha, a constant; equals the value of Y when the value of X=0

'b' or Beta, the coefficient of X; the slope of the regression line; how much Y changes for each one-unit change in X.

'X' is the value of the Independent variable (X), what is forecasting or describing the value of Y. **'e'** is the error term; the error in forecasting the value of Y, given the value of X (it is not displayed in most regression equations).

The research studies the variation in value of return on assets when the macroeconomic and bank explicit variables are varied.

Testing of Hypothesis

HYPOTHESIS 1

H_0: There is no substantialinfluence of Macroeconomic elements on profitability of Punjab National Bank.

H_1: There is substantialinfluence of Macroeconomic elements on profitability of Punjab National Bank.

Empirical Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig.F Change
1	.899[a]	.808	.744	123.02197	.808	12.637	3	9	.001

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Table No. 4.8: Model Summary of Hypothesis 1					
		ROA	GDP	Inflation	Interest
ROA	Pearson Correlation	1	.053	.834**	-.839**
	Sig. (2-tailed)		.863	.000	.000
	N	13	13	13	13
GDP	Pearson Correlation	.053	1	.185	-.247
	Sig. (2-tailed)	.863		.545	.416
	N	13	13	13	13
Inflation	Pearson Correlation	.834**	.185	1	-.784**
	Sig. (2-tailed)	.000	.545		.002
	N	13	13	13	13
Interest	Pearson Correlation	-.839**	-.247	-.784**	1
	Sig. (2-tailed)	.000	.416	.002	
	N	13	13	13	13

Table No. 4.9: Correlation Table of Hypothesis 1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	284.795	150.334		1.894	.091
	GDP	-19.463	8.210	-.280	-2.371	.042
	INFLATION	31.946	11.462	.514	2.787	.021
	INTEREST	-33.725	12.455	-.506	-2.708	.024

Table No-4.10: Regression table of Hypothesis 1

ANALYSIS AND INTERPRETATION

The value of correlation among the two elements Return on Assets and Macroeconomic factors named GDP, Inflation Rate and Interest Rate are 0.53, 0.834 and -0.839 respectively which is positive in trendfor GDP and inflation rate but negative for interest rate. The value of R^2 is .808 which means that all the three elements have 80.8% influence on ROA and they effect the profitability of the bank.

Regression equation among the two elements can be established as follows:

$Y = 284.795 – 19.463X_1 + 31.946X_2 – 33.725X_3$.

As the p value (=0.001) gained from regression table is less than the value of alpha 0.05, so the null hypothesis is rejected and the alternate hypothesis is accepted. It conditions that GDP, Inflation Rate and Interest Rate jointly have significant impact on Return on Assets of the Punjab National bank. Thus, it is confirmed that macroeconomic elements have substantialinfluence on profitability of Punjab National Bank.Out of three macroeconomics elements the effect of interest rate and inflation was larger as can be seen through their correspondingsubstantial values. The influence of GDP on ROA is negligible, as neither its correlation value nor its regression coefficient is important.

HYPOTHESIS 2

H_0: There is no substantialinfluence of Bank explicitelements on profitability Punjab National Bank.

H_1: There is substantialinfluence of Bank explicitelements on profitability Punjab National Bank.

Empirical Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.853[a]	.728	.638	146.39692	.728	8.042	3	9	.006

Table No. 4.11: Model Summary of Hypothesis 2					
		ROA	Liquidity	Risk	Cost
ROA	Pearson Correlation	1	-.661*	.574*	-.127
	Sig. (2-tailed)		.014	.040	.678
	N	13	13	13	13
Liquidity	Pearson Correlation	-.661*	1	-.083	.198

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	Sig. (2-tailed)	.014		.787	.517
	N	13	13	13	13
Risk	Pearson Correlation	.574*	-.083	1	.253
	Sig. (2-tailed)	.040	.787		.405
	N	13	13	13	13
Cost	Pearson Correlation	-.127	.198	.253	1
	Sig. (2-tailed)	.678	.517	.405	
	N	13	13	13	13

Table No. 4.12: Correlation Table of Hypothesis 2

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	38.366	412.733		.093	.928
LIQUIDITY	-25.347	7.784	-.583	-3.256	.010
RISK	88.089	28.323	.564	3.110	.013
COST	-2.794	3.333	-.155	-.838	.424

Table No. 4.13: Regression Table of Hypothesis 2

ANALYSIS AND INTERPRETATION

The value of correlation among the two variables- Return on Assets and Bank Explicitelements named Liquidity, Risk and Cost is -0.661, 0.574 and -0.127 respectively which is positive in trend for risk but negative in case of liquidity and cost. The value of R^2 is .728 which means that all the three elements have 72.8% influence on ROA and they mark the profitability of the bank.

Regression equation between the two variables can be recognized as follows:

$Y = 38.366 – 25.347X_1 + 88.089X_2 – 2.794X_3$.

As the p value (=0.006) attained from regression table is less than the value of alpha 0.05, so the null hypothesis is rejected and the alternate hypothesis is accepted. It states that Liquidity, Risk and Cost jointly have substantialinfluence on Return on Assets of the Punjab National bank. Thus, it is confirmed that Bank Explicitfactors have substantialinfluence on profitability of Punjab National Bank.

The bank explicitelements namely Liquidity, Risk and Cost together have substantialinfluence on profitability of PNB. Out of three Bank explicitelement, the influence of liquidity and risk was more as can be seen through their respective important values. The influence of cost on ROA is negligible, as neither its correlation value nor its regression coefficient is important.

HYPOTHESIS 3

H_0: There is no substantialinfluence of Macroeconomic elements on profitability of Axis Bank.

H_1: There is substantialinfluence of Macroeconomic elements on profitability of Axis Bank.

Empirical Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.939[a]	.882	.843	72.94734	.882	22.506	3	9	.000

Table No. 4.14: Model Summary of Hypothesis 3

		ROA	GDP	Inflation	Interest
ROA	Pearson Correlation	1	-.060	.859**	-.840**
	Sig. (2-tailed)		.846	.000	.000
	N	13	13	13	13
GDP	Pearson Correlation	-.060	1	.185	-.247
	Sig. (2-tailed)	.846		.545	.416
	N	13	13	13	13
Inflation	Pearson Correlation	.859**	.185	1	-.784**

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	Sig. (2-tailed)	.000	.545		.002
	N	13	13	13	13
Interest	Pearson Correlation	-.840**	-.247	-.784**	1
	Sig. (2-tailed)	.000	.416	.002	
	N	13	13	13	13

Table No. 4.15: Correlation table of Hypothesis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	284.795	150.334		1.894	.091
GDP	-19.463	8.210	-.280	-2.371	.042
INFLATION	31.946	11.462	.514	2.787	.021
INTEREST	-33.725	12.455	-.506	-2.708	.024

Table No. 4.16: Regression Table of hypothesis 3

ANALYSIS AND INTERPRETATION

The value of correlation among the two elements Return on Assets and Macroeconomic factors named GDP, Inflation Rate and Interest Rate is -.060, 0.859 and -0.840 respectively which is positive in trend for risk and negative in instance of liquidity and cost. The value of R^2 is .882 which means that all the three elements have 88.2% influence on ROA and they effect the profitability of the bank. Regression equation among the two variables can be established as follows

$$\mathbf{Y = 284.795 - 19.463X_1 + 31.946X_2 - 33.725X_3.}$$

As the p value (=0.000) attained from regression table is lower than the value of alpha 0.05, so the null hypothesis is rejected and the alternate hypothesis is accepted. It states that GDP, Inflation Rate and Interest Rate together have significant impact on Return on Assets of the Axis bank. Thus it is verified that macroeconomic determinants have significant impact on profitability of Axis Bank.

The macroeconomic factors namely GDP, Inflation and Interest rates jointly have substantialinfluence on profitability of Axis Bank. Out of three macroeconomics elements the influence of interest rate and inflation was more as can be seen over their respective important values. The influence of GDP on ROA is insignificant, as neither its correlation value nor its regression coefficient is important.

HYPOTHESIS 4

H_0: There is no substantialinfluence of Bank explicitelements on profitability of Axis Bank.

H_1: There is substantialinfluence of Bank explicitelements on profitability of Axis Bank**.**

Empirical Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.907[a]	.823	.764	89.46051	.823	13.959	3	9	.001

Table No. 4.17: Model Summary of Hypothesis 4

		ROA	Liquidity	Risk	Cost
ROA	Pearson Correlation	1	-.359	.775**	.559*
	Sig. (2-tailed)		.228	.002	.047
	N	13	13	13	13
Liquidity	Pearson Correlation	-.359	1	.138	.063
	Sig. (2-tailed)	.228		.654	.837
	N	13	13	13	13
Risk	Pearson Correlation	.775**	.138	1	.724**
	Sig. (2-tailed)	.002	.654		.005
	N	13	13	13	13
Cost	Pearson Correlation	.559*	.063	.724**	1
	Sig. (2-tailed)	.047	.837	.005	
	N	13	13	13	13

Table No. 4.18: Correlation table of Hypothesis 4

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-588.911	191.593		-3.074	.013
LIQUIDITY	-5.197	1.546	-.476	-3.361	.008
RISK	87.165	20.518	.871	4.248	.002
COST	-1.103	5.345	-.042	-.206	.841

Table No. 4.19: Regression table of hypothesis 4

ANALYSIS AND INTERPRETATION

The value of correlation among the two elements Return on Assets and Bank Specific factors named Liquidity, Risk and Cost is -0.359, 0.775 and 0.559 respectively which is positive in trend for risk and cost but negative for liquidity and return on assets. The value of R^2 is .823 which means that all the three elements have 82.3% influence on ROA and they mark the profitability of the bank.

Regression equation among the two elements can be established as follows:

$Y = -588.911 – 5.197X_1 + 87.165X_2 – 1.103X_3$.

As the p value (=0.001) acquired from regression table is lower than the value of alpha 0.05, so the null hypothesis is rejected and the alternate hypothesis is accepted. It indicates that Liquidity, Risk and Cost together have importantinfluence on Return on Assets of the Axis bank. Thus it is proved that Bank Specific elements have substantialinfluence on profitability of Axis Bank.

Out of three Bank explicitelement the influence of liquidity and risk was more as can be seen through theircorrespondingsubstantial values. The influence of cost on ROA is insignificant, as neither its correlation value nor its regression coefficient is important.

CONCLUSION

The macroeconomic elements namely Gross Domestic Product, Inflation and Interest rates collectively have importantinfluence on profitability of Punjab National Bank and Axis Bank. Out of three macroeconomics elements for Punjab National Bank and Axis Bank, the influence of interest rate and inflation was more and the influence of GDP on ROA is negligible.The bank explicitelements namely Liquidity, Risk and Operating Cost together have importantimpression on profitability of Punjab National Bank and Axis Bank. Out of three Bank definite factor for Punjab National Bank and Axis Bank, theinfluence of liquidity and risk was more but the effect of cost on ROA is insignificant.

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MODELLING VOLATILITY OF SELECT TELECOM COMPANIES OF CNX 500

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ABSTRACT
Telecomm sector is an important component of any economy and it acts as an infrastructure for other sectors of economy, so it plays a pivotal role in the functioning of other sectors of economy. This study investigates the stock market performance of select telecommunication companies in CNX 500. First stock return performance through descriptive statistics has been assessed. Volatility of stock returns have been studied using GARCH model. The investigation has been made for a period from 2008 to 2014. The study reports an evidence of time varying volatility which exhibits clustering, high persistence and predictability. It is inferred from the results that volatility is impacted more by lagged values and also reactive to recent innovations.

Keywords; Economy, CNX 500, Volatility, Innovations

INTRODUCTION
Volatility in the equity market has become a matter of everybody's concern in recent years, namely investors, regulators, and brokers. Firstly when asset prices fluctuate sharply over time periods as short as few minutes to a long span, the investors may find it difficult to accept that the explanation for the change lies in information about fundamental economic factors, hence they may consequently associate speculation and irrationality with the market. Arguably this can lead to general erosion of investors‟ confidence and diversion of the flow of capital from equity markets. Secondly, an increase in volatility will tend to increase the risk faced by market makers, leading them to charge more for the liquidity they provide. Thirdly, with volatility increasing steadily over a long period, regulatory agencies and providers of capital might require different security firms to allocate a large percentage of available capital to cash-equivalent investments, to the potential determinant of allocation efficiently. Lastly volatility is perceived as an indicator of market inadequacy and a potential threat to the very integrity of market mechanism. The wide spread concern in the market place has underlined the importance of being able to measure and predict stock market volatility to the benefit of market participants.

In a seminal article, Engle (1982) proposes to model time-varying conditional variance with the Auto Regressive Conditional Heteroscedasticity (ARCH) process that uses past disturbances to model the variance of the series. Early empirical evidences show that high ARCH order has to be selected in order to catch the dynamic of the conditional variance. The Generalized ARCH (GARCH) model of Bollerslev (1986) is an answer to this issue. In most of the cases the ARCH and GARCH models are apparently successful in estimating and forecasting of volatility of financial time series data. Stock return volatility hinders economic performance through consumer spending, for example, immediately after persistent drop in stock prices, economic forecasters generally predict sharp weaker economic growth. They believe that the fall in the stock prices is expected to directly lower consumer spending. In addition, a weakening in consumer confidence could contribute to further reduction in consumer spending.

This study is conducted to analyse the stock market performance of select telecom companies through descriptive statistics and modelling volatility of these companies. This will help investors and other stake holders to gain insights into the stock market performance of these companies and they will be able to make better decisions regarding the sector and individual companies of the sector.

The vision of the telecom policy 2012 is "To provide secure, reliable, affordable and high quality converged telecommunication services anytime, anywhere for an accelerated inclusive socio-economic development. (National telecom policy 2012). So telecom companies have an important role in economy not only as a back bone of information and communication services but also from the point of view of its support it other industries. it acts as infrastructural network and offers lots of opportunities for growth and investment. So telecom sector is a very attractive investment avenue for investors which have ample potential for returns. So it becomes imperative to analyse the various aspects and performance of telecom companies in India.

REVIEW OF LITERATURE
Chan K.K and G.S.Ksrolyi (1991) conducted a study which covered both S&P 500 and Major Market Index (MMI) futures. Bivariate GARCH Models were used to estimate volatility. Their results indicated a strong inter-market dependence in volatility of spot and futures returns.

Goyal (1995) used conditional volatility model to study the nature of stock return volatility in India. He also documented the impact of carry forward system on the level of volatility.

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Antonio and Holmes (1995) in their study examine the relationship between information and volatility in FTSE 100 index in the UK using GARCH technique. They found that introduction of FTSE 100 index Futures had changed volatility in the spot market and attributed this to better and faster dissemination of information flow due to trading in stock index futures.

Gregory and Michall (1996) in their study examine that how volatility of S & P 500 index futures affected the S & P 500 index volatility. Their study also examined the effect of good and bad news on the spot market volatility. Volatility was estimated using EGARCH model. They found that bad news increased volatility more than good news and the degree of asymmetry was higher for futures market.

Varma (1999) showed, using daily data from 1990-1998 of an Indian stock index (Nifty), that GARCH (1, 1) with generalized error distribution performs better than the EWMA model of volatility.

Pandey.I.M and Chee.H.K (2002) used yearly panel data of Malasian companies from 1993 to 2000 and concluded that beta E/P ratio, dividend yield and book to market ratio played a significant role in predicting the expected stock returns in Malaysia.

Chowhan and Shukla (2003) studied BSE Sensex and a set of representative stock to find the changes in their volatility during two years 1998 – 99 and 1999-2000 when rolling settlement and dematerialization of stocks as a measure of reducing volatility was put to test. They found that the market regulations were not very effective in curbing the volatility in the markets.

Harvinder Kaur (2004) made an attempt to study the extent and pattern of stock returns volatility of the Indian stock market during 1999-2000. The two most prominent spot price indices namely, BSE Senses and S&P CNX Nifty were covered in this study. It was found that the stock market volatility was the highest during 1992 and 2000.

Partha Aparation pal (2005) analyzed the impact of FII on the movement of sensex in his study. The study pointed out that during the months, April to June 2004, the period after the general elections the stock market index declined by about 17 per cent.

Banerjee and Sarkar (2006) studied the volatility in the index returns of the NSE, using high frequency intra-day data covering a period from June 2000 to January 2004. (At five minute intervals). This paper shows that Indian stock market experiences volatility clustering and hence GARCH type models predict the market volatility better than simple volatility models like historical average, moving average etc. It is also observed that the asymmetric GARCH models provide better fit than the symmetric GARCH model, confirming the presence of leverage effect. Finally the results show that the change in volume of trade in the market directly affects the volatility of asset returns. Further the presence of FII in the Indian stock market does not appear to increase the market volatility.

Niladri Das & JK Pattanayak (2007) in their article considered the fundamental factors which have a significant bearing on the movement of stock prices in the Indian capital market. The study has identified twelve different explanatory variables, namely EPS, ROCE, RONW, PE ratio, debt-equity ratio, P/B ratio, beta dividend yield, average return, CEPS, book value per share and market capitalization which have considerable influence on the stock price movement in the Indian stock market.

Kumar and Singh (2008) conducted an empirical study of volatility , risk premium and seasonality in risk – return relation of the Indian stock and commodity markets, using the general autoregressive conditional heteroscedasticity in the mean model (GARCH -In -Mean) introduced by eagle et al (1987). The return showed persistence in the volatility, clustering and asymmetric properties. Gold shows significant positive risk-return relationship, whereas Nifty and Soybean had positive but not significant relationship. This finding is consistent with most asset pricing models which postulate a positive relationship between a stock portfolios expected returns and volatility. Soybean does not show seasonality in return, whereas seasonality is found in Nifty returns. Volatility shows seasonal effect in all the cases.

Rohini Singh (2009) conducted a study on "Company Attributes and stock returns in India. A panel Data Analysis" and analyzed that stock returns to the underlying behaviour of beta and five company attributes i.e. size earning yield, cash earning yield, dividend yield and book to market ratio. Beta was not found to be statistically significant. Size and book –to-market ratio were found to be significant in the individual regressions and only size was significant in the multivariate analysis.

Kuper (2012) tries to understand the nature of dependence of conditional variance on past volatility in oil prices, as a measure of uncertainty. Time varying conditional variance are estimated using univariate (G) ARCH models, for monthly time series for the period January 1970 to April 2002.

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RESEARCH PROBLEM

The Indian stock market has pivotal role to play in the growth and development of economy. Telecommunication has to keep pace with the advancements in other sectors of country's economy for proper and systematic growth. The telecom sector is one of the most important sector and acts as infrastructure for the other sectors, so it has very important place in economy. Due to its significance and potential opportunities for growth, a lot of investment is required in the sector and investors are very eager to make investment in the telecom companies. So the present study has been conducted to analyse the performance of select telecom companies through descriptive statistics and modelling their volatility. This will give investors the risk perception of these companies and act as a guide to investors.

OBJECTIVES

- To model the volatility of select telecom companies of CNX 500.
- To analyse stock market performance of the selected telecom companies through descriptive statistics.

HYPOTHESIS

H_o: There is no volatility clustering in select telecom companies of cnx 500 index.

H_1; There is volatility clustering in select telecom companies of cnx 500 index

METHODOLOGY

The telecom companies included in CNX 500 have been selected for the purpose of the current study.

PERIOD OF STUDY

The study period spans from January 2008 to December 2014, besides being the most recent period, a lot of changes have happened in Indian stock market particularly due to financial crisis. It is, therefore, important to study the nature of stock market volatility during these years.

THE SAMPLE

The stock market indices are representative of the various industry sectors and trading activity which revolves around the stocks comprising the indices. CNX 500 is a broad index in Indian capital market and from these 500 companies, 4 telecom service providers namely Bharti Airtel, Idea Cellular, Reliance Communications, Tata Communications have been selected among the total of seven companies,

DATA BASE

The daily stock price data of these selected companies have been taken from prowess, the online data base maintained by the centre for monitoring of Indian economy (cmie) and official website of NSE.

Daily stock prices have been converted to daily returns. The present study uses the logarithmic difference of prices of two successive periods for the calculation of rate of return. The logarithmic difference is symmetric between up and down movements and is expressed in percentage terms for ease of comparability with the straightforward idea of a percentage change. If I_t be the closing price of stock on date t and I_{t-1} be the same for its previous business day, i.e., omitting intervening weekend or stock exchange holidays, then the one day return on the market portfolio is calculated as:

$$\mathbf{r_t = l_n (}I_t / I_{t-1}\mathbf{)*100}$$

Where, ln (z) is the natural logarithm of 'z'

Tools Used for Analysis The tools used for analysing the stock market performance include mean, standard deviation, skewness and kurtosis and the volatility of selected companies is modelled through GARCH (1, 1) model.

the study. The forecast by these conditional volatility models are based on the parameters of the model itself as well as they are on the return characteristics during the relevant period.

EMPIRICAL ANALYSIS

Performance analysis of the telecom companies through descriptive measures.

Figure one shows the plot of the return series generated from the daily closing prices of selected companies over the entire study period, while the descriptive statistics of selected companies is shown in table 1

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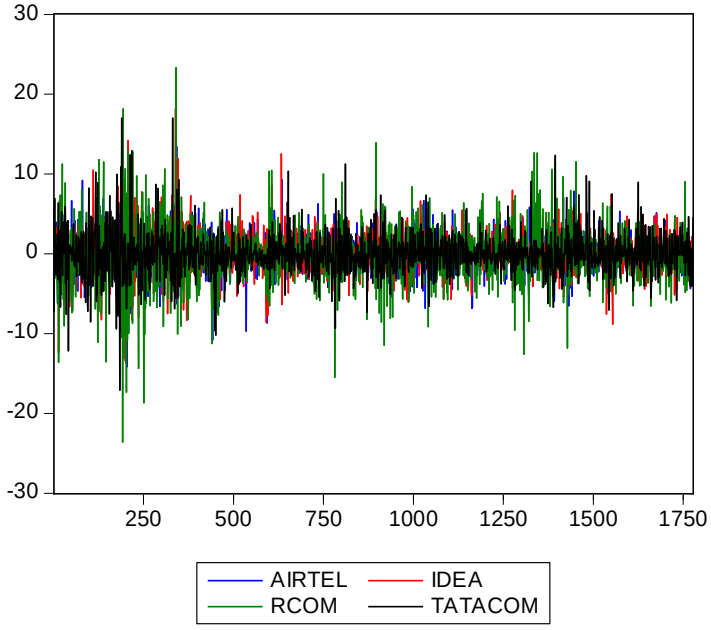

Airtel- Bharti Airtel, Idea- Idea Cellular; Rcom- Reliance Communications, Tatacom-Tata Communications

Visual inspection of the plot shows that there is volatility clustering of the return series of the selected companies during the study period. Among the selected return series, the idea cellular is having a positive means indicating that price series has increased over a period of time. The return series of rcom has highest standard deviation of 3.48 indicating maximum dispersion in the return series and Airtel is having lowest standard deviation of 2.31 indicating comparatively lower dispersion than other series.

Table-1

Descriptive analysis of AIRTEL, RCOM, IDEA CELLULAR and TATACOM								
	N	**Mean**	**Std. Deviation**	**Variance**	**Skewness**		**Kurtosis**	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Airtel	1777	-0.015	2.310	5.337	-.050	.058	2.680	.116
Idea	1777	0.004	2.676	7.159	.125	.058	4.237	.116
Rcom	1777	-0.120	3.483	12.135	-.033	.058	4.871	.116
Tatacom	1777	-0.002	2.561	6.559	.580	.058	6.053	.116

Airtel- Bharti Airtel, Idea- Idea Cellular, Rcom- Reliance Communications, Tatacom-Tata Communications

The return series of Airtel and Rcom is negatively skewed indicating the return series is spread more on the lower side of the mean and for idea cellular and Tatacom, it is positively skewed, it implies the existence of relatively larger number of extreme positive values. The kurtosis statistic is above 3 in case of idea, Rcom and Tatacom which connotes that series are leptokurtic which means they have heavier tail than standard normal distribution, while it less than 3 in case of Airtel i.e. Plytokurtic.

Volatility modelling of selected telecom companies in CNX 500 index

The modelling of volatility is done through Garch model. The precondition for the application of an econometric model is the stationarity of data series. This test is conducted with the help of Augmented Dickey Fuller (ADF) test. The results generated from the unit root test of selected telecom companies are given in table 2.

Table-2

STATIONARY TEST OF TELECOM COMPANIES			
Null Hypothesis: AIRTEL , Idea, Rcom, and Tatacom has a unit root			
Augmented Dickey-Fuller test statistic		t-Statistic	Prob.*
Airtel		-32.32593	0.0000
IDEA		-40.55123	0.0000
RCOM		-43.25422	0.0000
TATACO		-40.81561	0.0000
Test critical values:	1% level	-3.433832	

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	5% level		-2.862965	
	10% level		-2.567575	
*MacKinnon (1996) one-sided p-values.				

Airtel- Bharti Airtel, Idea- Idea Cellular, Rcom- Reliance Communications, Tatacom-Tata Communications

It is observed from the table 2 that the computed ADF test statistic is smaller than critical values i.e. -3.433832, -2.862965 and -2.567575 at 1 percent, 5 percent and 10 percent level of significance respectively; therefore the null hypothesis is rejected. It indicates that return series of selected companies do not have a unit root problem and is stationary at 1 percent, 5 percent and 10 percent level of significance.

In order to identify volatility clustering in data of airtel, GARCH model has been applied and results are presented in table 3.

Table-3

Garch analysis of airtel				
Dependent Variable: AIRTEL				
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
	Variance Equation			
C	4.22E-32	7.48E-33	5.638951	0.0000
RESID(-1)^2	0.150000	0.027812	5.393356	0.0000
GARCH(-1)	0.600000	0.060917	9.849534	0.0000

Table 5.2 presents parameter estimates of GARCH (1, 1) for the returns of Airtel Company. Since σ_t^2 is the one-period ahead forecast variance based on past information, it is called the conditional variance. The above specified conditional variance equation is a function of three terms viz. a constant term (C), news about volatility from the previous period, measured as the lag of the squared residual from the mean equation (ε^2_{t-1}) , and the last period's forecast variance (σ^2_{t-1}). It is observed from the table that all the GARCH parameters are statistically significant. The estimated GARCH coefficients in the conditional variance equation are considerably larger than ARCH coefficient. The implication is that the market has a memory of longer than one period and that volatility is more sensitive to its lagged values than it is to new surprises' in the market place. So the bulk of information for the current volatility comes from previous days forecast. Finally the sum of arch and Garch term is less than one implying that a shock at time t will persist but it will keep on declining.

Next is the analysis of idea cellular and Garch results are given below in table 4.

Table 4

Garch analysis of idea cellular				
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.98E-32	5.34E-33	3.702413	0.0002
RESID(-1)^2	0.150000	0.025342	5.919139	0.0000
GARCH(-1)	0.600000	0.084104	7.134029	0.0000

It is observed from table four that all the Garch parameters are statistically significant in the variance equation. The value of Garch coefficient is larger than arch coefficient and it connotes that past volatility has higher impact on the conditional variance than recent news measured as the square of yesterdays return. The total value of arch and Garch term is less than one means that shocks at time t will persist.

Next is the Garch analysis of RCOM and the results are presented in table 5 below

Table-5

Garch analysis of rcom				
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
	Variance Equation			
C	1.52E-31	1.84E-32	8.262545	0.0000
RESID(-1)^2	0.150000	0.019166	7.826555	0.0000
GARCH(-1)	0.600000	0.034981	17.15199	0.0000

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It is observed from the above table that all the parameters' in the variance equation are statistically significant. The Garch coefficient is larger than arch coefficient and it connotes that the bulk of information about the conditional variance is given by previous volatility and recent news means arch coefficient explains only 15 percent of conditional variance. The sum of arch and Garch is less than one and it connotes that shocks at time t will be persistent.

Next and last is the application of GARCH model to tatacom and results of analysis is presented in table 6 below.

Table-6

Garch analysis of tatacom				
Dependent Variable: TATACOM				
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	2.14E-32	4.45E-33	4.804164	0.0000
RESID(-1)^2	0.150000	0.031907	4.701195	0.0000
GARCH(-1)	0.600000	0.070727	8.483331	0.0000

It is observed from the table no 6 that all the parameters of the variance equation are statistically significant. The Garch coefficient in case of tatacom is also larger than arch coefficient , implying that new shock will have implication on the price for a larger period. The market will take some time to digest the information fully into the price. Smaller arch coefficient means that tatacom reacts less to market movements. sum of arch and Garch is less than one means shocks will be persistent.

CONCLUSION

In this paper stock market performance of four telecom companies have been assessed through descriptive statistics. The study has also modelled their volatility through Garch model. It is found from the descriptive statistics that only idea cellular is having positive mean implying that the price series has increased over time and other three companies namely airtel , rcom and tata com are having negative average return. The return of rcom is having the highest spread while airtel returns are comparatively least spread. The returns of airel and rcom are negatively skewed and the returns of idea and tata com are positively skewed implying the existence of relatively larger number of extreme values. Kurtosis statistic of only airtel is less than 3 while the other three companies are more than three i.e. they have fatter tail than normal distribution.

Volatility of the select companies is measured over a period from January 2008 to December 2014. using Garch model. While studying the daily logarithmic return series, we observed that the market is tranquil and volatile, volatile and tranquil. The conduct of stationary test confirmed that the return series of the four companies are stationary and then we applied the Garch (1,1)model. This is the effect that is known as volatility clustering. It indicates about the predictability of volatility. The GARCH (1, 1) model is estimated to see whether volatility is predictable. The study finds strong evidence of time varying volatility. It is also found that periods of high and low volatility tend to cluster. Also, volatility shows high persistence and is predictable. The Garch (1, 1) model is fitted for all the companies. It was found that in all the four telecom companies conditional volatility is more explained by its recent lags than that of recent innovations. Garch coefficient is found higher than arch coefficient in all companies implying that previous trend will have implication on the price for a larger period. Smaller arch coefficient for selected companies means they reacts less tonew informations.sum of arch and Garch is less than one means shocks will be persistent but in long period it is of decaying nature.

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RELATIONSHIP BETWEEN COMMODITIES & STOCK MARKETS IN INDIA – AN EMPIRICAL TESTING

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ABSTRACT
India has six national and sixteen regional commodity exchanges which is growing at appreciable levels. There is a difference in opinion about correlation between stocks and commodity markets among countries. This has created a curiosity to find the correlation between these markets in India.

This paper attempts to test if there is any correlation between the stock and commodity markets. It focuses on examining the performance of these markets. The impact and influence between these markets was analysed. Data was collected through reliable secondary sources and analysis was done with the use of statistical tools. Correlation is checked using the indicators of both market and the testing revealed that iCOMDEX Crude Oil showed a high degree of negative correlation between Nifty & Sensex however iCOMDEX Gold showed a high degree of positive correlation with Nifty & Sensex. This shows that Nifty and Sensex is highly correlated to Gold than Crude oil.

Keywords: stock market, commodity market, correlation, performance analysis, econometric test.

1. INTRODUCTION

According to **Swamy Vigneswara & S Sreejesh**, Indian commodity and stock markets witnessed volatile conditions very often. The impact of one market on another, the level of its effect and co-movements between the markets in the current situation need to be tested. Analysing the dependencies between commodity and stock markets is important mainly for two reasons. Firstly to accept that investment strategies are sensitive to the correlation structure of Commodity and Stock markets. Secondly it is helpful for policy makers to analyse the effect of their decision, whether the information spills over asset classes, financial and economic decisions will have cross-market influences.

This paper attempts to analyse the relationship between commodity and stock market.

2. LITERATURE REVIEW

(Ingalhalli, G., & Reddy, 2016)used granger causality test and revealed that there is a granger cause between Oil process and Sensex. Further authors argued there is a unidirectional relationship between gold and stock market.

(Aftab, Kabir, Bashar, & Masih, 2015)authors used GARCH methodology to find the relationship between commodity and Islamic stock market. The result shows that there was a high correlation between commodity and Islamic stock markets during financial crisis 2007-08.

(Ghorbel, Abbes Boujelbene, & Boujelbene, 2014)found that there is strong bidirectional volatility between oil and stock markets of oil importing countries using ARCH and GARCH effect. Further they used Kalman filter which showed high correlation between oil and stock market returns.

(Urooj Aijaz, 2013)used multi linear regression test and found that there is a positive and significant correlation between gold and crude oil prices and it has positive impact on KSE 100 index.

(DeLegge, 2013)states that commodity markets were highly neglected in the attraction of stock and bonds due to reasons like difficulty and expensive mode of investment. There exists a perfect correlation between commodity ETF and commodities. There is a high potential for commodity markets.

(Nandini, 2012)studiesthe correlation relationship between global and Indian stock market considering BSE and found that BSE Sensex showed high positive correlation NASDAQ, S&P 100, FTSE 100 and HANG SENG, whereas the degree of correlation with NIKKEI was moderate. This correlation was further proved with significant T test. Author concluded that Indian Capital market is highly dependent on global capital markets.

(Rossi, 2012)states that global commodity prices indices have high positive correlation with equity markets. Also found that both commodity and stock markets has high predictive capacity.

According to **(Swamy Vigneswara & S Sreejesh, 2011)** investors sell their shares to stop loss and use commodity investment as a hedge over loss. Pre-recession period indicated a negative correlation between

equity and commodity markets. However this correlation was higher during the post-recession period. Investors find commodity market as risk mitigating market.

2.1 RESEARCH GAP

Various studies have tried to identify the relationship using the market prices of gold and crude oil with equity market, whereas this paper have used the commodity index values to establish the relationship with stock market index. Since the comparison is between dependant and independent variable and both being index values, the result is expected to be more reliable with the use of statistical and econometric tools.

3. OBJECTIVE

- To determine the relationship between Commodities &stock markets in India.

4. METHODOLOGY

4.1 Research Design & Hypothesis

Causal research design is used to study the extent of the relationship between independent variables iCOMDEX Gold &iCOMDEX Crude oil and dependent variables Nifty & Sensex.

The Hypotheses for the study are:

H_0: There is no significant relationship between Commodities & Stock markets in India.

H_1: There is a significant relationship between Commodities &Stock markets in India.

4.2 Sampling design

The population considered for the study is the index values of commodities and stock markets. Non-probability sampling design is adopted to select a sample from the population of iCOMDEX Gold, iCOMDEX Crude Oil, Nifty & Sensex.

4.3 Data used

The secondary data used for the purpose of study are the opening and closing prices of the iCOMDEXGold &iCOMDEX Crude Oil, for each month for the period January 2012 to Nov 2017. These values are used to calculate the annual returns which are correlated with the returns of Nifty & Sensex for the same period.

4.4 Data analysis techniques

The following techniques are used for data analysis:

The opening and closing prices ofiCOMDEX Gold, iCOMDEX Crude Oil, Nifty & Sensex for each month is used to calculate the monthly returns and then the sum of returns between Jan to Dec is considered as annual returns.

$$\text{Monthly return (\%)} = \frac{\text{End of month price} - \text{Beginning of month price}}{\text{Beginning of month price}} \times 100$$

4.5 Statistical and Econometric Techniques Used:

- Pearson's product moment correlation coefficient
- Granger Causality Test.

4.6 Limitations

- Relationship is determined between the indices and not on the individual commodities or shares prices.
- Only two commodity indices are used in the study.
- Study is limited to indicators within the country.
- Only annual returns are correlated not monthly or daily.

5. ANALYSIS AND INTERPRETATION

5.1 Comparison of performance:

Table-5.1: Comparison of performance between annual returns of iCOMDEX Crude Oil & Nifty

Year	Period Covered	Crude Oil Returns %	Nifty Returns %
2012	Jan - Dec	-11.92153878	26.83777
2013	Jan - Dec	17.59901068	2.245417

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	2014	Jan - Dec	-54.5162292	29.68148	
	2015	Jan - Dec	-48.02061035	-6.34202	
	2016	Jan - Dec	31.03583514	-0.06959	
	2017	Jan - Nov	-6.323809622	15.89049	
Correlation Coefficient 'r'	**-0.341365936**	**t test Calculated**	**-0.726364227**	**t Critical**	**2.447**

The above table indicates a negative correlation coefficient of -0.341 between returns of iCOMDEX crude oil & Nifty for the period Jan 2012 to Nov 2017. The t test carried out to test the significance of 'r' presented a calculated value of -0.726. The critical t value of 2.447 was found from the t distribution table for a significance level of 5% for a two tailed test. In this case the calculated t value is lesser than the critical t value failing to reject the null hypothesis.

Table-5.2: Comparison of performance between annual returns of iCOMDEX Crude Oil & Sensex

	Year	**Period Covered**	**Crude Oil Returns %**	**Sensex Returns %**	
	2012	Jan - Dec	-11.92153878	25.51048981	
	2013	Jan - Dec	17.59901068	4.592124109	
	2014	Jan - Dec	-54.5162292	28.64366267	
	2015	Jan - Dec	-48.02061035	-6.834748741	
	2016	Jan - Dec	31.03583514	-0.685796469	
	2017	Jan - Nov	-6.323809622	15.49306616	
Correlation Coefficient 'r'	**-0.313587737**	**t test Calculated**	**-0.660491156**	**t Critical**	**2.447**

The above table indicates a negative correlation coefficient of -0.314 between returns of iCOMDEX crude oil & Sensex for the period Jan 2012 to Nov 2017. The t test carried out to test the significance of 'r' presented a calculated value of -0.661. The critical t value of 2.447 was found from the t distribution table for a significance level of 5% for a two tailed test. In this case the calculated t value is lesser than the critical t value failing to reject the null hypothesis.

Table-5.3: Comparison of performance between annual returns of iCOMDEX Gold & Nifty

	Year	**Period Covered**	**Gold Returns %**	**Nifty Returns %**	
	2012	Jan - Dec	3.951122757	26.83777	
	2013	Jan - Dec	-5.208192094	2.245417	
	2014	Jan - Dec	-7.456840484	29.68148	
	2015	Jan - Dec	-12.32908888	-6.34202	
	2016	Jan - Dec	8.247522124	-0.06959	
	2017	Jan - Nov	6.242454618	15.89049	
Correlation Coefficient 'r'	**0.198326736**	**t test Calculated**	**0.404692294**	**t Critical**	**2.447**

The above table indicates a correlation coefficient of 0.198 between returns of iCOMDEX Gold & Nifty for the period Jan 2012 to Nov 2017. The t test carried out to test the significance of 'r' presented a calculated value of 0.405. The critical t value of 2.447 was found from the t distribution table for a significance level of 5% for a two tailed test. In this case the calculated t value is lesser than the critical t value failing to reject the null hypothesis.

Table-5.4: Comparison of performance between annual returns of iCOMDEX Gold & Sensex

Year	**Period Covered**	**Gold Returns %**	**Sensex Returns %**	
2012	Jan - Dec	3.951122757	25.51048981	
2013	Jan - Dec	-5.208192094	4.592124109	
2014	Jan - Dec	-7.456840484	28.64366267	
2015	Jan - Dec	-12.32908888	-6.834748741	
2016	Jan - Dec	8.247522124	-0.685796469	
2017	Jan - Nov	6.242454618	15.49306616	
Correlation	**0.184938192**	**t test Calculated**	**0.376368686**	**t Critical**	**2.447**

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The above table indicates a correlation coefficient of 0.185 between returns of iCOMDEX Gold & Sensex for the period Jan 2012 to Nov 2017. The t test carried out to test the significance of 'r' presented a calculated value of 0.376. The critical t value of 2.447 was found from the t distribution table for a significance level of 5% for a two tailed test. In this case the calculated t value is lesser than the critical t value failing to reject the null hypothesis.

5.2 Descriptive Statistics

Table-5.5: Descriptive Statistics (E views output)

	GOLD	CRUDE_OIL	NIFTY	SENSEX
Mean	947.3389	631.7050	7391.904	24314.48
Median	940.7300	578.3100	7762.250	25623.35
Maximum	1116.480	1229.370	10452.50	33731.19
Minimum	812.1400	220.4700	4636.750	15517.92
Std. Dev.	64.58368	309.3664	1500.954	4727.602
Skewness	0.223933	0.004138	-0.000960	-0.100351
Kurtosis	2.343286	1.273661	1.852492	1.811980
Jarque-Bera	38.41159	181.1782	80.04913	88.24956
Probability	0.000000	0.000000	0.000000	0.000000
Sum	1382168.	921657.7	10784788	35474827
Sum Sq. Dev.	6081394.	1.40E+08	3.28E+09	3.26E+10
Observations	1459	1459	1459	1459

Descriptive statistics provides brief information on various statistical values.Jarque-Bera is a test statistic for testing whether the series is normally distributed. The test statistic measures the difference of the skewness and kurtosis of the series with those from the normal distribution. We reject the hypothesis of normal distribution at the 5% level but not at the 1% significance level.

5.3 Stationary Test

Table-5.6: Group Unit root (Stationary) Test at 1 level difference

Group unit root test: Summary				
Series: GOLD, CRUDE_OIL, NIFTY, SENSEX				
Date: 11/23/18 Time: 15:52				
Sample: 1/02/2012 11/30/2017				
Exogenous variables: Individual effects				
Automatic selection of maximum lags				
Automatic lag length selection based on SIC: 0				
Newey-West automatic bandwidth selection and Bartlett kernel				
Balanced observations for each test				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-98.4271	0.0000	4	5828
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-83.3429	0.0000	4	5828
ADF - Fisher Chi-square	351.091	0.0000	4	5828
PP - Fisher Chi-square	351.285	0.0000	4	5828
** Probabilities for Fisher tests are computed using an asymptotic Chi- square distribution. All other tests assume asymptotic normality.				

Null hypothesis of a unit root, this statistic does not follow the conventional t-distribution, and they derive asymptotic results and simulate critical values for various test and sample sizes. Since all returns have zero probability value thus the data is stationary ($p<0.05$). Now we can do further econometric research analysis because the data is now stationary.

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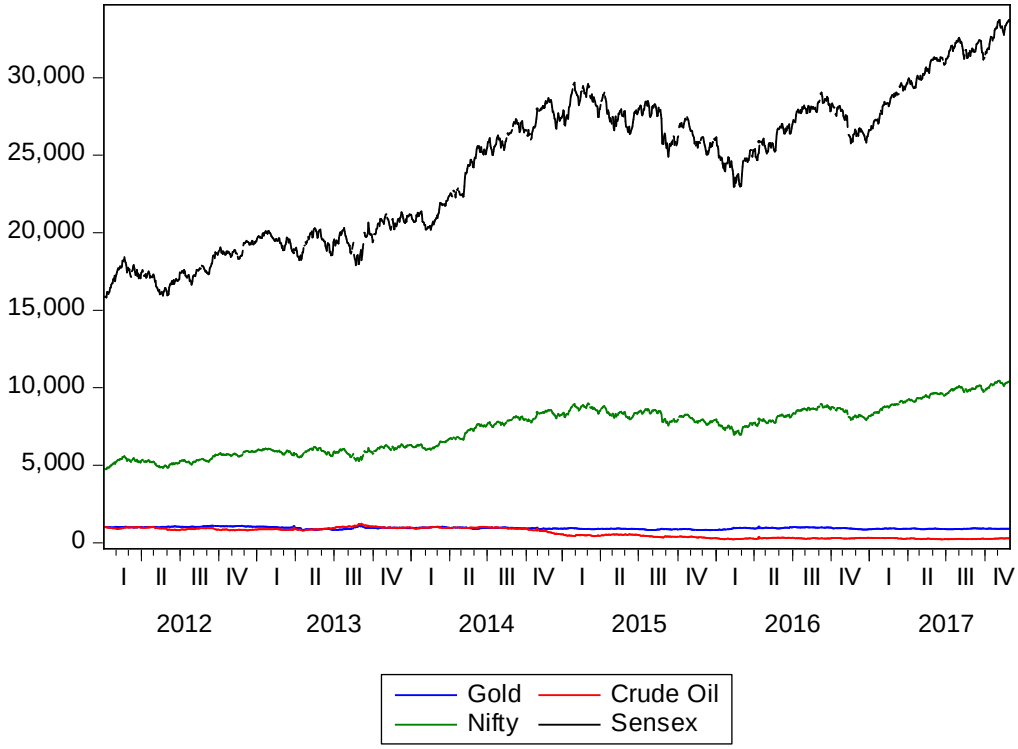
5.4 Granger Causality Test

Table-5.7: Granger Causality Test for i=0 i.e. and use return as variables.

Pairwise Granger Causality Tests			
Date: 11/23/18 Time: 15:48			
Sample: 1/02/2012 11/30/2017			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
CRUDE_OIL does not Granger Cause GOLD	1457	0.96062	0.3829
GOLD does not Granger Cause CRUDE_OIL		0.01266	0.9874
NIFTY does not Granger Cause GOLD	1457	3.68029	0.0255
GOLD does not Granger Cause NIFTY		3.44049	0.0323
SENSEX does not Granger Cause GOLD	1457	4.39651	0.0125
GOLD does not Granger Cause SENSEX		2.92142	0.0542
NIFTY does not Granger Cause CRUDE_OIL	1457	5.16833	0.0058
CRUDE_OIL does not Granger Cause NIFTY		0.07508	0.9277
SENSEX does not Granger Cause CRUDE_OIL	1457	5.86865	0.0029
CRUDE_OIL does not Granger Cause SENSEX		0.00577	0.9942
SENSEX does not Granger Cause NIFTY	1457	0.14086	0.8686
NIFTY does not Granger Cause SENSEX		0.11219	0.8939

Since the probability values of all observations are more than 0.05 or 5%, we fail to reject the null hypothesis in all situations thus stating that there exists no univariate or bivariate granger cause between the pairs under test.



6. CONCLUSION

The study was considered for the period of Jan 2012 to Nov 2017 based on the availability of data. There was a need to identify if there was a relationship or influence of commodities markets on the stock markets. Hence the correlation of performance between iCOMDEX Gold, iCOMDEX Crude Oil, Nifty & Sensex was identified to analyse if there was a correlation between commodities and stock markets. The testing revealed thatiCOMDEX Crude Oil showed a high degree of negative correlation between Nifty & Sensex howeveriCOMDEX Gold showed a high degree of positive correlation with Nifty & Sensex. This shows that Nifty and Sensex is highly correlated to Gold than Crude oil. However, the Granger Causality Test revealed that there was no granger

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cause between any of the pairs and none of the variable caused the other. The result does not provide enough evidence to establish a significant relationship between commodity and stock market in India. The results have been arrived only based on sample data.

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THE CRITICAL NEED FOR RIGHT-SKILLING OF HUMAN RESOURCE: THE CASE OF THE INDIAN WORKFORCE

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ABSTRACT
It is a widely recognized fact, that education plays a pivotal role in the progress of an economy. Although India is the fastest growing economy, "employment problem" has been one of the major issues that are hampering the productivity and economic growth of the country. Not that the government or the private sector is not taking adequate steps to provide education to all, but the problem lies in the quality of education. It is because of this, that the labour force participation rate in India is much lower as compared to the other developed or developing economies. Right-skilling is the answer to this problem. By right-skilling we mean, providing the skills to workers/employees that match the job requirements. This study makes a case for vocational training as a means to reduce the mismatch between demand and supply in the labour market. In addition to this, it is also important to reduce the discrepancy between labour market participation rate of men and women in our country. This paper provides deep insights into the above mentioned issues and also provides suggestions as to how can an economy resolve these issues.

Keywords: Education; Employment; Labour Force Participation; Right Skilling; Vocational Training

CONTEMPORARY ISSUES IN THE INDIAN LABOUR MARKET

The World Bank and the International Monetary Fund have named India as world's fastest-growing large economy. According to forecast made by these international institutions, by 2020 India might overtake Germany to be named among the four largest economies of the world after the USA, China, and Japan. It already occupies a number three position in terms of purchasing power parity (Babones, 2018). However, there is still much to be done in the area 'employment conditions' if compared with developed and developing economies. The present challenges lie in lack of quality jobs, informal employment issues, disparities in the labour market (on the basis of caste, religion, and gender) and gap in the demand of skills required in a labour and the skills they actually possess. Overcoming these challenges would lead to huge improvement in labour market/force participation (LMP/LFP). One of the major competitive advantages of India is its demographic dividend as the proportion of the population in the working age group is more as compared to the total population (Paul, 2014).

According to a report (EPW Engage, 2018), unemployment is higher among the educated in India. The study found that the unemployment rate among the educated is not only higher compared to the uneducated, but it also increased with higher levels of education. In rural as well as urban areas, the unemployment rate among graduates and above was much higher than among those with secondary education and above. One of the reasons stated was that the educated were not willing to take up low-grade informal jobs, but at the same time, sufficient regular salaried jobs were not available for them. According to a report by the International Labour Organization, nearly 81% of the employed in India are in the informal sector. Also, at the higher level of education quite often there exists a discrepancy in the labour market because of the gap in the demand of skills required in a labour and the skills they actually possess. It is thus important to improve the skills of young Indians and to provide them access to the formal employment so as to reap the benefits of demographic dividend (OECD Employment Outlook, 2014).

India's Labour Force Participation Rate dropped to 53.8 % in Dec 2017, compared with 53.9 % in the previous year. One of the major factors responsible for low labour market participation rate in India is the extremely low rate of women labour market participation and to add to this disparity this rate has dropped even further in the recent years. As per International Labour Organization's Global Employment Trends, 2013 report, India ranks 11th from the bottom in female labour force participation. According to the World Bank Group Report, 2018, the LMP rate of Organisation for Economic Co-operation and Development (OECD) member countries in 2017 was 60.2%

This underutilization of human resource is responsible for slowing down the productivity and economic growth of our country and therefore this problem has to be treated with utmost priority. The other critical need is to improve labour market participation rate of women. The objective of this module is to understand these important issues by providing evidence of the currently existing conditions in the Indian labour market and identify research gaps for further study in order to find solutions to the existing problems.

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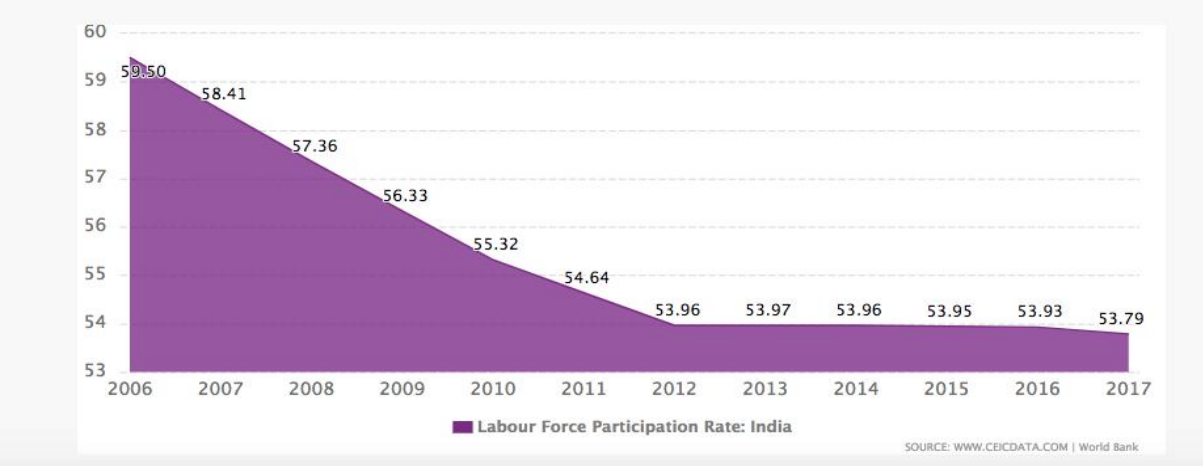
STATE OF LABOUR MARKET/ FORCE PARTICIPATION IN INDIA

The labour market/force participation rate is the total of number of persons who are employed and number of persons unemployed but looking for a job divided by the total population that lies in the working age category (Trading Economics, 2018).This rate is calculated by expressing the number of people in the labour market as a percentage of the working-age population.

The work force is defined as the sum of the number of employed persons and the number of unemployed persons. Therefore, to calculate LMP/ LFP, measurement of both employment and unemployment is required. It includes all persons in the working age who, during a brief specified period, such as a week or a day were in the following categories: a) paid employment or b) self-employment. The unemployed include all persons of working age who: a) did not work during the reference period, i.e. not in paid or self-employment; b) currently available for work, that is, they were available for paid employment or self-employment during the reference period; and c) looking for work, that is, had taken specific steps in a specific recent period to look for paid employment or self-employment (International Labour Organization).

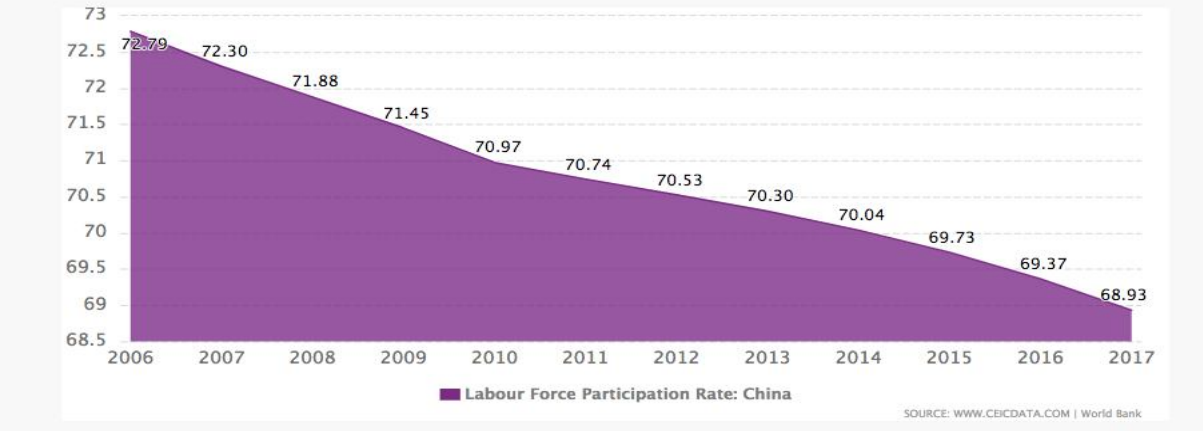
India's labour force participation rate dropped to 53.8 % in Dec 2017, compared with 53.9 % in the previous year (Figure 1). The average of India's labour force participation rate from Dec 1990 to Dec 2017 was 59.4 %. The data reached an all-time high of 60.8 % in Dec 1994 and a record low of 53.8 % in Dec 2017. In World Bank's latest reports, India's population reached 1,316.0 million people in March 2018. Unemployment rate of India increased to 3.5 % in December 2017

Figure-1: India's Labour Force Participation Rate (2006—2017)



A comparison with the neighbouring country China and Organisation for Economic Co-operation and Development (OECD) member countries provides further insights into the challenges faced by Indian labour market. China's labour force participation rate dropped to 68.9 % in Dec 2017, compared with 69.4 % in the previous year. (Figure 2).The average of China's Labour Force Participation Rate from Dec 1990 to Dec 2017 was 74.5 %. The data reached an all-time high of 79.1 % in Dec 1990 and a record low of 68.9 % in Dec 2017. In World Bank's latest reports, China's Population reached 1,390.1 million people in Dec 2017. Unemployment rate of China dropped to 3.8 % in Jun 2018. According to the World Bank Group Report, 2018, the LMP rate for Organisation for Economic Co-operation and Development (OECD) member countries in 2017 was 60.2%

Figure-2: China's Labour Force Participation Rate (2006—2017)



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India has one of the lowest female labour workforce participation rate in the world. Not only women participation rates are low, but it has been showing a decreasing trend since 2004-05. Shockingly, this rate is even smaller in urban areas and among the educated women since most women tends to end up in marginal jobs, often in home-based work as an unpaid worker or contributing family member thus hampering the female labour force participation rate.

Talking about the sector-wise employment in India, the service sector is the greatest contributor to India's GDP but yet employs comparatively lower percentage of workforce whereas the agricultural sector's contribution to GDP is the lowest among the three sectors but tends to employ comparatively a very large percentage of the workforce. This situation hampers India's productive capacity and thus needs to be resolved immediately (International Labour Organization, 2017).There has been a reduction in the number of minimally skilled jobs that require employees with lower educational qualification but the high growth sector related vocational courses are not being offered to the workforce. For e.g., 4.0 million trained and qualified people were required in the growth sector in Maharashtra in 2012, of which minimally qualified required were only 1.1 million. Participation in the workforce is decreasing while student participation is increasing. Therefore, more students are joining upper secondary education and looking for vertical mobility. (Bhardwaj, et al., 2011).

RELATION BETWEEN EDUCATION AND EMPLOYMENT

Education plays a pivotal role in uplifting the status of an individual in the society as well as for the development of a country. Education provides economic benefits in two important ways. First, education expands scientific knowledge and transforming this knowledge into productivity enhances an economy's technological advancements. Secondly with education the skills and competencies of employees improve and this improves their ability to perform the present job or to take up new jobs. Education improves an individual's ability to socialize since educational institutions teach and reinforce social attitudes and thus employers are more willing to hire employees with higher education with the expectation that they will be able to fit in the organization better which will thus improve productivity (OECD). No country has been able to achieve constant economic development without continuous investment in human capital. It has to be noted that education will benefit a country only when it is equally distributed else it will lead to lower per capita income. Moreover, the investment in education will have a significant impact on the economic growth of a country only when it is applicable in the competitive and open market (Ozturk, 2001).

In general, education is a good insurance against unemployment and to remain employed in difficult economic times. Education does play a major role in reducing unemployment in a country. The OCED statistics show that in 2009, the average unemployment rate for those with tertiary education stood below 4.4%, for higher secondary level, it stood below 6.8% and the rate was 11.5% for those who did not attain higher secondary level education (OECD, 2011)

Some common questions related to education and LMP in India are: Should the government allocate more budget in the education sector? If yes, which are the areas in education that need more investments? Is the quality of education in India such that it matches the skill set of the people with the job requirement? One of the major problems for the lack of adequate employment in India has been the huge discrepancy between the skills required for doing the particular job and the skills that the education system has actually taught the prospective employee. A report (EPW Engage, Economic and Political Weekly, May 4, 2018) has shown that unemployment is higher among the educated in India (Figure 3.

Figure-3: Unemployment and Education

Source: EPW Engage, Economic and Political Weekly, May 4, 2018

The unemployment rate among the educated is not only higher compared to the uneducated, it also increases with higher levels of education. In both rural and urban areas, the unemployment rate among graduates and above is much higher than among those with secondary education and above. One of the reasons is that the educated are not willing to join in low-grade informal jobs, but at the same time, sufficient regular salaried jobs are not available for them

In India several positions for engineers, doctors, judges and other professions remain vacant each year (Varghese, 1989). For example, there is a serious shortage of medical colleges. The problem is even more serious at the post-graduate level of medical education. Low quality of education in many medical colleges is a serious threat that needs to be addressed. 97% of graduate engineers seek jobs but only 7% are employable. This is due to the lack of quality that persists in our education system. Skill mismatch, profit-hungry management, lack of proper faculty, rote learning method, corruption, etc are the primary reasons why graduates in India are degree holders without suitable skills for finding right jobs in the labour market (Chakrabarty, 2016).

At the higher level of education quite often there exists a discrepancy in the labour market because of the gap in the demand of skills required in a labour and the skills they actually possess. This discrepancy comes with the high opportunity cost for any economy and thus this problem has to be redressed immediately. For solving this issue, The International Institute for Education Planning, carried out a research project to relate the development of higher education to the changing needs of the labour market and reduce the mismatch between the type of training offered by the institutions and the types of skills that the labour market needs. Employment for educated people has been the serious topic for discussion since the past decade (Varghese, 1989) This field had received less attention in the past years but because of the increasing unemployability of educated youth, the mismatch in training acquired and that which is demanded by industry, for example, shortage of quality professionals like engineers, doctors and technicians and teachers due to lack of infrastructure and quality education, shortage of English speakers and fall in women labour market participation-to name a few issues-questions have started to emerge that need correct answers.

RELATION BETWEEN EDUCATION AND LABOUR MARKET PARTICIPATION RATE

It is a very simple concept that when people spend a huge amount of resources in seeking higher education then they do want to get a return for the expenditure they have made and the time they have invested in educating themselves. Therefore, the more the population of a country opts for higher education, the more likely it is that they would look for jobs and this would thus increase the labormarket participation for a country. With investment in education, the skills and capabilities of employees increases which results in higher income. The Human Capital theory says that there is a direct relationship between education and productivity and therefore with higher education, there will be higher payoffs and thus labour market participation is likely to increase. The government of most of countries including India subscribe to Human Capital school of thought and therefore allocate budget to education every year. Higher educational attainment comes with many advantages. In general, when more and more people opt for higher education, the unemployment rate decreases. The main factor responsible for unemployment, besides lack of jobs, is the inability to apply skills for solving practical problems on the work front. Another important factor is when the economy is strained, then employers are unwilling to spend huge resources to train the employees in necessary skills required for the particular job and thus prefer hiring candidates with the prepossessed skills. Third important problem is lack of English speaking skills or computer skills (Chakrabarty, 2016). If all these factors are taken care of then more and more people would find themselves qualified for the particular job and would want to apply for suitable jobs and this would, in turn, increase the labour market participation in India. When there is a skill mismatch, people end up jobless and after a point of time, they withdraw themselves from the labour market thus reducing the LMP rate which is against the economic growth of any country.

DISCREPANCY BETWEEN LMP RATE OF MEN AND WOMEN

The labor market/force participation rate for women is one of the lowest in the world. Despite educational gains, the labor force participation rate for women in 2017 was 28.5% as compared to 82% for men (WEF Report, 2017).Increasing women's labor force participation by 10 percentage points could add $700 billion to India's GDP by 2025 (or a 1.4% increase) (McKinsey, 2015). Among developing countries, there exists gender gaps in labour force participation rates. In the case of India, the gender gap in labour force participation rate is more than 50 percentage points. Women workers are the most disadvantaged in the labour market as they constitute a very high proportion among the low skilled informal worker category (Economic survey, 2018).

Employment in India has grown faster for men and in urban areas. Male employment increased by 1.9 percent per year since 1999- 2000 to 2011-12, while female employment increased by only 0.3% per annum

(International Labour Organization, 2017). Although India tops the list of the developing countries in the world, it has to do a lot of work in order to improve the status of its women. Women in India suffer from discrimination in many spheres of life and education and employment is one of them. The literacy rate for men in India is 82.14% whereas the female literacy rate is as low as 65.46%. In some states like Rajasthan, the difference in literacy rate is even more visible with the male literacy rate of 79.19% and the female literacy rate of merely 52.12%. This is about women who are illiterate. But what about those women who are literate? Are they getting equal opportunities in the labour market? Are they being paid wages at par with the male population of our country? The answer is 'NO'. This discrimination does not end with education. This is clearly evident from the labour market participation rate of women in our country.

In addition to education, variations in women's employment rates contribute to differences in general employment rates between countries. Although discrepancy exists in the employment rates of men and women across countries, much research work has shown that these differences narrow down with the level of education. For instance, a study conducted by OECD in 2011 found that employment rates for men and women in OECD countries increase by an average of 70.1% for men and 48.9% for women with lower secondary education to an average of 88.6% for men and 80.0% for women with tertiary-type A qualifications. Employment rates for women with lower secondary education are particularly low: less than 40% in Chile, the Czech Republic, Hungary, Poland, the Slovak Republic, Turkey, and the United Kingdom. Employment rates for women with a tertiary-type A education is equal to or greater than 75% everywhere except in Chile, Italy, Japan, Korea, Mexico, and Turkey, but it is still below men in all countries.

A study was conducted by Bhaduri and Pastore in 2017 to find whether a lower wage rate for women is the reason why the female LMP rate is lower in India. The analysis shows that women's education has a U-shaped relationship with participation in paid work. Levels of education higher than compulsory schooling correlate with an increase in the propensity to participate in paid work. Pay increases significantly along with the increase in educational levels. However, the increase rate of return is lower for women with each passing year of education in rural as well as urban areas. This suggests that women suffer high levels of wage discrimination in the labour market and this may be the reason for lower female LMP in India.

ROLE OF VOCATIONAL TRAINING IN INDIA

Among the above-mentioned factors, the mismatch in the skills is the primary reason for the mismatch between demand and supply in the labour market. Therefore skill development has been the primary focus of the government of several countries with a specific emphasis on vocational education and training. And why shouldn't it be, given the statistics of unemployment due to the lack of formal skills resulting in lower productivity and economic setback for a country. Vocational education involves training and is concerned with training on vocation in order to prepare individuals for jobs. The Indian Education Commission, 1996 noted that vocational training can bring education closer to productivity (Venpakal, 2015). A study done by Agrawal and Agrawal, 2017 showed that 'the relative returns to vocational education are higher than that of general secondary education' (Khan). As India is the fastest growing economy, so in order to keep pace with the developed countries, India has to buckle up and work towards making the technical and professional education and training system as good as the internal standards demand it to be.

Vocational training is important as employers find it difficult in finding suitably skilled employees. There is a mismatch in the type of workers demanded and the type of workers supplied. Skills are a critical asset for individuals, business as well as society. Although it is imperative to impart basic education to individuals but it is also crucial to guarantee that the skills taught at school are relevant to the job world; that they are maintained and improved during work life; and that they are recognized and used by employers once people are in the labour market (World Economic Forum, 2014). Recognizing the repercussions involved in ignoring this aspect, the government is taking several initiatives to match the skills with jobs. The above-mentioned facts make a strong case for improving the vocational training system of a country

Presently in India, vocational training is offered part-time and full-time. Full-time training is usually provided by the Industrial Training Institute, while part-time programs are offered by the State Board of Technical Education (Savion, 2018). In order to improve the 'school to work' transition the government of our country has taken several initiatives and has launched various programs at the state and central level. As per the latest update (2015) on the website of Directorate General of training, Ministry of Skill Development and Entrepreneurship, there are a total of 11,964 (Govt. 2284 + Pvt. 9680)numbers of ITIs in all States/UTs. Training is imparted in 126 trades (73 Engineering+ 48 Non- Engineering +05 exclusively for visually impaired) of duration 1-2 years. National Trade Certificate, nationally & internationally recognized under the aegis of National Council for Vocational Training (NCVT) is awarded to successful trainees. However, keeping

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in mind the fall in labour market participation, the education system of the country needs to be overhauled so that there is a link between the schools and the workplace.

A way forward would be to strengthen government and private organizations partnership in establishment of vocational training and entrepreneurship development at the school level as government run institutes and private organizations are unable to handle the challenge of increasing unemployability of youth that has been educated in the present conventional education system. For example, the University of Delhi has total of only 905 seats in B. Voc. Courses for students to get an opportunity to take admission in skill based education programme under a university system and thus become part of labour market. Vocational training initiatives have not yet been a success story, given the poor quality of training and the lack of awareness among the masses about the vocational training programs provided by the government and private sector. In fact, the World Bank report of 2006 shows that only 2% of the population in the working age group of 15-29 have a formal vocational training and 8% has informal vocational training (Bhardwaj et al, 2011). But this situation is gradually improving because of the several initiatives taken up by the government and private bodies to help the masses reap the benefits of vocational training programs by reaching out to them through several initiatives as discussed in the next topic.

GOVERNMENT INITIATIVES IN RIGHT SKILLING OF INDIAN WORKFORCE

'Skill India Programme' aims at providing training to develop the necessary skills of 500 million youth of the country by 2020. The main features of the programme are: to provide necessary skills to people so that they can get employed, to promote entrepreneurship, to provide guidance and support for traditional occupations such as carpenter, blacksmith, etc. Under this programme special emphasis is also given to improve skills in areas such as construction, transport, textile, etc where there is an inadequate number of skilled people at present (Phukan, 2014).With the help of the World Bank, the government of India has launched the 'Vocational Training Improvement Project'. The project aims to design the training program in a way that it is responsive to the demands of the labour market. The main aim of the project was to improve the quality of vocational training provided by the industrial training institute. The project aims to support 400 ITIs across the country so that they can become the Centre of Excellence in selected skill areas that are currently in demand (World Bank, 2007).

The central government has established 'National Vocational Qualifications Framework' to qualify workforce in a nationally standardized and acceptable manner and as per the international standards. NVQF covers schools, vocational education, and training institutions and higher education sector. NVQF lays down a detailed list of knowledge, skills, and attitude that the labour must possess to perform a particular task as written by the particular employment-led sector skill council (Bhardwaj, 2011).The Government of India and the Ministry of Labour have launched 'Modular Employability Skills (MES)' under the 'Skills Development Initiative (SDI)'. Under this scheme, the school dropouts and existing workers, mostly in the unorganized sector, are to be trained for employment skills 'The Ministry of Skills and Entrepreneurship Development (MSDE)' is responsible for the coordination of general skills development efforts throughout the country, building the vocational and technical training framework, improving skills, building new skills and Innovative thinking for existing and newly created jobs (National Skills Network, 2016).

'The National Skill Development Corporation, (NSDC)' is a unique organization under the Ministry of Development of Skills and Entrepreneurship. Its main objective is to promote the development of skills by creating training institutes throughout the country. NSDC provides the necessary funds to companies, businesses, and organizations that offer training in the needed skills. The existence of multiple sectors in the country is always a blessing for investors.'Pradhan Mantri Kaushal Vikas Yojana (PMKVY)' was launched with an aim to train around 24 lakhs young Indians so that they could be relevant to the industry, to build on skills and to prepare them for the global market. Under this scheme, apprentices will also receive financial support and a certificate on the successful completion of training and evaluation process, which will help them get a job for a better future. Some other important programs that have been initiated by the government for providing vocational education in India are National Skill Development Agency, National Rural Livelihood Mission – Ajeevika Skills, Etc (National Skills Network, 2016).

PRIVATE SECTOR INITIATIVES IN RIGHT SKILLING OF INDIAN WORKFORCE

One major setback to the vocational training in India is the lack of private and industry participation since there are no incentives for the private and industrial players to participate in imparting vocational training programs. In fact, all they look for is employees with high qualifications so that they do not have to invest their resources in building capacity and can milk the cow right from the beginning. A new study published by the National Skill Development Corporation (NSDC) and Accenture said that private financing and public-private partnerships are helping India overcome two of the biggest challenges to vocational training: inadequate

infrastructure and a shortage of offers of work (Canada India Education Council,2013).In order to improve the vocation education system in India and to improve the technical skills of the working age population, Jindal Education Initiatives (implementation partner), Wadhwani Foundation (technical partner) and Montgomery college (Capacity building partner), US entered into a strategic partnership in 2011. The main objective of this collaboration was to provide an advanced training program for technical trade instructors that include curricula in a way that is driven by industry work and is progressive. The Jindal Education initiatives have set up community colleges with the intention to enrol one lakh students in vocational education (Gohain, 2011).

Some other private organizations that are making a significant contribution in vocational training in India are Nettur Technical Training Foundation, which has 19 training centers and trains more than 10,000 students annually, and Gedee Institute of Technical Training that offers Certificate and Diploma Courses in Coimbatore. Lately, many new initiatives have been launched, including IL & FS, Skill Development Corporation, IIJT, GRAS Academy, NIIT-IFBI, Vidyanta Skill Institute, ICICI Manipal Academy, Apollo Med Skills Ltd., Centum Workskills, Hero Mindmine, CII-Edexcel, NIIT Yuva Jyoti, Future Sharp, etc. International institutions also seek to enter India mainly through associations or joint ventures (Kabir and Saxena, 2014).

CONCLUSION

This module on 'Education and Labour Market Participation' discusses the role of education and in particular higher education in improving the labour market participation rate for India. Although India is the fastest growing economy with an excellent demographic dividend, it lags behind in the LMP rate due to several factors; lack of proper skilled based education or vocational training being one of them. This module also discusses how government and private sector initiatives can improve the LMP in India. No doubt education has a very important role to play in improving the labour market outcomes for a country but to increase LMP in India it is important to reduce the discrimination that is faced by women in the labour market. This module also informs participants that the job market and society in general is hugely biased in favour of men and with higher education this biasness can reduce to some extent. If women's salary is at par with the men's income, they are more likely to be encouraged in seeking a job and this will transform the state of LMP in India which is negatively impacted because of the lack of participation of women who form almost 50% of the workforce of a country. Training courses in certain skills that may encourage women to participate in labour market is also an area that needs to be researched for further improvements in the existing system. There is also a need to increase awareness among women about economic empowerment.

The education system of the country may be restructured through forming a link between the schools and the workplace. Sole dependence on institutions after secondary and higher secondary education may not be the right way. For example, The University of Delhi has total of only 905 seats in B. Voc. courses for students to get an opportunity to take admission in skill based education programme under a university system and thus become part of labour market. A very strong emphasis on vocational training is the need of the hour because of the change in the state of the labour market which now demands employees with skills that match the job requirement. The increasing unemployability of educated youth is a serious problem that needs to be resolved. Although some amount of skill mismatch is unavoidable but if this mismatch persists then it would lead to huge loss for the individual, organization as well as the society. Studies need to be conducted so as to find out how the present education system may be restructured. The involvement of school system in vocational training is also an area of research for policy making. Furthermore, ways should be found to improve the existing quality of vocational training. There is also an urgent need to increase the strength of teachers/trainers and enhance their quality. Regarding the issue of vocational courses seats lying vacant, besides improving quality and infrastructure, there is also a need to spread awareness of the benefits of the programme and thus increase the acceptability of such courses in Indian society.

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SMART RETAIL DEVELOPMENT THROUGH USE OF SMART SUPPLY CHAIN ENABLERS IN INDIA

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ABSTRACT

Introduction - The challenges such as environmental and social responsibility, adoption of technology, collaborative decision making among the retail supply chain stakeholders to reduce cost and achieve higher level of flexibility and customer satisfaction have scored the attention of both the practitioners and the academicians towards making smart retail supply chain ecosystem. Over the past decade, the concept of smart supply chains has emerged as the most promising resolution to these challenges. The need for such study in the retail sector is more pronounced, given the challenges on one hand and increasing complexities of supply chain on the other.

Purpose – The purpose of this paper is to report on a study that examines the impact of the identified enablers in the metamorphoses of common retail supply chain into smart supply chain. The problem here is at this nascent stage there is a dire need to establish a proper relation between the enablers along with their importance. The paper aims to fill this gap and examines the hierarchical relationship of the identified enablers of smart retail supply chain (SRSC).

Design/Methodology/Approach – An approach was adopted using one-to-one, in-depth semi-structured interviews with the academicians, industry experts and retailers who were directly involved in research or in introducing these enablers within their respective companies. These factors were then probed through extant literature. Thus, the ensuing factors enabling the implementation of smart retail supply chain were selected for the study. The paper presents a novel approach to prioritize the importance of identified factors first and then to construct causal relations among the factors.

Findings – The all-encompassing role of the identified enablers in today's business world and the findings of this study aims to explore and find the factors that would play a vital role in the future of retail firms operating as smart retail firms in India where use of smart technology is still very much in its infancy for some retailers although its use has generally continued since 2000.

Originality/Value – The outcomes and future scope of the study illustrate the specific enablers and implementation issues encountered by retailers, identify the consequences of their implementation on the retail businesses, and identify how these retailers in India could use and facilitate better implementation of these enablers in the future. The study aims to make the Indian retail ecosystem more robust with reduced uncertainties helping in the progression of smart retail in India. The outcomes of the study would assist researchers and practitioners to understand how these enablers are associated among themselves.

Keywords: MICMAC Analysis, Smart Retail, Smart Supply Chain, Smart Supply Chain Enablers, Total Interpretive Structural Modelling (TISM)

1. INTRODUCTION

Indian retail is the fastest growing industry in India. Retail sector encompasses products from all other sectors viz., apparel, food, automotives, electronic products etc. The competency of this industry is dependent on the competence of its supply chains. Post globalization, the increasing rate of urbanization and disposable income, exposure to western culture and growing consumerism and changing life styles has lead to rapid growth of this sector (IBEF report, 2017). This has also presented a major challenge in front of the retailers to increase the efficiency of their operations. The only resort is to make their supply chains smarter. This necessitates the adoption of new innovative technologies and tools. Any factor that causes disruption in the smooth functioning of the retail supply chain might pose as a barrier in the development of smart retail system. Though ample of literature on retail sector is there however there is limited research that has been done on this aspect of retail supply chain.

Volatile market conditions and fluctuating consumer demand calls for optimum supply chain configurations to synchronise supply and demand however lack of clarity and visibility to information inhibits supply chain response to these unpredictable swings. Retail management has come a long way from the conventional means in 80s and 90s to the use of latest internet of things (IoT). Now retail chains are global in nature. They not only make use of smart technologies (GPS, RFID etc) but also its supply chain partners now join hands and make collective decisions to optimize cost, time and opportunities. For developing smart retail supply chain, a

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conducive environment is required. A smart supply chain ecosystem is an environment that is an ecosystem that involves interaction between the various components that makes a smart supply chain. In a smart supply chain ecosystem we highlight the relationships between various components of the four dimensions of smart supply chain (figure 1).

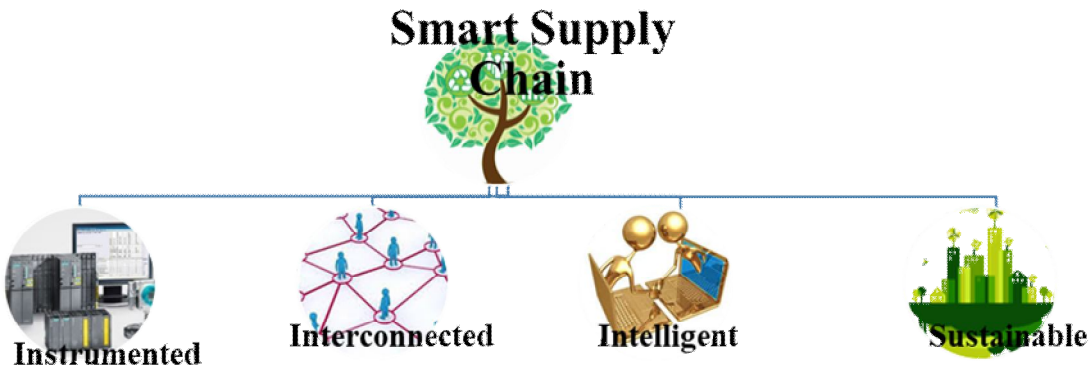

Figure-1: Smart Supply Chain Ecosystem

Wu et. al., (2016) defines "smart supply chain" as the new interconnected business system which extends from isolated, local, and single-company applications to supply chain wide systematic smart implementations. The emerging studies depict that rise and improvements in technologies have presented solutions such as ICT, RFID technology and the EPC Network in managing e-commerce supply chains (Wamba et. al., 2006). These along with other factors such as better instrumentation and tools such as analytics contribute in making a supply chain smarter (Wu et. al., 2016). Hence it would not be an exaggeration that their usage makes the foundation of smart retail supply chain. This paper presents a conceptual framework for using advanced technologies, instrumentation, improving transparency and traceability, intelligent tools etc for the development of smart retail supply chain in India.

2. LITERATURE REVIEW

Plethora of studies have been conduction in the area of retail supply chain management and how different tools and methods can help in improving the efficiency however very few are focused on smart supply chain. This leaves the canvas wide open for research. Smart supply chain goes one step further in the process of evolution of supply chains after the extended supply chain. A smart supply chain overcomes the often daunting challenges that the complexities that conventional and extended supply chains offer. It is marinated with the latest technologies and tools. Companies aim to improvise their supply chain by adopting emerging technologies and intelligent infrastructure and business processes (Schuster et al., 2007) by focussing on current capabilities and building new competencies for the future. Today's retail business like other business systems is interconnected, integrated and intelligent (IBM, 2010). As summed by Wu et. al. (2016); it is equipped with smarter supply chain capabilities such as online or e-supply chain (Akyuz and Rehan,2009), Internet of Things (IoT) (Ma, 2011),ambient intelligence (Kloch et. al.,2010), physical internet (Montreuil,2011), smart environment (Weiser et.al.,1999), and smarter supply chain (Butner, 2010).

Supply chains today are highly complex and face five major challenges; cost containment, risk, visibility, customer intimacy and globalization (IBM Report, 2010) which must be addressed simultaneously. Smart retail supply chains are flexible and thus are responsive, capable of combating and adapting the ever changing environment.

The characteristics and enablers for SRSC identified from the literature and expert opinion are summarized in the Table 1.

Table-1: Characteristics and enablers of SRSC

S. No.	Characteristics of Smart Retail Supply Chain	Smart Retail Supply Chain Enablers	References
A	**Instrumented**	1. Technology Utilization (TU) 2. Virtual supply chain using IOT (VSC) 3. Location Based Services (LBS)	IBM Report (2010), Ke Rong (2015), Saudah Ahmad (2014), L. Atzori (2010), D Uckelmann (2011), Verdouw C N, Beulens and Van Der Vorst (2013), Tijun, Feng, Sheng and Shuxia (2014),

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			Guillemin P. (2009), Tijun Fan (2015)
B	**Interconnected**	4. Visibility of information (VI) 5. Coordination among various stakeholders (CDN) 6. Customers Intimacy (CI) 7. Governance Mechanisms (GM) 8. Better Understanding of the Processes (BPS) 9. Inventory Visibility (IV)	Pascal Pluvinet, Jesus Gonzalez-Feliua, Christian (2012), Farhad Panahifar (2014), Singh (2011), Anil Singh (2016), Rajendra Kumar Shukla (2013), Daniel Rexhausen (2012)
C	**Intelligent**	10. Supply Chain Analytics (SCA) 11. Network and distribution analysis (NDA) 12. Modelling event simulation (MES) 13. Use of demand signals (UDS) 14. Customer Segmentation (CS) 15. Leagile SC (LSC) 16. Measurement through KPIs (KPI) 17. Supply chain risk reduction strategies (SCRR)	Fawcett (2013), Agarwal et. al. (2006), Khan Rai Waqas Azfar (2014), Gunasekaran and Tirtiroglu (2001), Gunasekaran, Patel, & McGaughey (2004), Daniel Rexhausen (2012), R. Rajesh (2015), Mourtzis, Doukas, & Bernidaki (2014)
D	**Sustainability**	18.Adoption of Safety Standards (ASS) 19.Adoption of Green Practices (AGP) 20. Waste and Hazard Management (WHM)	Sunku Venkata Siva Rajaprasad (2015), M Bostrom (2015), Kannan Govindan (2015), Vachon (2007)

2.1 Research Gap

Extensive literature has been carried out in the context of smart supply chain however it was found that very limited research work has been done on various aspects of smart retail supply chain. It is also evident that the work done so far is inadequate to understand the smart retail supply chain and its ecosystem. Literature indicates requirement for the studies exploring the enablers affecting a smart retail supply chain. Hence the present study focuses on exploring the enablers of smart retail supply chain and in identifying the relationship among them.

3. METHODOLOGY ADOPTED: TISM

ISM was introduced by Warfield in 1973. It is an interpretive approach that incorporates experts' knowledge and opinions in a systematic manner (Thakkar, 2007). TISM is an extension of ISM . TISM methodology is used to develop a hierarchical relationship among the variables under study and also shows the interpretation of links Sushil (2012) explained that TISM methodology consists of following steps (Sushil, 2012):

1. Identifying and defining the elements
2. Define contextual relationship
3. Interpretation of relationship
4. Interpretive logic of pair-wise comparison
5. Develop reachability matrix and transitivity check
6. Level partition on reachability matrix
7. Developing diagraph
8. Interaction matrix
9. Total Interpretive Structural Model

3.1 Justification for selection of TISM

Literature shows that TISM methodology has been used extensively to delineate the relationship between different variables (Thakkar (2007); Sushil (2012)). In the present study, a similar attempt has been made to establish a hierarchical relationship among the factor-enablers of smart retail supply chain in India. Hence considering the similar studies done in other areas, TISM is chosen to achieve this objective.

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3.2 Modelling of the Enablers Using TISM

Earlier, focus group interview was done followed by literature review to identify the various enablers for smart supply chain. Here, using Total Interpretive Structural Modelling (TISM), we try to build a hierarchical order of all the variables on the basis of their dependent power and driving power.

TISM helps to identify relationship among different variables. The data collected from expert through the questionnaire was collated and the analysis was carried out using the average response for each variable. The relationships among different variables are found out through group decision-making technique like Nominal Group Technique. Once the relationships between the variables are established, Structural Self-Interaction Matrix (SSIM) is formed by representing the relationships using the following rules:

V: Factor *i* helps to achieve factor *j*;

A: Factor *j* helps to achieve factor *i*;

X: Factors *i* and *j* helps to achieve each other; and

O: Factors *i* and *j* are independent of each other.

Reachability matrix is formed, which is further partitioned into different levels. Then the final model of TISM is developed. MICMAC analysis is performed, which classifies the variables into four types based on their driving and dependence powers.

3.2.1 Structural Self Interaction Matrix (SSIM)

The structural self-interaction matrix (SSIM) for the element under consideration is then prepared by filling in the responses of the group on each pair-wise interaction between the elements. SSIM constructed for the enablers for the development of SRSC is shown in Table 2.

Table-2: Structural Self Interaction Matrix (SSIM) for Enablers

S. No.	Enablers	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
		SSC	WHM	AGP	ASS	SCRR	KPI	LSC	CS	USD	MES	NDA	SCA	IV	BPU	GM	CI	CDN	VI	LBS	VSC	TU
1	TU	V	V	V	V	V	V	V	V	V	V	V	V	V	A	A	V	V	V	V	V	
2	VSC	V	V	V	V	V	V	V	V	V	V	V	V	V	A	A	V	V	V	X		
3	LBS	V	V	V	V	V	V	V	V	V	V	V	V	V	A	O	V	V	V			
4	VI	V	V	V	V	V	V	V	V	V	V	V	V	X	O	O	V	X				
5	CDN	V	V	V	V	V	V	V	V	V	O	O	V	X	A	A	O					
6	CI	V	V	V	V	V	V	V	X	O	A	A	A	O	O	O						
7	GM	V	V	V	O	V	V	V	O	O	O	O	V	O	A							
8	BPU	V	V	V	V	V	V	V	V	O	V	V	V	A								
9	IV	V	O	O	O	V	V	V	V	V	V	V	V									
10	SCA	V	V	V	V	V	V	O	V	A	X	X										
11	NDA	V	O	O	O	V	V	V	V	A	A											
12	MES	V	V	V	V	V	V	V	V	A												
13	UDS	V	O	O	O	V	V	V	O													
14	CS	V	O	O	O	O	O	O														
15	LSC	V	O	O	O	V	V															
16	KPI	V	A	A	A	A																
17	SCRR	V	A	A	A																	
18	ASS	V	V	O																		
19	AGP	V	V																			
20	WHM	V																				
21	SSC																					

3.2.2 Reachability Matrix

The SSIM format is transformed into the reachability matrix format by transforming the information in each entry of the SSIM into 1's and 0's in the reachability matrix.

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Table-3: Initial Reachability matrix

S. No.	Enablers	1 TU	2 VSC	3 LBS	4 VI	5 CDN	6 CI	7 GM	8 BPU	9 IV	10 SCA	11 NDA	12 MES	13 UDS	14 CS	15 LSC	16 KPI	17 SCRR	18 ASS	19 AGP	20 WHM	21 SSC
1	TU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	VSC	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
3	LBS	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
4	VI	1	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
5	CDN	1	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
6	CI	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
7	GM	1	1	0	0	1	0	1	0	0	1	0	0	0	0	1	1	1	1	1	1	1
8	BPU	1	1	1	0	1	0	1	1	0	1	0	1	0	1	1	1	1	1	1	1	1
9	IV	0	0	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	1
10	SCA	0	0	0	0	0	1	0	0	0	1	1	1	0	1	0	1	1	1	1	1	1
11	NDA	0	0	0	0	0	1	0	0	0	1	1	0	0	1	1	1	1	0	0	0	1
12	MES	0	0	0	0	0	1	0	0	0	1	1	1	0	1	1	1	1	1	1	1	1
13	UDS	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	0	0	0	1
14	CS	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
15	LSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1
16	KPI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
17	SCRR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
18	ASS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1
19	AGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
20	WHM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
21	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

The reachability matrix was then checked for transitivity to obtain the final reachability matrix (Table 4).

Table-4: Final Reachability matrix

S. No.	Enablers	1 TU	2 VSC	3 LBS	4 VI	5 CDN	6 CI	7 GM	8 BPU	9 IV	10 SCA	11 NDA	12 MES	13 UDS	14 CS	15 LSC	16 KPI	17 SCRR	18 ASS	19 AGP	20 WHM	21 SSC
1	TU	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	VSC	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
3	LBS	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
4	VI	1	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
5	CDN	1	0	0	1	1	1*	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
6	CI	1	0	0	0	0	1	0	0	0	1*	1*	1*	1*	1	1	1	1	1	1	1	1
7	GM	1	1	1*	1*	1	1*	1	0	1*	1	1*	1*	1*	1*	1	1	1	1	1	1	1
8	BPU	1	1	1	1*	1	1*	1	1	1*	1	1*	1	1*	1	1	1	1	1	1	1	1
9	IV	0	0	0	1	1	1*	0	0	1	1	1	1	1	1	1	1	1	1*	1*	1*	1
10	SCA	0	0	0	0	0	1	0	0	0	1	1	1	0	1	1*	1	1	1	1	1	1
11	NDA	0	0	0	0	0	1	0	0	0	1	1	1*	0	1	1	1	1	1*	1*	1*	1
12	MES	0	0	0	0	0	1	0	0	0	1	1	1	0	1	1	1	1	1	1	1	1
13	UDS	0	0	0	0	0	0	0	0	0	1	1	1	1	1*	1	1	1	0	0	0	1
14	CS	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1*	1*	1*	1*	1*	1*	1
15	LSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1
16	KPI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
17	SCRR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
18	ASS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1*	1	1
19	AGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1*	1	1	1
20	WHM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1*	1*	1	1
21	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.2.3 Level Partitions

Once the reachability matrix was prepared, it was processed to extract the digraph and associate structural models. A series of partitions were induced by the reachability matrix on the sets and sub-sets of the elements, i.e. relation partition and level partition. Thus twelve levels were obtained (Table 5 – Table 16).

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Table-5: Iteration 1

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21	1,7,8	1
2	2,3,4,6,9,10,11,12,13,14,15,16,17,18,19,20	1,2,3,7,8	2,3
3	2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21	1,2,3,7,8	2,3
4	4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21	1,2,3,4,5,7,8,9	4,5,9
5	4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21	1,2,3,4,5,7,8,9	4,5,9
6	6,15,16,17,18,19,20,21,11,12,13	1,2,3,4,5,6,7,8,9	6
7	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21	7,8	7,8
8	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21	8	8
9	4,5,6,9,10,11,12,13,15,16,17,18,19,21	1,2,3,4,5,7,8,9	4,5,9
10	6,10,11,12,14,15,16,17,18,19,20,21	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
11	6,10,11,12,14,15,16,17,18,19,20,21	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
12	6,10,11,12,14,15,16,17,18,19,20,21	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
13	10,11,12,13,14,15,16,17,21	1,2,3,4,5,7,8,9,13	13
14	6,14,15,16,17,18,19,20,21	1,2,3,4,5,7,8,9,10,11,12,13,14	14
15	15,16,17,21	1,2,3,4,5,6,7,8,9,10,11,12,13,15	15
16	16,21	1,2,3,4,5,6,7,8,9,10,11,12,13,15,16,17,18,19,20	16
17	16,17,21	1,2,3,4,5,6,7,8,9,10,11,12,13,15,17,18,19,20	17
18	16,17,18,19,20,21	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20
19	16,17,18,19,20,21	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20
20	16,17,18,19,20,21	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20
21	21	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21	21

Table-6: Iteration 2

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20	1,7,8	1
2	2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20	1,2,7,8	2,3
3	2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20	1,2,3,7,8	2,3
4	4,5,6,9,10,11,12,13,14,15,16,17,18,19	1,2,3,4,5,7,8,9	4,5,9
5	4,5,6,9,10,11,12,13,14,15,16,17,18,19,20	1,2,3,4,5,7,8,9	4,5,9
6	6,15,16,17,18,19,20	1,2,3,4,5,6,7,8,9	6
7	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20	7,8	7,8
8	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20	8	8
9	4,5,6,9,10,11,12,13,15,16,17,18,19,	1,2,3,4,5,7,8,9	4,5,9
10	6,10,11,12,14,15,16,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
11	6,10,11,12,14,15,16,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
12	6,10,11,12,14,15,16,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
13	10,11,12,13,14,15,16,17	1,2,3,4,5,7,8,9,13	13
14	6,14,15,16,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13,14	14
15	15,16,17	1,2,3,4,5,6,7,8,9,10,11,12,13,15	15
16	16	1,2,3,4,5,6,7,8,9,10,11,12,13,15,16,17,18,19,20	16
17	16,17	1,2,3,4,5,6,7,8,9,10,11,12,13,15,17,18,19,20	17
18	16,17,18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,18,19,20	18,19,20
19	16,17,18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,19,20	18,19,20
20	16,17,18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,20	18,19,20

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Table-7: Iteration 3

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,6,9,10,11,12,13,14,15,17,18,19,20	1,7,8	1
2	2,3,4,5,6,9,10,11,12,13,14,15,17,19,20	1,2,3,7,8	2,3
3	2,3,4,5,6,9,10,11,12,13,14,15,17,19,20	1,2,3,7,8	2,3
4	4,5,6,9,10,11,12,13,14,15,17,18,19,20	1,2,3,4,5,7,8,9	4,5,9
5	4,5,6,9,10,11,12,13,14,15,17,18,19,20	1,2,3,4,5,7,8,9	4,5,9
6	6,15,17,18,19,20	1,2,3,4,5,6,7,8,9	6
7	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,17,18,19,20	7,8	7,8
8	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,17,18,19,20	8	8
9	4,5,6,9,10,11,12,14,15,17,18,19,20	1,2,3,4,5,7,8,9	4,5,9
10	6,10,11,12,14,15,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
11	6,10,11,12,14,15,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
12	6,10,11,12,14,15,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
13	10,11,12,13,14,15,17	1,2,3,4,5,7,8,9,13	13
14	6,14,15,17,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13,14	14
15	15,17	1,2,3,4,5,6,7,8,9,10,11,12,13,15	15
17	17	1,2,3,4,5,6,7,8,9,10,11,12,13,15,17,18,19,20	17
18	17,18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20
19	17,18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20
20	17,18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20

Table-8: Iteration 4

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,6,9,10,11,12,13,14,15,18,19,20	1,7,8	1
2	2,3,4,5,6,9,10,11,12,13,14,15,19,20	1,2,3,7,8	2,3
3	2,3,4,5,6,9,10,11,12,13,14,15,19,20	1,2,3,7,8	2,3
4	4,5,6,9,10,11,12,13,14,15,18,19,20	1,2,3,4,5,7,8,9	4,5,9
5	4,5,6,9,10,11,12,13,14,15,18,19,20	1,2,3,4,5,7,8,9	4,5,9
6	6,15, 18,19,20	1,2,3,4,5,6,7,8,9	6
7	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,18,19,20	7,8	7,8
8	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,18,19,20	8	8
9	4,5,6,9,10,11,12,13,15,18,19	1,2,3,4,5,7,8,9	4,5,9
10	6,10,11,12,14,15, 18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
11	6,10,11,12,14,15, 18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
12	6,10,11,12,14,15, 18,19,20	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
13	10,11,12,13,14,15	1,2,3,4,5,7,8,9,13	13
14	6,14,15,18,19,20	1,2,3,4,5,7,8,9,10,11,12,13,14	14
15	15	1,2,3,4,5,6,7,8,9,10,11,12,13,15	15
18	18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20
19	18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20
20	18,19,20	1,2,3,4,5,6,7,8,9,10,11,12,14,18,19,20	18,19,20

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Table-9: Iteration 5

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,6,9,10,11,12,13,14	1,7,8	1
2	2,3,4,5,6,9,10,11,12,13,14	1,2,3,7,8	2,3
3	2,3,4,5,6,9,10,11,12,13,14	1,2,3,7,8	2,3
4	4,5,6,9,10,11,12,13,14	1,2,3,4,5,7,8,9	4,5,9
5	4,5,6,9,10,11,12,13,14	1,2,3,4,5,7,8,9	4,5,9
6	6	1,2,3,4,5,6,7,8,9	6
7	1,2,3,4,5,6,7,8,9,10,11,12,13,14	7,8	7,8
8	1,2,3,4,5,6,7,8,9,10,11,12,13,14	8	8
9	4,5,6,9,10,11,12,13	1,2,3,4,5,7,8,9	4,5,9
10	6,10,11,12,14	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
11	6,10,11,12,14	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
12	6,10,11,12,14	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
13	10,11,12,13,14	1,2,3,4,5,7,8,9,13	13
14	6,14	1,2,3,4,5,7,8,9,10,11,12,13,14	14

Table-10: Iteration 6

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,9,10,11,12,13,14	1,7,8	1
2	2,3,4,5,9,10,11,12,13,14	1,2,3,7,8	2,3
3	2,3,4,5,9,10,11,12,13,14	1,2,3,7,8	2,3
4	4,5,9,10,11,12,13,14	1,2,3,4,5,7,8,9	4,5,9
5	4,5,9,10,11,12,13,14	1,2,3,4,5,7,8,9	4,5,9
7	1,2,3,4,5,7,8,9,10,11,12,13,14	7,8	7,8
8	1,2,3,4,5,7,8,9,10,11,12,13,14	8	8
9	4,5,9,10,11,12,13	1,2,3,4,5,7,8,9	4,5,9
10	10,11,12,14	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
11	10,11,12,14	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
12	10,11,12,14	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
13	10,11,12,13,14	1,2,3,4,5,7,8,9,13	13
14	14	1,2,3,4,5,7,8,9,10,11,12,13,14	14

Table 11: Iteration 7

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,9,10,11,12,13	1,7,8	1
2	2,3,4,5,9,10,11,12,13	1,2,3,7,8	2,3
3	2,3,4,5,9,10,11,12,13	1,2,3,7,8	2,3
4	4,5,9,10,11,12,13	1,2,3,4,5,7,8,9	4,5,9
5	4,5,9,10,11,12,13	1,2,3,4,5,7,8,9	4,5,9
7	1,2,3,4,5,7,8,9,10,11,12,13	7,8	7,8
8	1,2,3,4,5,7,8,9,10,11,12,13	8	8
9	4,5,9,10,11,12,13	1,2,3,4,5,7,8,9	4,5,9
10	10,11,12	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
11	10,11,12	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
12	10,11,12	1,2,3,4,5,7,8,9,10,11,12,13	10,11,12
13	10,11,12,13	1,2,3,4,5,7,8,9,13	13

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Table-12: Iteration 8

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,9,13	1,7,8	1
2	2,3,4,5,9,13	1,2,3,7,8	2,3
3	2,3,4,5,9,13	1,2,3,7,8	2,3
4	4,5,9,13	1,2,3,4,5,7,8,9	4,5,9
5	4,5,9,13	1,2,3,4,5,7,8,9	4,5,9
7	1,2,3,4,5,7,8,9,13	7,8	7,8
8	1,2,3,4,5,7,8,9,13	8	8
9	4,5,9,13	1,2,3,4,5,7,8,9	4,5,9
13	13	1,2,3,4,5,7,8,9,13	13

Table-13: Iteration 9

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3,4,5,9	1,7,8	1
2	2,3,4,5,9	1,2,3,7,8	2,3
3	2,3,4,5,9	1,2,3,7,8	2,3
4	4,5,9	1,2,3,4,5,7,8,9	4,5,9
5	4,5,9	1,2,3,4,5,7,8,9	4,5,9
7	1,2,3,4,5,7,8,9	7,8	7,8
8	1,2,3,4,5,7,8,9	8	8
9	4,5,9	1,2,3,4,5,7,8,9	4,5,9

Table-14: Iteration 10

Element	Reachability Set	Antecedent Set	Intersection
1	1,2,3	1,7,8	1
2	2,3	1,2,3,7,8	2,3
3	2,3	1,2,3,7,8	2,3
7	1,2,3,7,8	7,8	7,8
8	1,2,3,7,8	8	8

Table-15: Iteration 11

Element	Reachability Set	Antecedent Set	Intersection
1	1	1,7,8	1
7	1,7,8	7,8	7,8
8	1,7,8	8	8

Table-16: Iteration 12

Element	Reachability Set	Antecedent Set	Intersection
1	1	1,7,8	1

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1.2.4 Formation of TISM based Model

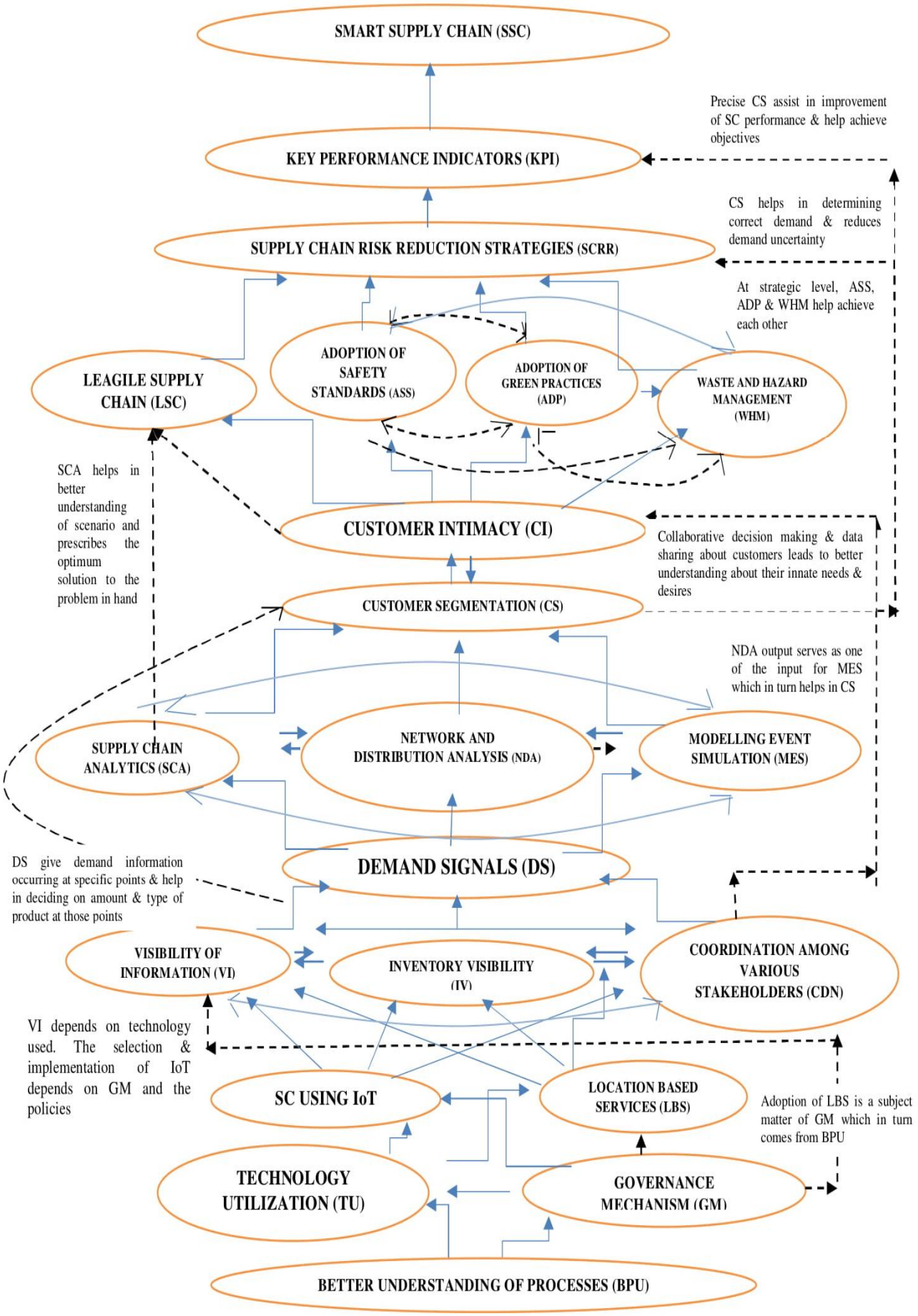

Figure-2: TISM Diagraph

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Based on the level partitioning, the ISM is developed (Figure 2). As it is evident by the diagraph better understanding of the processes, governance mechanism and technology utilization act as the main drivers (enablers) of smart retail supply chain.

4. MICMAC Analysis

MICMAC analysis (Mathiyazhagan, 2013) is performed, which classifies the variables into four types based on their driving and dependence powers as shown in Table 17.

Table-17: MICMAC Table

S. No.	Variable Type (Quadrant)	Dependence and Driving Power	Variable Name
1	Autonomous Variables (A)	Weak dependence and driving power	UDS
2	Dependent Variables (B)	Strong dependence and weak driving power	CS, LSC, KPI, SCRR, ASS, AGP, WHM and SSCE.
3	Linkage Variable (C)	High dependence and driving power	CI, SCA, NDA and MES
4	Driving Factors (D)	Weak dependence and strong driving power	BPU, GM, TU, VSC, VI, CDN and IV

The driving power Vs dependence power diagram (MICMAC diagram) is then constructed as shown in figure 3.

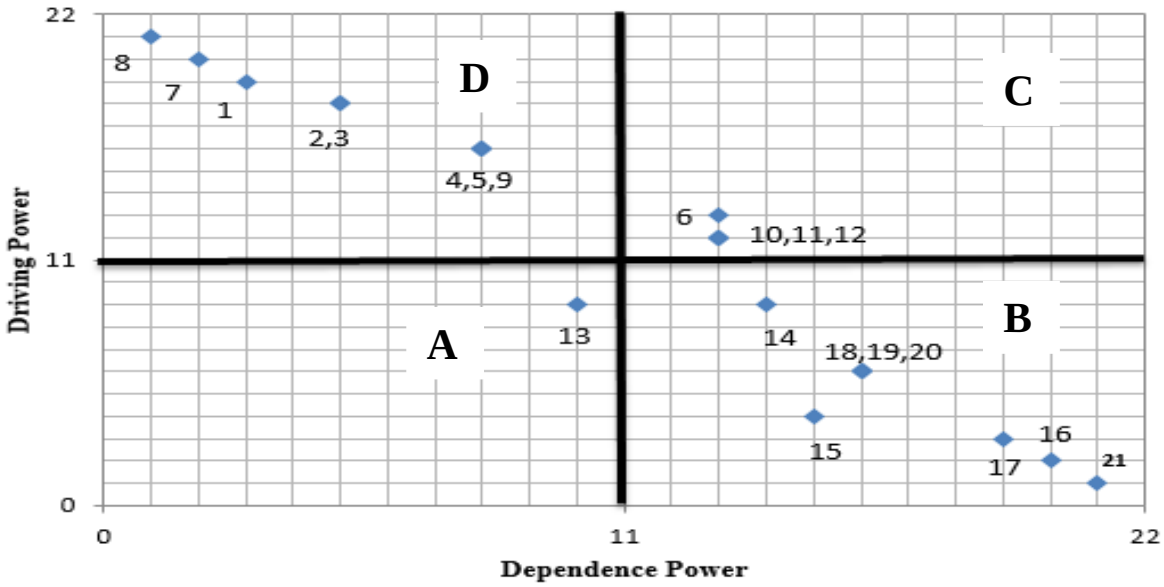

Figure 3: MICMAC Analysis of Enablers

(Driver-Dependence Matrix Diagram)

5. RESULTS AND MANAGERIAL IMPLICATIONS

The results of the study indicate that the smart retail supply chain depends on the twenty variables as discussed in section 2. The paper aimed to identify and analyze the interactions among these enablers. To achieve this TISM-based framework has been developed to show their hierarchical relationship. The top-level variables having weak driving power have strong dependence on other variables. These variables depend on other variables such as coordination among stakeholders, use of IoT and technology. The primary focus of the top management should be on the most crucial factors viz understanding of business processes and governance mechanism to frame appropriate policies that would consequently promote the adoption of other enablers and help in making a supply chain smart.

The TISM model shows both direct and indirect relationships with the interpretation of the links i.e., how one factor is effecting the other factor hence making this model self explanatory (figure 2).

The managerial implications that come into view from MICMAC analysis (driver-dependence matrix diagram) and TISM model are as follows:

- There is only one variable (UDS) in the autonomous region A, hence it can be inferred that the effect of demand signal as an enabler of SSC is not much significant.

- Region B in Figure 3 consists of variables CS, LSC, KPI, SCRR, ASS, AGP, WHM and SSCE. These variables are called Dependent variables. They occupy top level in the TISM hierarchy. These variables do not affect variables above their own level and they are influenced by other variables in the system.
- Region C consists of linkage variables which act as the connecting link between the variables in the system. These include CI, SCA, NDA and MES and have both high dependence and driving power. If not managed, they may result into unstable system as they can drive other factors and can also get influenced by other factors.
- Region D consists of driving variables. They occupy the lowest level in the TISM hierarchy. They drive other variables in the system. Variables BPU, GM, TU, VSC VI, CDN and IV fall under this category.

6. CONCLUSIONS

This paper adopts a novel approach to deal with the problems that are cropping with the growth of retail sector and to ensure that the retail sector could evolve as smarter. The implementation of the model is proposed as a way to deal with this scenario the research done in the area of smart retail supply chain is very limited and not much has been done to identify and prioritise these enablers which would help in evolution of smart retail supply chain. The developed framework would enable the managers to better understand the driving power of these enablers and divert focus more on these factors to drive other enablers and achieve the ultimate goal. Experts both from academics and retail sector were consulted for their opinion on the adopted methodology. The outcome shows that domain expertise (better understanding of the processes), governance mechanism and technology utilization act as the main drivers (enablers) of smart retail supply chain. To develop a smart retail supply chain, it is essential to have a good understanding of business process and the technology which could deployed with lesser cost. Also tools such as supply chain analytics, location based services and CPFR gives an edge to it making the supply chains smarter. The study shows that green supply chain practices helps in making the organizations more socially responsible but also helps in reducing risks and making the supply chain sustainable. The effectiveness of these factors could be measured against key performance indicators. The outcome can have great significance for research and management in smart retail domain in the future.

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THE IMPACT OF DEMONETIZATION ON CONSUMERS PURCHASE ON RETAIL STORE

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ABSTRACT
Demonetization is the act of stripping a currency unit of its status as legal tender. It affect different sectors of the economy at large. In India demonetization took place on November 8, 2016 with withdrawing five hundred and one thousand notes.This study assesses the impact thatdemonetization had on the online purchase activityof the customers. This research deals with the consequences of demonetisation on rural areas with insufficient banks/having no Banks, Village markets, Real estate, Health, E-business, Retail industry, Household and Cross sector credit customers. The present research is conclusive, descriptive and is based on single cross sectional research design. Quantitative data was generated on the basis of the research instrument Questionnaire). Students belonging to Department of Buiness Administration, Aligarh MuslimUniversity were the respondents.In all 102 responses were received. The studyconcludes that demonetization did have an impact on consumers purchase behaviour. Though they did not stop purchasing off-line, they did postponed purchase and as such so consumer stopped visiting retail store. Also, they engaged in purchasing less frequently. They shifted from purchasing off- line to online.

Keywords: Demonetization, online purchase, mode of payment, new currency, bank, old currency, cashless

INTRODUCTION
Demonetization"is the act of changing the existing currency in different form. The old units are replaced by new currency. In other words, demonetization means either introducing new notes or coins of the same currency or fully replacing the old currency with new currency". There is one important thing exist on economics, which is remonetisation, in which forms of payment is restored as legal tender. There are many reasons as to why governments' demonetize their nation's currency; some reasons being resisting inflation, resisting corruption, and also discouraging a cash system in the country. The impact of demonetization is on various sectors. The study throws light on the impact of demonetization on the Unbanked/ Inadequately Banked Villages, Mandi, Real Estate, Health Sector,Online Transactions & Payment Wallet, High-End Retail & White Goods, Household Sector and Cross Sector Credit customers.

1.1 Impact of Demonetisation on different sectors
This research deals with the consequences of demonetisation on rural areas with insufficient banks/having no banks, village markets, real estate, health, e-business, and retail industry, household and cross sector credit customers.

- **Impact on Unbanked/ Inadequately Banked Villages**

The situation in villages due to the lack of adequate amounts of cash was more abysmal than it was in the cities and the towns. Banks in villages cater to the needs of more than twice customers compared to banks in the city. Further, since the village economy runs mostly on cash, the most disastrous effects of demonetisation was seen here. **AReserve Bank of India survey published in December 2015** states that, banks in villages and sub-urban areas cater to almost 12, 863 people. Whereas, the banks in cities and metropolitan areas look after the financial needs of around 5, 531 people. The problem for people residing in villages is further compounded by the fact that rural bank branches open only for a couple of days in a week. There is also an urban-rural disparity in terms of the ATM machines available. In Delhi there exists 9,070 more ATMs compared to Rajasthan, although the latter is the largest state in terms of geographical area (Source: Media Report). The report further found out that apart from farmers, majority of the small scale businesses are taken care of by only the concerned owner. This explains, why cash is the most prevalent medium of transaction in villages. Demonetisation has had an adverse impact on these areas, even leading to the destruction of local businesses in some cases. While demonetisation was intended towards turning the village economy to a cashless economy, unfortunately, that cannot happen overnight, and simply pushing demonetisation down its throat has only lead towards its destruction.

Government aid for farmers can only be availed by those possessing a **KCC / Agricultural loan account.** This leaves out marginal farmers who, in the absence of the above mentioned requirements cannot avail any benefit.Due to this they were severely impacted as they did not have any means of withdrawing INR 25,000 in cash. Moreover, small farmers do not usually keep such large amounts in their accounts. This is because of their low income, and also due to lack of adequate information.

➢ ***Impact on Seasonal Workers/Daily Workers***

Demonetisation had a disastrous effect on seasonal workers and daily wage earners. This is because, these workers received their payments in cash on the day of their labour, which they could not use to buy the essentials that is required. Further, their main source of earning was through the sale of products such as vegetables, milk, eggs, etc. If not sold on time, these products can turn stale and these labourers did not have the means to sustain themselves in the absence of adequate savings.

➢ ***Impact on the Village Marketplace***

This sudden, unannounced financial decision by the Indian Government had a serious effect on the village market also. A news report by Times Now news channel stated that demonetisation had caused serious loses at the vegetable market in Chandigarh, which also happens to be the biggest North Indian vegetable market. Producers carrying produce from distant places like Indore and Nasik had complained about their inability to sold their products because of the lack of cash flow. The situation had turned so severe that certain traders did not earn enough money to go back to their hometowns from Chandigarh.

➢ **Impact on Real Estate**

Another area that underwent the consequences of demonetisation was the real estate business. It led to a reduction in the number of real estate property buyers leading to a fall in the prices for a short period. But, demonetisation had also brought about some betterments for this industry.Whileunorganised builders were badly impacted due to the lowering of the costs in the cement and ceramic industries. However, there also exists a contrarian explanation that since loans are used to finance majority of the expenditure in this sector, demonetisation did not cause a severe damage to the extent that did for other sectors

Cross Sector Credit Impact

Other associated sectors with the real estate, cement and steel had been on a negative credit. This had led to a tumultuous consequence for daily wage earners, and the granting of job contracts. This is because, since the real estate sector employs a lot of construction labourers, a negative impact on the industry had had the worst results on the daily wage earners and seasonal workers such as the construction labourers. But, experts suggest that the situation in this industry might improve in the long run.

Impact on E-business

Online business or e-business was one of the sectors that benefited immensely from demonetisation. Post-demonetisation there had been a massive increase in e-shopping and the usage of payment wallets. According to Paytm, a major Indian payment, they witnessed a massive 35 million increase in transactions through its app, following demonetisation. Moreover, in Hyderabad, following demonetisation 20,000 small businesses had started using Paytm.

Impact on Health Sector

During demonetisation people who went for their check-ups in private hospitals, faced hardships since these hospitals were not ready to accept the banned 500 and 1000 rupee notes. There were also instances when these hospitals refused their services when patients were not able to produce new notes. This research cannot confirm the veracity of such reports but believes that such instances were not unlikely.

Impact on the Retail Industry

The retail business and the selling of white goods also suffered in the aftermath of demonetisation. Sale of white goods such as TV, Refrigerator & Washing Machine had turned damp since these products are mostly purchased in cash. A minor effect was also seen in the food and grocery business in the supermarkets.

➢ ***Impact on the Household Sector***

It is a commonplace feature in Indian households that the housewives save a certain amount of money from the total which is used to meet the household expenses. This money is usually hidden from other family members and used during emergency situations. The sudden announcement of demonetisation had a very adverse effect on these housewives' saveings. This saved money could no longer be used. Fortunately, these housewives were provided some relief money by the Government amounting to upto 1.5 Lakhs- 2 Lakhs INR.
It could be said that all low scale industries which are cash driven were adversely affected by demonetisation, at least for a short time. This adverse impact had also a negative consequence on the overall economy, and it will require time for the Indian economy to be in its earlier state once again.

To Conclude

It is difficult to predict the long term consequences of demonetisation by only looking at its short term impacts. However, forcing everyone to go for a cashless economy in such a large country as India cannot be a measure

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that cannot have problematic consequences. It is extremely difficult to bring about such a flawless transformation. What demonetisation has led to is a sudden shortage in money supply and bank deposits. This coupled with the adverse impact on the real estate has contributed to a decline in the GDP growth of the country. But, everything is not yet that gloomy. If the Government is able to resolve the cash crunch situation, things might just be salvaged and the decline in the GDP might be arrested.

LITERATURE REVIEW

In her research called "Demonetization as a prelude to complete financial inclusion " Sherline T.I (December 2016) had set out to study how demonetisation could lead towards financial inclusion. Here financial inclusion referred to the capability of providing financial benefits for disadvantaged social groups at reasonable prices. Her research suggested that financial inclusion could help increase savings and provide more credit. Her research also found that demonetisation is expected to have benefits in the future. Further it could lead to the betterment of medium to long term Current account and saving account (CASA) ratio. Demonetisation is also expected to lessen the usage of cash in the real estate business which will further bring about a reduction in the inflation rates.

The impact of demonetisation was researched by M. Angel Jasmine Shirley (February, 2017). The initial section of her research described its effect on the Indian economy. It stated that on the day following demonetisation the the BSE SENSEX and NIFTY 50 stock had seen a slump by nearly 6%. In the following days there was an intense unavailability of cash, which would led to a reduction in production. There was also a lack of adequate new notes in the banks, which had a terrible impact on the economy. The research also studied the consequence of demonetisation outside India. After demonetisation there was a reduction in the consumption of goods which are exported, so that an import-export balance could be maintained. Demonetisation also had a serious effect on the local businesses, reduced Government liability, farming and fishing industry, business, drop in industrial output, black money, impact over counterfeit currency, hawala, bank deposits, jewellery and real estate, IT sector etc. The research pointed out the flaw in the understanding of black money, the elimination of which was touted to be the goal of demonetisation. While the goal was noble, however, black money is not kept in cash but mostly as land, gold, real estate property, etc.

Demonetisation brought about immense hardships on the common peoples' lives even leading to death due to lack of proper execution.

Research was conducted on demonetisation and bank payments by Chabi Gupta (December 2016). She conducted her research by first of all presenting an account of the Indian banking sector and payment banks. These are banks which operate under the ambit of RBI and caters to needs like small payment services, keeping bank accounts for people who are economically marginalised and small businesses. After having provided this account, she showed how demonetisation affected these banks. A Reserve Bank Of India (RBI) report states that till March 2016, around Rs.16,415 billion was in the market out of which 500 rupee notes were of around 47.8%in value and 1000 were of 38.6% in value. Jointly they had 86% value in the economy.

RESEARCH METHODOLOGY

3.1 Objective of the study was to identify weather consumer

1. Reduce the frequency of purchasing after period of demonetization.
2. Stop purchasing after period of demonetization.
3. Postponed purchasing after period of demonetization.
4. Did not reduced purchase but shifted to purchase online.
5. Reduce purchase modeoff-line and increase purchases mode online.

3.2 data collection

The proposed research is carried out with a view to analyse the impact of demonetization on consumer purchase on retail sector. The present research is conclusive, descriptive and is based on single cross sectional research design. Quantitative data was generated on the basis of the research instrument Questionnaire). Students belonging to MBA department Aligarh MuslimUniversityIn all 102 responses were received.

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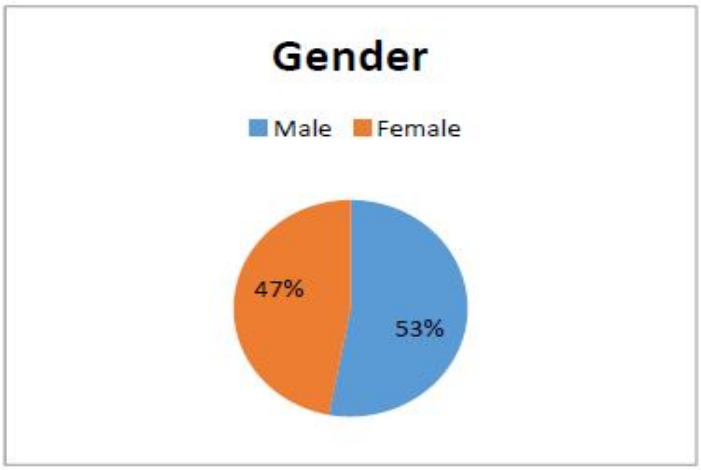
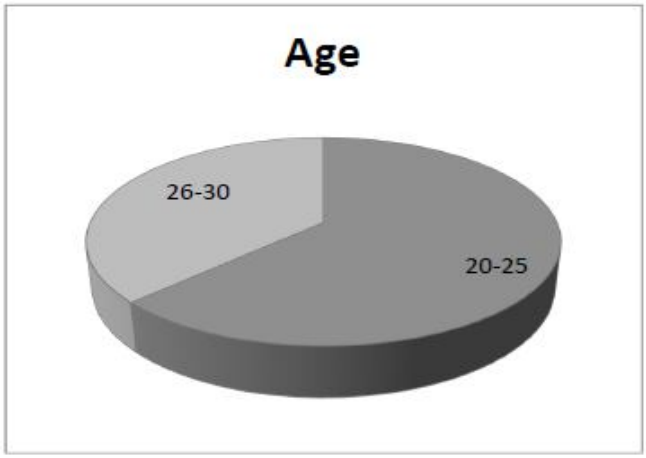
DATA ANALYSIS

4.1 Respondents profile



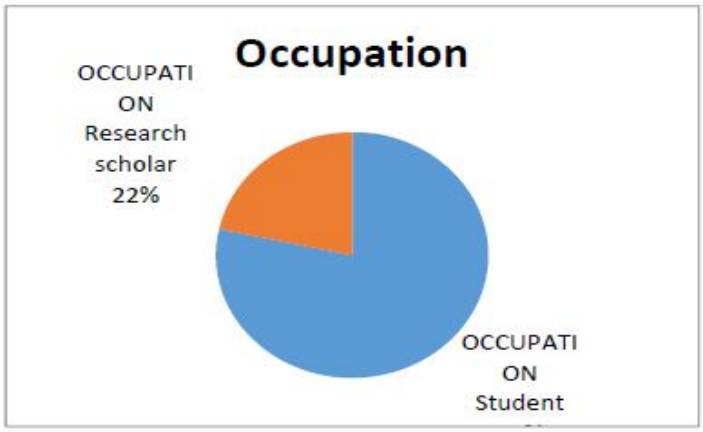
ITEMS		RespondentN
GENDER	Male	54
	Female	48
	Total	102

There are 54% male and 48% female in survey.



ITEMS		Respondents
AGE	20-25	64
	26-30	38

In survey there are 64% respondents have age limit 20-25 and 38% have limit of age is 26-30.



ITEMS		Respondents
OCCUPATION	Student	80
	Research scholar	22

Most of the respondents that we surveyed were students 80%, and the rest of them were research scholar 22%.

ITEMS		Respondents no.
Engage with online shopping?	YES	102
	NO	0

It shows that all the respondents are opting for online shopping.

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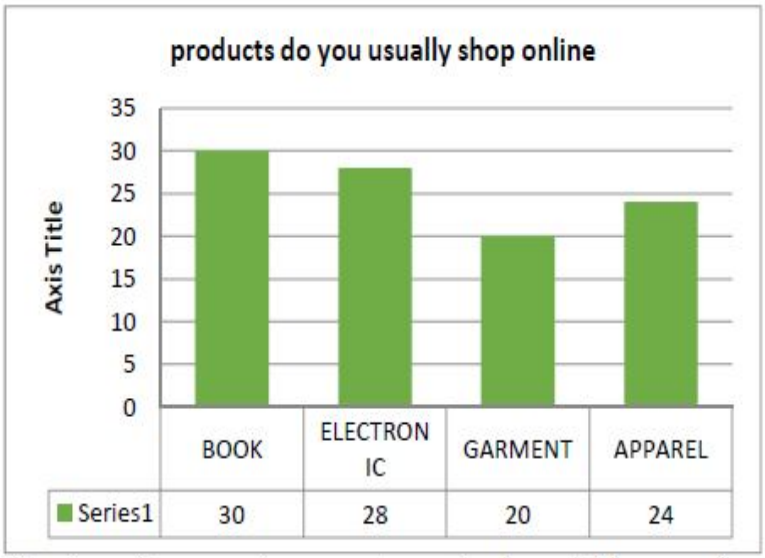
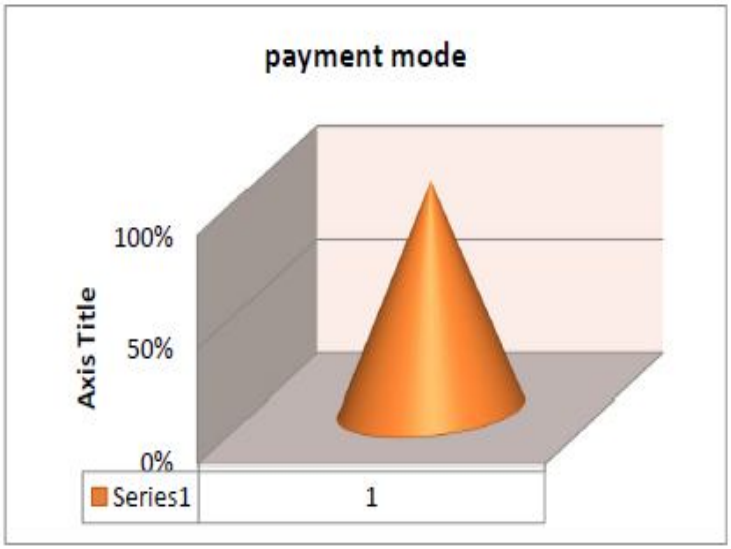


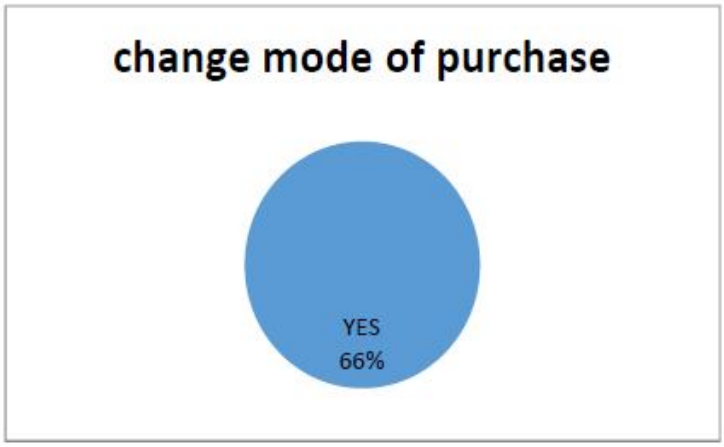
ITEMS		Respondents No.
Which products do you usually shop online?	BOOK	30
	ELECTRONIC	28
	GARMENT	20
	APPAREL	24
	Total	102

The item they purchase most was books, which was closely followed by electronic item. They also purchase garments



ITEMS		Respondents No.
Which is your payment mode for online shopping these days?	Debit Card	25
	Credit Card	19
	Cash On Delivery	21
	Net Banking	27
	Payment Wallet	10

Online mode helped them in paying using card (debit card, credit card). And enable them to reduce on transaction which involved payment by cash. Most consumers used net banking facility (27%) , may mode payment by using debit & credit card (25%, 19%), respectively; and 21% took benefit of provision of making cash on delivery



ITEMS		Respondents No.
Have you shifted to purchase off-line to purchase online post demonization?	YES	67
	NO	35

The study also focused on the impact of demonetization on mode of purchase post demonetization a large number of consumers (67%) shifting to purchase online from purchasing off-line.

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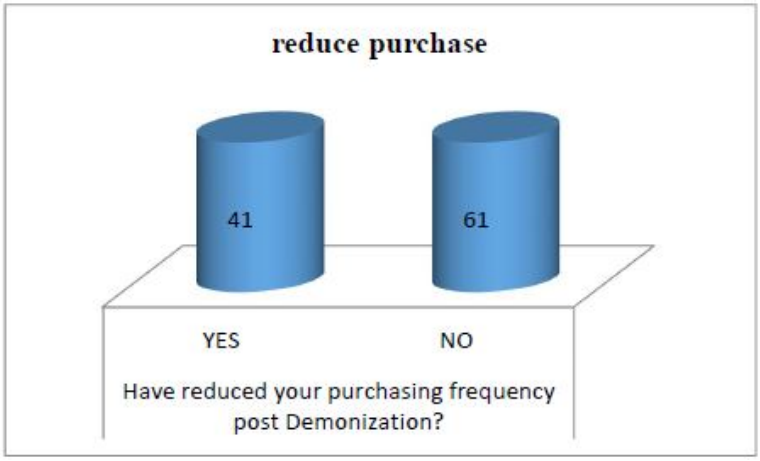

ITEMS		Respondents No.
Have reduced your purchasing frequency post Demonization?	YES	41
	NO	61

It also resulted in reducing their frequency their frequency of purchasing. A large number (61%) reduced the frequency of purchase.

4.3 Summary of analysis

ITEMS		Observed N	Interpretation
GENDER	Male	54	There are 54% male and 48% female in survey
	Female	48	
	Total	102	
AGE	20-25	64	In survey there are 64% respondents have age limit 20-25 and 38% have limit of age is 26-30.
	26-30	38	
	Total	102	
OCCUPATION	Student	80	Most of the respondents that we surveyed were students 80%, and the rest of them were research scholar 22%.
	Research scholar	22	
	Total	102	
Engage with online shopping?	YES	102	It shows that all the respondents are opting for online shopping.
	Total	102[a]	
Which products do you usually shop online.?	BOOK	30	the item they purchase most was books, which was closely followed by electronic item. They also purchase garments
	ELECTRONIC	28	
	GARMENT	20	
	APPAREL	24	
	Total	102	
what are your preferred online shopping websites?	FLIPKART	40	their most preferred site wherefrom they purchase was flipkart, snapdeal, amazon and E-bay was the least preferred site
	AMAZON	28	
	SNAPDEAL	28	
	EBAY	6	
	Total	102	
rank the best three. (Where 1 is for most preferred)	FLIPKART	37	it show that respondents rank the sites flpkart 37%, snapdeal 34% and then comes Amazon 31%.
	AMAZON	31	
	SNAPDEAL	34	
	Total	102	
Have you stopped purchasing off-line post demonetization	NO	102	my studies also focused on impact demonetization on consumers purchase activity and it reveals that the consumers did not stop purchasing off-line during the phase of demonetization through a large number did postpone purchase
	Total	102[a]	
Have you postponed purchasing post demonization?	YES	58	
	NO	44	
	Total	102	
Have reduced your purchasing frequency post Demonization?	YES	41	It also resulted in reducing their frequency their frequency of purchasing. A large number (61%) reduced the frequency of purchase.
	NO	61	
	Total	102	

Have you shifted to purchase off-line to purchase online post demonization?	YES	67	The study also focused on the impact of demonetization on mode of purchase post demonetization a large number of consumers (67%) shifting to purchase online from purchasing off-line.
	NO	35	
	Total	102	
which is your payment mode for online shopping these days?	Debit Card	25	Online mode helped them in paying using card (debit card, credit card). And enable them to reduce on transaction which involved payment by cash. Most consumers used net banking facility (27%) , may mode payment by using debit & credit card (25%, 19%), respectively; and 21% took benefit of provision of making cash on delivery
	Credit Card	19	
	Cash On Delivery	21	
	Net Banking	27	
	Payment Wallet	10	
	Total	102	
Did your payment mode change due to demonetization?	No	102	Their mode of payment did not change during the demonetization period
	Total	102[a]	
Describe any change that has come about in your purchase activity post demonetization?	Affected My Off-Line Purchase	71	The study also focused on the change in purchase activity post demonetization and it revealed that a large number 71% off-line purchase activity was affected
	Affected My Online Purchase	15	
	ShifftedPuchase More To Onlinne	16	
	Total	102	

CONCLUSION

The studyconcludes that demonetization did have an impact on consumers purchase behaviour. Though they did not stop purchasing off-line, they did postponed purchase so consumer stopped visiting retail store. They engaged in purchasing less frequently. Theyshifted from purchasing off- line to online.

They shifted to make payment online and use the same mode of payment as before.

- Consumers stopped visiting retail store.
- Frequency of visiting to retail store decreased.
- Purchase from in store centres retail.

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VOIDS AND ABYSSES IN INFORMATION TECHNOLOGY ACT, 2000 VIS-A-VIS E-COMMERCE: DEFIES AHEAD

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ABSTRACT
Today in India electronic commerce is fastest growing and as a rule exciting channel for commercial transactions. According to ASSOCHAM-Forrester study, Indian e-Commerce is growing at an annual rate of 51%, the highest in the world, and is expected to jump from $30 billion in 2016 to $120 billion in 2020, even though being hit by the sound effects of the government's scheme of demonetization. However, at the same time e-commerce, certainly, affords us transactions that otherwise would not have been possible. In this background the paper argues, that despite the shift towards e-commerce in India yet, surely, there are inadequate laws in protecting a person over internet. However, at the same time even after the Information Technology (Amendment) Act, 2008, section 10-A is incorporated which validates the e-commerce including e-shopping not including in advance attendant philosophy of contract creation which gave rise to number of queries than the solutions provided by this amendment. Further, the paper argues that The Indian Contract Act, while prescribing the behaviour in which traditional agreement is to be prepared and executed. But, in e-commerce transactions what happens is that the contractual terms are already set by the seller and the user is being afforded the choice of accepting or rejecting the agreement and acceptance alone entitles him to access the services. Therefore, leaving a person in a position where he can't bargain. Lastly, the paper came up with certain suggestions keeping in view above unfilled space.

Keywords: Contract, E-commerce, Information Technology, Jurisdiction, Privacy

1. INTRODUCTION
Technology has fundamentally changed the way the businesses were handled by society today. The global presence of internet has enabled businesses to reach new markets and millions of new potential customers. By this, electronic commerce commonly known as e-commerce have developed and is one of the wildest developing region around the world and India's greatest increasing and mainly electrifying means for business communications. While being able to access global markets, e-commerce has enabled businesses to bypass the traditional intermediaries in domestic jurisdictions. Besides, owing to its lower transaction costs, e-commerce has caused a steady increase in the number of sellers and suppliers in the market, thus increasing diversity and competition in the market.

Electronic commerce as an indication of globalisation represents critical periphery of achievement in the virtual world across the globe. Today Internet development has led to a mass of fresh growth for example limited restrictions for corporations as customers turn exclusively towards internet to purchase products at possible meagre price. Further, internet being an effectual medium of changing straightforward behaviour of doing commerce. However, electronic commerce is preferable rather useful because of numerous reasons, say for example, access to products, which may not be accessible otherwise, becomes quite convenient. That is true particularly in rural areas. Besides, it acts as an effective mode of entering into transactions, for consumers as well as retailers and has made possible low value cross-border transactions to an extent that could have been unthinkable previously.

1.1 Growth of E-commerce
In India electronic commerce are likely persist the extraordinary development. Number of reasons are lucidly associating the development of E-commerce around the globe, and more specifically in India. Furthermore, the swiftness of development of electronic commerce in India is incredible. There are number of factors which led to the growth of e-commerce like easily accessible and financially cheap qualities of internet, increasing use of tablets, smartphones, and for professionals with their busy schedule etc. The growth of internet in India is tremendous as it holds first rank in it but China is having largest electronic commerce market followed by USA all around the globe. Further, as per the report of ASSOCHAM-Forrester study, annual growth of e-commerce in China is 18% but at the same time India is having tremendous annual growth of 51%. Moreover, in India the estimations of future in online sales is expected to be welcoming as the as it is anticipated to reach $120 billion by 2020. Keeping in view proclivity of Indians towards Mobile phones and thereby increasing sales of mobile phones which have, percentage of e-commerce sales is increasing day by day.

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1.2 The trenches – Determinations and Consequences

The electronic commerce in India is highly hostile as it is a field where chief electronic commerce actors struggling amongst themselves in enlarging their province. The e-commerce sites like Amazon, Snapdeal and Flipkart have shown mega sales on their sites but the competition is increasing, thereby price cutting is high in number. At the same time Snapdeal is the most unfortunate rival because by confronting different backlashes and polemics throughout its being into existence.

The Amazon is providing better quality and services than flipkart thereby is ahead of it in the line of competition of best downloaded app rating by 'App Annie'. However, 'Amazon Prime' is the most successful and had gained Leading status in e-commerce market compared to 'Flipkart First', thereby Amazon is ahead of Flipkart. However, Snapdeal is now improving after learned from its mistakes. The 'Unbox Zindagi' campaign is a steps towards restructuring its own identity.

2. LITERATURE REVIEW

Given that the phenomenon of e-commerce is only recent to the whole world including India, there is a dearth of scholarly writings which can explore the challenges it poses to consumers besides offering legal ways to tackle them. So far, the research has been confined to rather a historical point of view. At the most, the authors have given a textbook analysis of the issues. The enormity of this new way of formation of contracts calls for its deep understanding on both sociological and legal counts. This impels the researcher to examine the existing laws related to contracts executed electronically.

Habul in his article titled "*Consumer decisions making in online shopping environments: the effects of interactive decisions aid*, 'Marketing Science' (2001), focussed on a questions including that why a traditional market have been changed into virtual market? The most commonly reasons cited by him for shopping online is convenience and comparison of prices. Moreover the capability of electronic commerce is that a person need not to leave his home and goods or services are provided to him at doorstep.. Moreover he cites reasons why the number of internet users who are shopping online goods or services is increasing day by day.

However, Tim Gerlach, in his article '*Using internet content filters to create E-borders to Aid international Choice of law*' (2005)' analyses that despite being trendy, allowing ease and quickness and received with a huge response by consumers both in urban and rural areas, online shopping cannot be said to be full proof. Rather it has become easy target for the evildoers. Online shopping poses a wide range of challenges from the consumer protection perspective, ranging from invasion of privacy to jurisdictional issues. He discusses all these challenges in detail.

Gregory Karp in article titled '*Right tools can make online shopping easier'(*2009), explores that electronic commerce can be a best friend of elegant customers with the capability to without doubt evaluate shops and can look for relaxations and can buy with a few clicks on mouse. A customer can now easily compare prices and can look for discount offers

Forrester in his book titled '*Trends in Indians e-commerce market'* (2012), analyse that there are hundred crore wireless subscribers and six crore smart phone users in India. There are 145 million internet users and they spend 20-25 hours /month for online shopping (Also McKinsey 2012). This is one of the reason why shoppers get attracted. However the author gives statistical data in his book on online shopping in India. Techno Pak (2012) discussed in their report that how the earlier people were afraid to purchase online and how the trend is changing from online to offline purchasing. Further the total retail size in India is 455 billion dollar. Out of this organised retail is thirty four billion dollar seven percent of total retail).

Dr. Jyoti Ratan in her book titled *'Cyber laws'* (2013) argues in detail that how the amount of trade has grown extra-ordinary with widespread internet usage and how the globe has now became a global market by shifting traditional world into virtual world. Further, paced special emphasis on advantages for both vendor and vendee in the sense that vendor can have reach to any corner of world and simultaneously the purchaser is having exceptional choices. Effectiveness to a great extent is enlarged, paper work abridged, time period concise and payment narrowed. Moreover the author focuses on Information Technology Act 2000.

Moreover according to Juneesh k, in his article titled "*Online shopping problems and solution*, (2014) discusses the problems which the online shoppers are facing those are like receiving damaged products, wrong products, delay in delivery of products or fails to receive any product at all which is eventually affected on consumer's right. Further, approximately 40% of internet users around the world purchase products through online medium via different apparatus and this indicates greater than 1 billion purchasing over internet and is anticipated to grow endlessly.

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An article titled '*What is E-Commerce' by Katherine Arline*, (2015) gives the historical perspectives of online shopping and further explains the different concepts of Electronic Commerce. It further analyses that with the beginning of internet machinery, the nature of e-commerce, its evolution have taken form and rotate dramatically. Further, medium of the E-commerce grow with the enlarged accessibility of internet entrance and the beginning of famous internet vendors in the 1990's and early on 2000's. In 1995 Amazon started functioning as a book delivering trade in Jeff Bezo's Garagr. At the same time in 1997 EBay exploded Beanie Babis Frenzy and in 1995 enabled customers to vend online against each other and which in 1995 launch online.

However, 'Professor Farooq Ahmed in his Book on *Cyber law* (2015),' evaluates in detail that how the Shopper as a consumer suffers despite having enumerable laws in India like Indian Contracts Act, 1872, Consumer Protection Act, 1986, Information Technology Act, 2000. Despite all these laws certain queries are raised which needs to be answered from the Indian Perspective by the agencies are: what are the questions related to formation of contract created by IT Act? How far the Indian Contract Act, is stretchy sufficient to contain these questions and to offer for their settlement? Does the IT Act include questions left cover by the Contract Law? How far the main principles of contract formation been changed by the Information Technology Act? What questions are left for courts to decide?

2.1 RESEARCH GAPS

Online Commerce or E-commerce, certainly, affords us transactions that otherwise would not be possible. However, as experience shows, it is not immune to consumer harm either. It is evident that much progress has been made in jurisdictions like United Kingdom and USA with respect to the protection of consumers on the Internet. Very little attention, however, has been paid to the online consumer protection in India. Further, despite the increasing growth of annual rate of e-commerce, India is far behind in protecting consumers which are discussed as under:

2.1.1 Electronic commerce issues under Information Technology Act, 2000

The issues under Information Technology Act, 2000 related to electronic commerce are as under:

I. One of objective of Information Technology Act, 2000 reiterated by Information Technology (Amendment) Act, 2008 is to legalize the electronic commerce. At the same time in the IT Act 2000 there was no provision which validated electronic contracts despite the fact that in the Model law there was direct provision to this effect. The IT (Amendment) Act now provides that

"*where in a contract formation, the communication of proposals, the acceptance of proposals, the revocation of proposals and acceptances, as the case may be, are expressed in electronic form or by means of an electronic record, such contract shall not be deemed to be unenforceable solely on the ground that such electronic form or means was used for that purpose*".

This provision makes it aptly clear that e-contracts are valid and enforceable but without laying down the principles of formation of contract which can give rise many questions than the solutions provided for the same by the amendment.

Are electronic contracts now exclusively dealt under IT Act? Are Common law principles followed by the Indian Courts to interpret provisions of the Indian Contract Act, applicable to the Electronic Contracts also? Has the IT Act in any way changed or modified substantive provisions relating to the Contract formation? Has the IT Act provided additional requirement for the formation of electronic contacts?

II. Further, one of the requisite under section 10 of Indian contract Act, 1872 is mutual consent of both the persons which must be offeror and offeree as provided under Section 2 (a) and (b) and the person equally includes both legal and natural person but at the same time the word computer does not fall in any of the two class. Therefore any agreement performed by an independent computer will not fall under the above definition. Therefore two options would have been available before passing the IT Act to legislatures. One to embrace computers as parties second to treat computers as an agents. But the court *in State Farm Mutual Automobile insurance company v. Brockhorst* support of treating computers as the agents.

III. In traditional contracts common law courts have clarified distinction between dichotomy of offer and Invitation to treat. But it is equally difficult to prove on websites carrying such statements. Now the question arises are those statements simply an offer or information provider to customer. The distinction between invitation to treat and offer on websites is difficult to prove, the reason being that these sites are structured in such manner that acceptance means goods are in accumulation and proposal can be involuntarily withdrawn. At the same time there is an argument that vendor may refuse to sell off his

products to certain or persons. Therefore every statement has to be interpreted by the words used and practice of deal.

IV. The phrase 'incorporation by reference' is used for a condition to refer a document where its provisions are defined somewhere else. Communication over internet is structured in a technique that huge messages are communicated with concise information to information detailed at other place. In such a situation question arises that does the terms by incorporation by reference form a part of actual agreement and if yes under what conditions?

The Information Technology Act is silent on conferring legal status on such terms. Infact it was not even in original United Nations Commission on Trade Law model but was later realised and express provisions to such an extent was incorporated in the Model law by Article 5 *bis* and such type of provision is missing in IT Act.

Also, due to the significant difference amongst physical contracts and electronic contracts, the tests developed by courts in traditional contracts like standard form of contracts may be unsuccessful whilst applied to electronic contracts. Moreover the terms and conditions must always be brought to the notice of other party but at the same time opinions differ in electronic contracts.

3. CHALLENGES AND ENCOUNTERS TO ELECTRONIC COMMERCE

Apart from above problems, there is the revolution in the modes of business which has thrown newer challenges to the consumer, like, invasion of privacy, insecure payment methods, jurisdictional issues etc discussed as under:

3.1 Incursion of Privacy

To make out a case for privacy invasion in the world of online shopping, it is arguable that the huge network of computers that makes up the Internet has brought people closer and made many communications that were once considered private less so. Internet users are, invariably, required to give their personal information, which, they otherwise regard as private. The personal information may range from an individual's financial details to sexual preferences to medical history to shopping patterns to address and family details without disclosing the need of its collection. In fact these organizations construct's a detailed personal profile of a user as a result of activity carried on the internet may not be a concern for a user as long as they get something for it in return. Also, scheme aiming at providing suitable protection to online shopper must effectively shield the online shoppers engaging in cross-border trade and should afford shield to sensitive data. For example, when a person buys any good online, he is required to visit a particular website where he is asked to fill in his/ her name, address, phone number, date of birth etc. But, at the same time, there is no guarantee to this person sharing his personal information with some unidentified person. "Violation Privacy over internet even includes, Dissemination of complex and trustworthy personal information to financial to medical of persons and establishments; tracing happenings of shoppers by means of net cookies distributing spam emails; and Irrational check and examination on worker's doings, together with their email communication."

3.2 Jurisdictional Issues

Over the past epoch, the internet has made our globe lesser in terms of online market. Moreover it has the capability to cross boundaries little of parting one's breathing area has made a jurisdictional vacuum which is up till now to be occupied. "In international transactions many challenging questions plea for answers. Like, where can the plaintiff file a case? Law of which country will apply? For instance, a shopper who lives in India possibly will purchase a couple of fabrics as of a professional situated in United Kingdom through the website of professional" . On the face of it, such professional will have contacts to dual nations i.e., India and United Kingdom. Likewise, contacts to another nations may too rise; for instance, if the website of the UK professional is maintained by a machine server located in the USA, or bought fabrics have been synthesized by an establishment in China. It is possible that dealer and purchaser might be living in two diverse nations and the business is situated in the third nation. Therefore in case of differences, questions arise which nation is having jurisdiction? Of which nation's law is applicable? How the judgement will be implemented?

"In India Jurisdictional matters are obtained by any of the following like when cause of action arises, what is the place of residence of parties or place of business? But the cause of action is a personal test among the three and is utmost possible to be deliberated in electronic commerce subjects. The aforementioned looks that Section 13 of the IT Act, 2000 is never in synchronization with section 11 of CP Act, 1986. Section 13 delivers, wherever an instigator (offeror here) or the Receiver (offeree) has more than one place of business then principal place of business shall be deemed as the place where the electronic record have been dispatched or acknowledged. The place of business will obtain the jurisdiction of the court and in case there is a disagreement amongst them concerning agreement shaped by electronic means, at that time the case intend to be in the law

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court in the interior the limited restrictions of whose jurisdiction, foremost domicile of professional of the contrasting party is located.

"In contradiction of it, the Consumer Protection Act lays, that a shopper can file a grievance contrary to the opposed in a District Forum inside the native boundaries of whose jurisdiction the contrary party, has a division workplace." So, there is an apparent conflict between the two sections as section 13 is likely to cause inconvenience to the consumers especially where the opposite party has principal office outside India.

3.4 Reticent Payment method And Digital Payment Failures

Again, online shopping is similarly vulnerable to the insecurity in payment systems. This is so because nearly each of these devices claim participation of a third party to assist as an intermediary to the transaction. "The intermediary may have a contractual relationship with the buyer, the seller, or both depending on the mechanism of the transaction. In some cases, one party may not even have the knowledge that an intermediary is being used." The chief benefit of this instrument lies on the fact that they are resourceful and expedient selection as it qualifies a shopper to purchase from everywhere.

The disappointment of electronic payments at all times emerges in the air though making electronic communications whether a shopper is making payment by net banking, debit or credit card. An uncertain internet link or a mechanical problem frequently consequences in to be paid sum being deducted as of shopper's account short of being accredited to vending party. "Besides recovering this sum is whatever nevertheless a swift course; a person has to notify the website and at that time have to wait round 7-10 days earlier the sum is reimbursed in their account. But then again this condition is gradually enlightening as the segment is concentrating further on cashless businesses and shoppers are receiving extra information and paying online."

3.5 Deferred Delivery

Adjournment in the conveyance of goods endures to persist one of the utmost common grumble of the consumer. The webstores does not give any security as to the period of conveyance. Thus it is contended that those online stores should be fixed with accountability in the background of facilities they provide under CP Act as it would else amount deficiency in service under CP Act.

3.6 Week Comment Scheme

In the online mode of shopping barely at hand is any complaint redressal mechanism. These online shops only deliver telephone number, email id and address on their online website. But then again practically at the most these online stores does not retort outcome is stroking the consumer in distress.

3.7 Other Legal Issues Online consumer face

There are no adequate laws, protecting the online consumer, in place in India. It is true, that the provisions of the laws, for example, The Consumer Protection Act, 1986, The Indian contract Act, 1872, The Sale of Good Act, 1930, which apply to off-line transactions, also do apply to those concluded online also. Yet, they, surely, are inadequate in the overall protection of the shopper in the online transactions as there are number of loopholes present.

Yet another concern with respect to online shopping is the complexity of contractual terms the sellers employ in the agreements. Remember, the Indian Contract, while prescribing the method and form by which agreements are formulated and then executed, also lays down certain criteria for the contracting parties under section 10 to enter into a valid and binding contract like that of (a) competence of parties (b) lawful consideration (c) free consent (d) lawful object (e) intention to create legal relations. But, in e-commerce transactions (online shopping),what happens is that the contractual terms are already set by the seller and the consumer is only required to click on an 'Ok,' 'I Agree' or 'I Accept' button to enter into a contract. Therefore, with this shift in the means of entering into a contract, the user is generally being afforded the choice of accepting or rejecting the agreement and acceptance alone entitles them to access the services. There is no opportunity for negotiations of terms, therefore, leaving the consumer in a position where he can't bargain. Interestingly, the primary purpose of the terms and conditions is to absolve the service provider from all forms of liability like in case of the defect in goods, deficiency in the overall services etc. This has limited the scope of remedies available to the consumers. Delay in the delivery of goods also happens to be the most common grievance among the consumers in case of online shopping. However, the term consumer defined under Consumer protection Act 1986, does not cover online consumer. Moreover, given that the average length of these contractual terms and conditions is, more often than not, tedious, it is not humanly possible for an ordinary internet user to read them before clicking on the 'I Agree' button. A simple perusal of the different terms and conditions imposed by the online business sellers on the consumer clearly indicate that a large number of terms

are against some established fundamental legal principles recognized under different laws like Indian Contract Act 1872, the Sale of Goods Act, 1930 and The CP Act, 1986 This rings true in other jurisdictions as well.

Keeping in consideration the requirement of documentary evidences it is likewise problematic to usage of the Consumer Protection Act, 1986 to decide e-Shopping grievances, because in e-Shopping accessibility of documentary evidences is circumscribed. Moreover, ever since there is no geographical restrictions for Internet, instituting Internet jurisdiction is so far one more problematic job. Prosecuting a trader in overseas is time consuming, challenging, costly and it cannot be known from website where the vendor is founded. Besides, it is difficult task to know which law of the nation is applicable to an agreement, the law of the nation where the Products were transported or the law of the nation where products were purchased. Action under law will take in to initiate court proceedings against vendor in his country thus can cause inconvenience to shopper to a large level.

Non-Bargainable nature and privacy invasion of E-Shopping agreements are others zones of shopper disappointment. Further, shoppers cannot take recourse to traditional systems of complaint redressal mechanism as a vendor is frequently unidentified with no physical site or address.

The 2008 amendment in IT Act, 2000 reveals the mounting significance of an Internet in the life of any Indian. The foremost concerns which are observed, into comprise privacy, slashing, authority regulating and sentences for transgressors. Nevertheless, the IT Act, does not emphasis on the protection of shoppers and is of restricted significance of shoppers shopping over Internet.

4. CONCLUSION AND SUGGESTIONS

If we talk of future as per the study conducted by ASSOCHAM, in India the number of online consumers in the year 2016, was 69 million and 100 million in the year of 2017 and which is expected to reach to 65% by the end of 2018. Keeping in view the rising rate, it is submitted that the fate of electronic commerce will revolve to around the theory of survival of the fittest. Further, in near future the electronic commerce entrepreneurs will come in clash against each other for shares in the market and at the same time it will be very hard for new entrepreneurs to compete with giant marketers unless they will come up with some new ideas and construct something which may be new, novel and distinct. The outlook of electronic commerce seems intense in India and development is on plan.

Keeping in view fast-tracking progression of e-commerce because of an enjoyments and satisfactions of customers over the internet without any definite protection. It is therefore suggesting following measures:

I. The term ‘consumer’ defined under Consumer Protection Act, 1986 should now include even the term online consumer.

II. Necessary amendment should be made were IT Act, 2000 and Contract Act, 1872 must not clash against each other.

III. IT Act 2000 needs to be amended and a chapter should be incorporated On Electronic commerce.

IV. Settlement of all issues especially jurisdictional issues when it comes to cross country market must be settled.

V. Restricted terms should be mentioned in online transactions and other party must be given opportunity to negotiate.

VI. The Information Technology Act needs to be amended to decide the legal validity of the concept of Incorporation by reference.

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TRADE AND INVESTMENT POLICIES OF INDIA AND BIMSTEC COUNTRIES: CURRENT TRENDS AND EMERGING CHALLENGES

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ABSTRACT
The World's South - Asian and region of South - East - Asia regions, are the fastest growing economy of asia, which is showing progress and advancement of social, technological and economic. BIMSTEC, is youngest association and recognized for the collaboration of BIMSTEC countries are India, Bhutan, Nepal, Myanmar, Srilanka, Thailand and Bangladesh which are brag contact from the Region of Himalayas and Indian- Ocean. BIMSTEC Countries has already outlined an ambitious plan to build economic corridors linking India with Southeast Asia. This Paper focuses on inter- regional cooperation to strengthening trade and Financial soundness among BIMSTEC and India. To see the impact of economic integration on inter-regional trade and inter-regional financial indicators among BIMSTEC and India, an empirical study has been conducted. The empirical findings suggest that BIMSTEC-India cooperation is essential for economic and social growth of BIMSTEC countries. This paper recommends for development of trade performance of India the various measures should be taken: elimination of political disputes, removal of protectionism, outburst of other regional agreements, elimination of bureaucratic inactivity, centralization of political and economic authority, identification of new market for export, arrangement for regional transport and communications infrastructure etc.

Keywords: inter-regional trade, Trade balance, financial indicators, BIMSTEC

INTRODUCTION
"BIMSTEC needs to eschew parochialism, pettiness to succeed", says secretary general Abul Hassan Mahmood Ali, Hon'ble Foreign Minister of Bangladesh on 20th anniversary of BIMSTEC. The foreign minister, however, said 20 years - for a regional organization is "not a long time and Even then BIMSTEC has achieved some progress during the last 20 years". He also said the grouping has "enormous" resources and potentials to fulfil the 'aims and purposes' of the Bangkok Declaration after establishment of BIMSTEC in 1997. BIMSTEC involving five south and south- West Asian countries(Bangladesh, Bhutan, India, Nepal and Srilanka) and two south- East Asian nations (Myanmar and Thailand), bridging subregions.

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation or BIMSTEC to focus on "undertaking more realistic and result-oriented and mutually beneficial projects". India resolve to turn this

regional organization into a more dynamic, result oriented and efficient platform for our future progress and prosperity.

This paper recommends development of trade and investment performance of India, policies that will help BIMSTEC in current trends. Challenges which are India and BIMSTEC facing to overcome trade and investment problems in current scenario? The various measures should be taken: elimination political disputes, removal of protectionism, outburst of other regional agreements, elimination of bureaucratic inactivity, centralization political and economic authority, identification new market export, arrangement for regional transport and communications infrastructure etc.

LITERATURE REVIEW

Relations of economics plays important role in bilateral relations between India and BIMSTEC. The economic relations have been multifaceted, embracing trade transactions, credit arrangements, joint ventures, transit facilities and transport development. The relations have continued even in adverse political relations. This is mainly because of the operation of objective factors of BIMSTEC such as Geographical Proximity, Common Language, Similarity Consumption pattern, Common Development needs and experience, and Infrastructure **(Dubey, 2013)**. **Devi (2007)** examined study on economic cooperation in BIMSTEC its emerging trends and prospects. Study analyzed that there was significant change in the trade orientation of BIMSTEC nations from 1990s and most of them exhibited higher outward orientation. The relevance of regional bloc enhancing the trading and investment patterns and analyzed the existing socio- economic performance of individual member nation. Formation of BIMSTEC trading bloc, majority of South Asian countries were able to improve their export competitiveness to some extent in international market and FTA under BIMSTEC umbrella help to expand size of market in international market of member nations. **Murty et.al (2007)** acknowledged a study on possibilities of cooperation in BIMSTEC. The study concluded that to achieve high level of economic integration within BIMSTEC nations, identify potential areas of trade and economic cooperation for individual economy and reduce the poverty and high mortality rate to promote economic cooperation among nations. Study stated that among BIMSTEC nations India and Thailand both lead in merchandise trade and Sri Lanka and Bangladesh appear as important exporters of manufacturing goods in the BIMSTEC area.

Free trade benefits developing countries because trading with developed countries 1) allows them to exploit advanced technology and expertise to enhance productivity in their home country and 2) increases demand for domestic goods and services produced. International trade is therefore an engine of growth **(Awokuse, 2007**). Export promotion enhances technical changes, and brings economies of scale which in turn reduces inefficiency and increases productivity **(Fatima 2002**). Exports increase the level of domestic and foreign competition, and efficiency resulting in higher productivity and output, and industrialization. Import penetration provides foreign competition and the capacity to utilize a wider variety of capital goods to domestic firms, allowing them to become more efficient. **Grossman and Helpman (1991)** find that through imports, domestic firms get access to foreign technology and knowledge, and hence imports also play significant role in economic growth. Small open developing nations require import factors of production that allow them to produce their exported goods. It is necessary to clarify the individual growth effects of the two trade components as the growth impacts of exports and imports differ, both qualitatively and quantitatively **(Iyer et al., 2009**). South Asian nations to establish connection and enlarge economic cooperation show their purpose to support economic associations with the ASEAN countries. BIMSTEC might be used as instrument for South Asian nations to set up and enlarge a good quality relationship with the ASEAN nations **(Devi, 2007)**. **Vanajamani (2007)** discussed a study on India's political economic relation with some BIMSTEC nations. The economic integration among the BIMSTEC nations, South Asian nation's exports services had been grown especially commercial services export show significant growth. In case of Sri Lanka, commercial service exports had made vibrant growth in total exports and Bangladesh made remarkable increase its share of export in transport sectors. But from the observations or evident the trade performance of BIMSTEC countries at the global level had been miserable in relative sense. India play an significant role to be future cooperation in South Asia in general and BIMSTEC in particular.

Chowdhury and Neogi (2014) study on Trade Complementarity and Similarity between India and BIMSTEC in Context of Regional Trade Agreement (RTA). The paper revealed important element of BIMSTEC region in India's "Look East" strategy and enhances a new dimension to India's economic cooperation with South East Asian nations. India and BIMSTEC free trade agreement stimulate trade and better connectivity among India, Nepal, Bangladesh, Myanmar, Sri Lanka, Bhutan and Thailand. The trade structure between India and BIMSTEC exposed the complementary sectors and products available for improving trade cooperation among trading partners. India's trade cooperation with selected BIMSTEC countries, in all product classifications was

vital player in the region. Emerging economic structure permits better collaboration from India in the regionalization efforts in Asia.

Debashis Chakraborty (2007) has conducted study on Trade Performance and Integration Experience of BIMSTEC: A Review of Issues. Looking into the current trade dynamics of BIMSTEC, it is observed that there is considerable scope to enhanced intra-bloc trade once the FTA is in place, when the dynamic effects would set in. Moreover, apart from the trade in final products, trade in intermediate products is also likely to increase within BIMSTEC, resulting from possible production integration among members.

OBJECTIVES

1.) To assess Regional –Economic- cooperation to strengthening trade /and Financial soundness among BIMSTEC and India.

2.) To see the impact of economic integration on trade indicators and financial indicators among BIMSTEC and India.

3.) To analyze BIMSTEC-India cooperation is essential for economic and social growth of BIMSTEC countries.

4.) To examine the challenges faced by India while trade and investment with BIMSTEC countries.

RESEARCH HYPOTHESES

H1: There is Economic relationship between India and BIMSTEC.

H2: There is need to study economic integration of trade indicators and financial indicators between India and BIMSTEC.

H3: Whether it is essential to assess impact on socio- economic environment on Trade indicators and financial indicators between India and BIMSTEC.

H4: India facing challenges to find solutions of regional integration and co-operation in BIMSTEC.

FINDINGS

BIMSTEC comprises a group of nations characterized by varying sizes of economies, differences in resource endowments, openness, and trade and investment liberalization. The member nations are having surplus resources which could be productively invested in other resource deficit countries of the region. In view of the growing importance of reinvigorating economic activities towards regional integration, this is of vital interest to examine pattern of macroeconomic developments in the member states. It identifies the areas of convergence with respect to GDP growth, prices, resources mobilization and external sector performance. The combined GDP of the BIMSTEC region grew impressively of $ 2.7 trillion economy during period 2016-17.

In line with the global trends in 1990s and 2000s, most countries in region have embraced a conscious policy of trade and investment liberalization. In the recent years, BIMSTEC have invariably followed investment policies with aim of raising export competitiveness; encourage foreign competition and bridging the supply bottlenecks. The paradigm, infrastructure investment has been given utmost priority in country development strategies. For instance, World Bank prescribes a significantly higher level of FDI inflows to support congenial growth environment in to compensate for domestic resource constraints and to enable the countries from knowledge and technological spillovers. The current trends in FDI flows show increasing contribution of FDI to fixed capital formation in the BIMSTEC.

Table1 presents selected financial indicators for BIMSTEC countries. FDI inflows to Bangladesh, Myanmar and India has showing increasing during period 2010 - 2015 but Myanmar has showing highest increasing Trend for this period i.e 0.1 to 6.5. Exchange rates also showing increasing trends to all BIMSTEC except Bangladesh. Myanmar is showing highest increasing Exchange rates i.e 5.6 to 1162.6 from 2010 to 2015. Bhutan, Srilanka and Thailand are showing negative Gross International reserves for the year 2015.

Table1: Selected Financial Indicators for BIMSTEC

Indicators	2010	2011	2012	2013	2014	2015
Bangladesh FDI, net inflows (% of GDP)	1.07	0.98	1.19	1.27	1.44	1.7
Exchange rate to the US dollar (annual average)	69.6	74.2	81.9	78.1	77.6	77.9
Gross International reserves	8.06	17.90	39.01	41.82	23.40	23.18
Bhutan FDI, net inflows (% of GDP)	4.75	1.71	1.37	2.77	0.43	0.5
Exchange rate to the US dollar (annual average)	45.7	46.7	53.4	58.6	61.0	64.2
Gross International reserves	12.49	-21.20	20.90	3.84	25.60	-11.4

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India FDI, net inflows (% of GDP)	1.60	1.99	1.31	1.51	1.65	2.1
Exchange rate to the US dollar (annual average)	45.7	46.7	53.4	58.6	61.0	64.2
Gross International reserves	5.55	-0.58	0.56	-0.78	9.05	8.69
Myanmar FDI, net inflows (% of GDP)	0.1	0.1	1.79	3.84	2.17	6.5
Exchange rate to the US dollar (annual average)	5.6	5.4	640.7	933.6	984.3	1162.6
Gross International reserves	9.80	21.78	-0.12	20.16	-74.0	76.74
Nepal FDI, net inflows (% of GDP)	0.55	0.50	0.49	0.39	0.03	0.2
Exchange rate to the US dollar (annual average)	73.3	74.0	85.2	93.0	97.6	102.4
Gross International reserves	6.50	23.30	19.32	23.01	14.39	31.03
Srilanka FDI, net inflows (% of GDP)	0.84	1.46	1.37	1.25	1.20	0.8
Exchange rate to the US dollar (annual average)	113.1	110.6	127.6	129.1	130.6	135.9
Gross International reserves	34.40	-6.34	5.45	5.54	9.48	-11.07
Thailand FDI, net inflows (% of GDP)	4.32	0.67	3.24	3.77	0.92	2.3
Exchange rate to the US dollar (annual average)	31.7	30.5	31.1	30.7	32.5	34.2
Gross International reserves	24.28	1.66	3.77	-7.85	-6.02	-0.45

Source: https:// Knoema.com/atlas/topics/economy

Trade performance could be better assessed by examining the trends in inter- and intra-regional export and import flows among the member countries. The current balance Trade of Bhutan and Nepal is increasing continuously from 2010 to 2015. Trade balance of Myanmar and Nepal is increasing for the period 2010 to 2015 but deceasing of India, Srilanka and Thailand. Merchandise trade is decreasing of Bangladesh, India, Srilanka, Nepal and Thailand for the year 2015.

Table 2: Selected Trade Indicators for BIMSTEC

Indicators	2010	2011	2012	2013	2014	2015
Bangladesh Current balance Trade (% of GDP)	37.8	47.4	48.1	46.3	44.5	42.1
Trade balance (% of GDP)	40.8	47.2	44.1	42.0	36.8	34.5
Merchandise Imports from high income economics % of total merchandise Imports	40.5	36.8	37.2	35.7	35.7	35.0
Merchandise Exports from high income economics % of total merchandise Exports	74.3	74.8	73.7	73.2	72.6	72.2
Merchandise Trade (% of GDP)	40.8	47.2	44.5	44.1	42.0	36.8
Bhutan Current balance Trade (% of GDP)	113.2	111.7	101.8	102.7	93.6	92.9
Trade balance (% of GDP)	94.3	94.4	83.7	80.8	77.4	78.2
Merchandise Imports from high income economics % of total merchandise Imports	N/A	N/A	N/A	N/A	N/A	N/A
Merchandise Exports from high income economics % of total merchandise Exports	N/A	N/A	N/A	N/A	N/A	N/A
Merchandise Trade (% of GDP)	94.3	94.4	83.7	80.8	77.4	78.2
India Current balance Trade (% of GDP)	49.7	55.6	55.8	53.8	49.0	42.2
Trade balance (% of GDP)	34.8	42.1	43.0	42.0	38.6	31.3
Merchandise Imports from high income economics % of total merchandise Imports	60.2	59.7	58.5	57.4	53.6	52.1
Merchandise Exports from high income economics % of total merchandise Exports	63.6	62.9	63.8	60.7	60.5	63.4
Merchandise Trade (% of GDP)	34.8	42.1	43.0	42.0	38.6	31.3
Myanmar Current balance Trade (% of GDP)	0.2	0.2	22.4	38.6	42.3	47.3
Trade balance (% of GDP)	27.1	30.4	30.3	38.7	42.2	45.2
Merchandise Imports from high income economics % of total merchandise Imports	25.4	23.4	30.3	27.3	25.9	25.7
Merchandise Exports from high income economics % of total merchandise Exports	14.6	15.6	17.0	17.7	10.2	19.5

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Merchandise Trade (% of GDP)	27.1	30.4	30.3	38.7	42.2	45.2
Nepal Current balance Trade (% of GDP)	46.0	41.8	43.7	48.1	52.3	53.3
Trade balance (% of GDP)	37.4	35.4	37.0	38.7	42.2	45.2
Merchandise Imports from high income economics % of total merchandise Imports	15.1	12.2	10.9	11.1	11.0	17.6
Merchandise Exports from high income economics % of total merchandise Exports	28.0	29.7	27.6	29.6	27.5	31.0
Merchandise Trade (% of GDP)	37.4	35.4	37.0	38.7	42.2	34.6
Srilanka Current balance Trade (% of GDP)	46.4	55.0	51.5	49.3	50.3	49.6
Trade balance (% of GDP)	39.0	46.7	41.7	38.0	38.7	36.5
Merchandise Imports from high income economics % of total merchandise Imports	51.4	47.2	51.7	51.0	45.9	53.6
Merchandise Exports from high income economics % of total merchandise Exports	64.3	65.2	64.3	64.8	72.8	75.9
Merchandise Trade (% of GDP)	39.0	46.7	41.7	38.0	38.7	36.5
Thailand Current balance Trade (% of GDP)	127.3	139.7	138.5	133.3	132.1	126.6
Trade balance (% of GDP)	110.3	121.7	120.3	113.9	112.0	104.5
Merchandise Imports from high income economics % of total merchandise Imports	65.1	64.8	62.6	62.3	59.4	57.4
Merchandise Exports from high income economics % of total merchandise Exports	58.4	56.1	55.5	54.3	54.8	55.3
Merchandise Trade (% of GDP)	110.3	121.7	120.3	113.9	112.0	104.5

Source: https://data.worldbank.org/data catalogue was accessed on 25 December 2017

METHODOLOGY

The MODEL

Empirical estimation impact of selected Financial Indicators of BIMSTEC on FDI net inflows, Exchange rate and Gross International reserves. The empirical estimation of impact of selected Trade Indicators of BIMSTEC countries on current balance Trade and Merchandise Trade balance, we use the following empirical models:

1.) $Y_i = b_0 + b_1(\text{FDI net inflows})_i + b_2(\text{Exchange rate US dollar})_i + b_3(\text{International Reserves})_i + E$

2.) $Y_i = b_0 + b_1(\text{current balance Trade})_i + b_2(\text{Merchandise Trade balance})_i + E$

The equation (1 and 2) is estimated to measure the impact on socio- economic environment on Trade indicators and financial indicators between India and BIMSTEC countries. The dependent variable of the equation is country. Explanatory variables that are going to be estimated for Financial indicators are FDI net inflows, Exchange rate and International Reserves in equation (1). Explanatory variables for Trade indicators that are going to be estimated are current Balance Trade and Merchandise Trade balance in equation (2).

The Data

Logistic Regression for seven-member nations of BIMSTEC namely Bangladesh, Bhutan, India, Myanmar, Nepal, Srilanka and Thailand is used in the empirical analysis. The range of data is from 2010 to 2015. Data has been collected from the Knoema, Asia Regional Integration Center(ARIC), Integration Indicators Database of the Asian Development Bank(ADB), the world Bank Data Bank and the UNCTAD data base. In our regression analysis, we use the R software technique for the above-mentioned equations.

Empirical Results and Discussion

According to table 3, results of our empirical estimation for the impact of FDI net flows, Exchange rate and International reserves on financial indicators of BIMSTEC countries. The Deviance residuals is showing Min., 1st Quartile, Median, 3rd Quartile and Max. Exchange rate has highest 1st Quartile, Mean, Median, 3rd Quartile and Max. as compared to FDI and International reserves. Only Min. is highest of International reserves among Exchange rate and FDI net flows. It means Exchange rate has impact more as financial indicators on BIMSTEC countries and least impact of FDI as financial indicators on BIMSTEC countries.

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Table 3: summary

FDI_net.Inflows	Exchange.rate_US.dollar	International.Reserves
Min. :0.030	Min.: 5.40	Min.: 74.04
1st Qu.:0.695	1st Qu.: 46.70	1st Qu.: 0.05
Median :1.320	Median: 71.45	Median: 8.87
Mean :1.620	Mean: 150.33	Mean: 10.26
3rd Qu.:1.94	3rd Qu.: 101.20	3rd Qu.: 22.70
Max. :6.500	Max. :1162.60	Max.: 76.74

The results of the econometric analysis have been shown in tables below. The Creating the Logistic Regression model for financial indicators of BIMSTEC countries.

Call: glm(formula = country ~ FDI_net.Inflows + Exchange.rate_US.dollar +

International.Reserves, family = binomial(link = "logit"),

data = Finance_data)

According to Table 4, the International reserves has positive impact with below 0.05 and not significant. The intercept is also showing results below 0.05 and not significant. The FDI net inflows and Exchange rate are significant results. This means International reserves are more impact as financial indicators on BIMSTEC countries.

In case of null deviance and residual deviance, the null deviance should be greater than residual deviance. The residual deviance is 25.136 as compared to Null deviance is 34.450. The number of Fisher Scoring iterations is also below 8 i.e 7.It means these variables has good impact as financial indicators of BIMSTEC countries.

Table 4: Coefficients

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	3.066352	1.191522	2.573	0.0101 *
FDI_net.Inflows	-0.025555	0.418097	-0.061	0.9513
Exchange.rate_US.dollar	0.007783	0.006006	-0.061	0.9513
International. Reserves	-0.110580	0.047479	-2.329	0.0199 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 34.450 on 41 degrees of freedom

Residual deviance: 25.136 on 38 degrees of freedom

AIC: 33.136

Number of Fisher Scoring iterations: 7

According to Table 5, Anova test for deviance check and comparison between FDI net Inflows, Exchange rate and International reserves as financial indicators of BIMSTEC countries. After comparing these variables FDI net inflows has highest Residual deviance but International reserves has highest deviance residuals in the Anova test.

Table 5: anova

	Df	Deviance Resid.	Df	Resid. Dev
NULL			41	34.450
FDI_net.Inflows	1	0.5252	40	33.925
Exchange.rate_US.dollar	1	0.4986	39	33.426
International. Reserves	1	8.2897	38	25.136

The results show the value of vif is below 5 in Table 6, therefore there is no multicollinearity between FDI net inflows, Exchange rates and International reserves variables of financial indicators of BIMSTEC countries. It means that these variables are individually affected as a financial indicators to BIMSTEC countries.

Table 6: **Multicollinearity test: vif(Finance_model)**

FDI_net.Inflows	Exchange.rate_US.dollar	International.Reserves
1.1017	1.4058	1.3117

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If over-dispersion is less than 1 than variables are free from over-dispersion. According to Table7, value of output shows of FDI net inflows and International reserves variables as financial indicators on BIMSTEC countries is below 1. It means these variables of financial indicators are free from over- dispersion. Exchange rate has highest impact on BIMSTEC countries as financial indicators.

Table 7: overdispersion test: overdispersion_indicator

1	2	3	4	5	6	7
-0.41376522	-0.16189760	-0.04018656	-0.03616542	-0.10121094	-0.10272531	0.03017090
8	9	10	11	12	13	14
0.02640120	0.03475874	0.02759106	0.03939351	0.02652938	0.02796905	0.02715699
15	16	17	18	19	20	21
0.02720592	0.02705667	0.02847984	0.02836769	0.02979386	0.03941807	0.02632444
22	23	24	25	26	27	28
0.02632457	0.02631579	0.02714071	0.02775798	0.03549726	0.03173339	0.03396176
29	30	31	32	33	34	35
0.02913436	0.04348769	0.04962875	0.02658273	0.02717534	0.02717102	0.02762098
36	37	38	39	40	41	42
0.02644356	0.04199188	0.02749739	0.02790217	0.02676206	0.02681671	0.02726385

Trade Potential of the BIMSTEC countries

The results of the econometric analysis have been shown in tables below. According to table 8, results of our empirical estimation for the impact of current balance Trade and Merchandise Trade balance on financial indicators of BIMSTEC countries. The summary is showing Min., 1st Quartile, Median, 3rd Quartile and Max. Current balance Trade has highest 1st Quartile, Mean, Median, 3rd Quartile and Max. as compared to Merchandise Trade balance. Only Min. is highest of Merchandise Trade balance. It means current balance trade has impact more as Trade indicators on BIMSTEC and least impact of Merchandise Trade balance as Trade indicators on BIMSTEC.

Table 8: summary

current.balance. Trade	Merchandise.Trade. Balance
Min: 0.20	Min: 27.10
1st Qu.: 44.88	1st Qu.: 37.55
Median: 49.65	Median: 42.05
Mean: 64.86	Mean: 56.20
3rd Qu.: 93.42	3rd Qu.: 78.00
Max.: 139.70	Max.: 121.70

According to Table 9, Anova test for deviance check and comparison between current balance Trade and Merchandise Trade balance as trade indicators of BIMSTEC countries. After comparing these variables both have almost equal Residual deviance but Merchandise Trade balance has highest deviance residuals in the Anova test.

Table 9: Anova Test:

	Df	**Deviance Resid**	**Df**	**Resid. Dev**
NULL			41	34.450
Current balance Trade	1	2.69113	40	31.759
Merchandise Trade balance	1	0.08197	39	31.677

If over-dispersion is less than 1 than variables are free from over-dispersion. According to Table10, value of output shows of current balance trade and Merchandise Trade balance variables as Trade indicators on BIMSTEC countries is below 1. It means these variables of Trade indicators are free from over- dispersion

Table 10: overdispersion test

1	2	3	4	5	6	7
-0.3333333	-0.3333333	-0.3333333	-0.3333333	-0.3333333	-0.3333333	0.3333308
8	9	10	11	12	13	14
0.3333311	0.3333306	0.3333297	0.3333308	0.3333311	0.3333309	0.3333295

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15	16	17	18	19	20	21
0.3333295	0.3333309	0.3333294	0.3333310	0.3333309	0.3333309	0.3333309
22	23	24	25	26	27	28
0.3333295	0.3333309	0.3333309	0.3333309	0.3333310	0.3333295	0.3333309
29	30	31	32	33	34	35
0.3333309	0.3333309	0.3333309	0.3333295	0.3333309	0.3333309	0.3333309
36	37	38	39	40	41	42
0.3333309	0.3333309	0.3333295	0.3333309	0.3333309	0.3333310	0.3333295

CONCLUSION

BIMSTEC is a natural choice for strengthening integration between South Asia and Southeast Asia. Through improved cross-regional relationships, particularly in commerce, culture and connectivity, BIMSTEC may truly come of age in the years to come.

The Bay of Bengal plays a key role in the region's maritime architecture. BIMSTEC's resurgence, centering on the Bay of Bengal, is critical to the Asian integration process in the backdrop of the Regional Comprehensive Economic Partnership (RCEP). There is great expectation for member countries to build a stronger, more inclusive and people-driven BIMSTEC. India's involvement in the grouping holds promise to foster the regional integration process.

To sum up, there exists huge potential for intra-regional trade in the BIMSTEC region. The estimated financial and trade potential for different indicators are showing that there must be more intra- regional relationship between all member countries. No BIMSTEC country is found to emerge as the single dominant financial and trade indicators of the regional economies. But, India, Srilanka and Thailand are considered as the leading for financial and trade indicators within the region. Each member country has at least some presence in each sectors of the region's trade. Dominating financial indicator is Exchange rate followed by International reserves and dominating trade indicators in the region are current trade balance.

This paper recommends for development of trade performance of India the various measures should be taken: elimination of political disputes, removal of protectionism, outburst of other regional agreements, elimination of bureaucratic inactivity, centralization of political and economic authority, identification of new market for export, arrangement for regional transport and communications infrastructure etc.

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IMPACT OF INFORMATION &COMMUNICATION TECHNOLOGY ON CUSTOMER RELATIONSHIP MANAGEMENT: PERSPECTIVES AND ROAD AHEAD

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ABSTRACT
Businesses are at its transition from a physical world to cyberspace. The pace of changing business environment with the aid of information and communication technology has created situations wherethe necessity of customer relationship management has become immensely vital. CRMoffers a business a well-rounded view of its customers and provides awareness of their dynamicbehavior. In today's challenging business environment, it is dominant to maintain and retain a customer, as the costs of acquiring new customers are comparatively much greater than retaining a customer. CRM when well maintained and well executed, it can offer much-needed benefits which ultimately helps in understanding behavior patterns and preferences, ability to perform customer profiling and targeting suitable customers for further promotions, cross-selling and up-selling opportunities, identifying the most valuable and least valuable opportunity. Whole CRM process can be amalgamated into a software or application system that facilitates collection, organization and management of the customer's information. A CRM system needs its ICT enabled implementation appropriately. CRM data helps in ensuring effective coordination of marketing campaigns, which ensures that the promotions do not target those who have already purchased the particular goods or product. Businesses and firms can also use the sorted CRM data to introduce loyalty programs that facilitate the purchasing of a particular product with a higher customer retention ratio. The need of the hours it to study the interface between ICT and CRM as this paper aspires to explore not just customer literacy but customer techno-literacy which is also the aim of the paper. The methodology used is descriptive primarily; in addition to primary data sources, secondary data sources are also utilized and applied.

Keywords: CRM, ICT, Cyber-space, Business Environment.

INTRODUCTION
The conceptual perspective of CRMis under regeneration in the cyberspace where customers/ consumers have ample choices to choose from. ThePresent era is dominated by Information and communication technology, which has to be critically examined to upgrade CRM practices. Customer Relationship Management has become one of the newest innovations in customer service. The very firstCRM factor is defined as a customer-led approach that emphasizes on the process of creating, collecting, coordinating, and sharing information about target customers to generate better response and fulfillment of customer needs (Javalgietal., 2005; Desppande& Farley, 1998).The conventional methods of customer relationship management are completely different when we talk about the online behavior of consumers. The question is not only of retention of prevailing consumers but also of creating new consumer base in the competitive business environment.

What is CRM?

According to Peppers & Rogers, (1993*)* a more popular approaches with the recent application of information technology is to focus on individual or one-to-one relationships with customers that integrate database knowledge with a long- term customer retention and growth strategy .Shani and Chalasani (1992) have defined relationship marketing as "an integrated effort to identify, maintain, and build up a network with individual consumers and to continuously strengthen the network for the mutual benefit of both sides, through interactive, individualized and value- added contacts over a long period of time".

Customer Relationship Management is an upright concept or strategy to solidify association with customers and at the same time reducing cost and enhancing productivity and profitability of a business. An ideal CRM system is a centralized collection of all data sources under an organization and provides an automatic real time vision of customer information. From the Information Technology perspective, CRM is considered as an enterprise wide communication and integration of various technologies such as data warehousing, web site, intranet and extranet, mobile application system, marketing, accounting, etc.

A CRM system is vast and significant, but it can be implemented for small business as well as large enterprises. Usually, an organization consists of various departments which primarily have access to customer's information either directly or indirectly. A CRM system piles up information centrally, examines it and then makes it addressable within all the departments. For instance, an international call center which uses a CRM tool called

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"XYZ" and is integrated with a phone and a computer system or a laptop. Now this system automatically perceives which customer is calling before the executive attends the phone, the CRM system brings forth the customer details on the computer or laptop screen and also indicates what opportunity of deals can be cracked with that particular customer, what the customer had already purchased or ordered in past and what is the probability of buying in future. Not only this, but it also highlights what all products best suit this customer. For a finance department it may show the information regarding the current balance and for accounting department, it may pop out the information regarding the recent purchases by the customer. These all pieces of data are stored in the CRM database and is available as and when it is required.

For all business units,CRM system is a well-defined platform to interact with their clients and fulfill all their needs and demands very effectively which ultimately triggersconstructionof a sustainable relationship. A CRM system can be costly and time taking to implement or integrated but once it's accomplished, it serves the best way of dealing with customers. In turn, customers feel a gratitude of self-satisfaction and loyalty which results in better bonding with supplier or service provider and hence increasing the business in the long run. A CRM system is not only beneficial in dealing with existing customers but also useful in acquiring new customers.

The robust advancement in information technology (IT) has promptedfirms to come up with new technology-based solutions—namely, CRM technology—to manage customer relationships. Such technologiesare a suite of IT solutions designed to support the CRM process (*Rigby, Reichheld, and Schefter 2002)* According to *El-Sawy* The unease with CRM technology use and implementation is similar to the disillusionment that firms encountered in the late 1980s with the use of IT to automate business activities. The frustration with IT systems led to a focus on information process redesigning in organizations to take advantage of the technology. There is anessential need ofresearch on as how such situationscould be adopted in the environment where markets are volatile and customers are emotional.

VARIOUS APPROACHES TO CRM& SYSTEMS

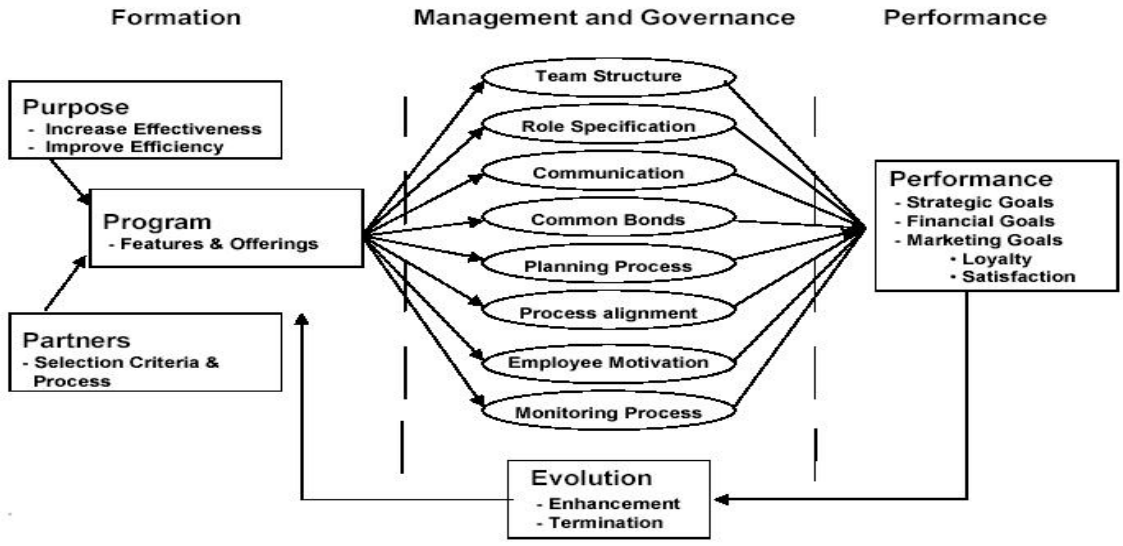
According to*Greenberg*, "CRM systems basically make three things possible:

(1) Its having an integrated, single view of customers, by using analytical tools.

(2) Managing customer relationships in a single way, regardless of the communication channel: telephone, website, personal visit, and so forth.

(3) Improving the effectiveness and efficiency of the processes involved in customer relationships

Figure 1: The CRM Process Framework



Source:https://www.jagsheth.com/relationship-marketing/customer-relationship-management-emerging-practice-process-and-discipline.

The early approaches to (CRM) can widely be discussed as under:

1. The Anglo-Australia Approach

2. The Nordic Approach

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3. The North American Approach.

1. **The Anglo-Australian approach-*:*** The Anglo-Australia Approach integrates the contemporary theories of quality management services marketing and customer relationship economics to explain the emergence of relationship marketing.

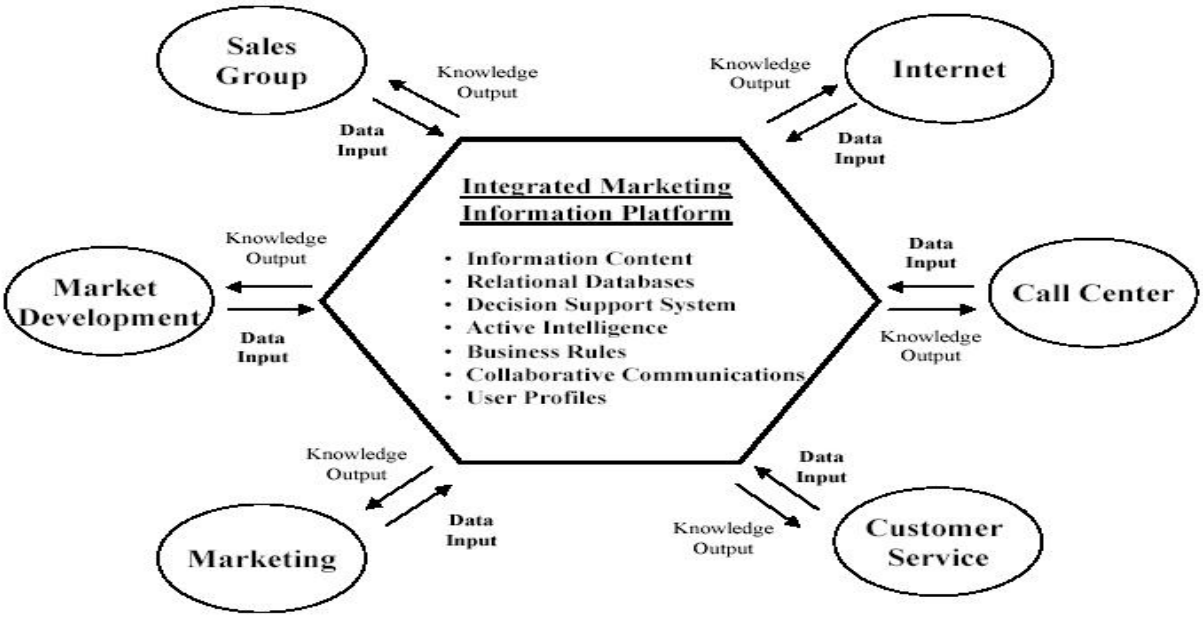
2. **The Nordic approaches-*:*** The Nordic Approach is the union of interactive network theory, services marketing and customer relationship economics. Marketing as an interactive process in a context where relationship building is an area of key concern for a market. 3.

The North American Approach-*:*The North American approaches on the relationship between the buyer and seller, operating within the context of the organizational environment which facilitates the buyer-seller relationship. One of the broadest approaches to CRM emerged from the research conducted by scholars at the Centre for Relationship Marketing and Service Management, Cornfield University, U.K. The broadened view of relationship marketing speaks abouta total of six crucial market domains, not just the traditional customer market. It also advocates for a transition for marketing from a limited functional role to a cross-functional role and a shift towards marketing activities for customer retention in addition to the conventional customer retention and acquisition. CRM is a discipline plus a set of distinct software and technologies that mainly focuson automating and improving the business processes eventually supplementing effective customer relationship management in the areas of sales, marketing, customer service andsupport. CRM applications smoothen multiple business functions andcoordinate multiple channels of communication with the customer - face to face, call centre and web. CRMenfolds methods and technologies used by companies tomanage their relationships with clients. Stored information about existing and potential customers is analyzed and used in favorable directions. Automated CRM processes are often used to generate automatic personalized marketing tasks based on the customer information stored in the system.

THE EMERGING APPROACHES TO CRM

According to *Parvatiyar&Sheth, 2000*several software tools and technologies claim solutions for various aspects of CRM,which have been recently been introduced for commercial application; the majority of these tools assure to individualize and personalize relationships with customers by providing dynamic information at every point in the interface with the customer. Techniques such as collaborative filtering, relational databases, rule-based expert systems, artificial intelligence are increasingly being applied for developing enterprise-level solutions aiming to managecustomer interaction information. The objective of this study is not to evaluate these application tools or technologies, rather, those aspects are considered elsewhere by the authors as well as by several commercial research organizations, such as Forrester Research and the Gartner Group. The researchers of CRM are in estimation that it evolves as a discipline and no more only as domain.

Figure 4: Data Model/ Information Platform for CRM



Source: www.jagsheth.com/relationship-marketing/customer-relationship-management-emerging-practice-process-and-disci.

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OBJECTIVE OF THE STUDY

1. To critically examine the conceptual framework of CRM in the modern era of electronic commerce.
2. To study CRM approaches towards cyberspace and its evolution.
3. To find future prospects of CRM and ICT interface
4. To find out the major challenges to CRMin the time of ICT.

HYPOTHESIS

1. CRM evolves from domain to discipline in the age of electronic commerce.
2. The interface between ICT and CRM made relationships at a highly dynamic pace.
3. CRM is no more strategy but necessity in the era of business warfare at cyberspace.

RESEARCH METHODOLOGY

The research methodology is descriptive in nature and data is collected primarily from secondary sources as well as primary data sources. Research is quantitative in nature for which the data is collected from all secondary sources. The evolution on CRM in cyberspace is a new domain of research and not many pieces of researches have been done so far and hence this study is an attempt to touch the epistemological side of CRM interface with ICT.This descriptive study aims at generating knowledge that may be used to describe or develop a profile of a problem which is structured and well understood. According to Cooper &SC hinder,2003, explanatory research design aims at connecting ideas in order to understand the interaction of variables in terms of cause and effect relationship.

ANALYSIS AND FINDINGS

The changing pace of CRM needs to be corroborated with whatever existing before the invasion of ICTs; the term customer relationship management and relationship marketing have been used interchangeably to reflect a variety of themes and perspectives. Some of these themes offer a very narrow functional marketing perspective while others offer a broad and somewhat paradigmatic approach. A narrower perspective of customer relationship management is databasemarketing emphasizing the promotional aspects of marketing linked to database efforts, another viewpoint is to consider CRM only as customer retention approach in which variety of after marketing tactics are used to focus on customer bonding. A more popular approach with recent application of information technology is to focus on individual or on creating one to one relationship with the customer that incorporates database knowledge with long-term customer retention and growth strategy. CRM intends towardsdevelopingstrong, lasting relationship with individual accounts, the study finds that CRM is more strategic in character and its role is more from manipulating the customer (telling & selling) to genuine customer involvement (communicating & sharing the knowledge). The present state of IOT (internet of things) is more to do with CRM and there is scope for ample research in this area.

The extensive research by Roger Buehrer and Christian D. Mueller on various views such as acommunity views : This category analyses four main aspects: solution categories offered, business scope of the CRM solution, size of target companies for the CRM software and business sector predominantly served; b) Process view: knowledge, intention, contracting and settlement. More specifically, the processes that were asked for, comprise management of the knowledge phase, administration management, marketing management, customer service management, sales management, logistics management and field service management; c) Functionality View: functionality view provides a valuable overview of the different functions that support the processes in the process view. In order to do so, the functionality view is divided into three criteria: functionalities that support interaction between the company and its customers/ partners; analytical functionalities to support evaluation of the processes/ customers/ etc. and functionalities to access customer interaction and partner interaction data; and d) Infrastructure View: comprise CRM architecture, sovereignty of data, scalability of software, support of user interfaces, support of operating system aswell as interfaces to databases and IT systems.

The opportunities that can be best harvested by CRM can be discussed under the following heads:

CRM will gradually reduce an organization’s dependence on periodic surveys to gather data. Collection of data related to buying and consumption behavior will be primarily app driven. In many cases, the transaction data is automatically collected sometimes real time as in the e-commerce transaction. This rich source of customer information and knowledge updated through regular interactions and actual customer transactions and purchase behavior will positively help marketers to develop and market customer-centric products successfully.

Customized promotions-based customer preferences and purchase patterns will substantially reduce the unnecessary wastefulexpenditure of mass communication and even direct mailing.

CONCLUSION

Expansion and rise of cyberspace have enriched the business environment; obviously, there are contrary resultsof the same but the reach of technology into the core of business processing cannot be taken lightly. ICT have reformed the way business world thinks and enabled the CRM process on a faster pace.

In the emerging competitive situation almost all industries and markets, a relationship marketing strategy has become crucial for survival. CRM continuously targets to exploits the new technologies, particularly the interactive ones: Internet, interactive TV, web-TV, kiosks, fax, e-mail, voice mail, personal data assist, mobile phones, smartphones, etc., which can enhance CRM user based contents and receive feedback from the user.Social media has also changed the very notion of CRM, and social media is not possible without cyberspace and IT-enabled apps. There is need for an *app. based* relations with customers which is completely different from traditional CRM practices.At this instant customer tends to create their own world with vendors; it can be also VRM (Vendor Relationship Management) instead CRM on social media, but there is need to develop a diagnostic model in these lines.

FUTURE OF CRM AT CYBERSPACE - ROAD AHEAD

Societies in which today's consumers' lives are informative about the business world;the gadget on the palms of customer can decide what to buy, when to buy, how to buy and from whom? Even without physically visiting the market; there is self-control on impulse character due to freedom and options extended by the ICT which needs careful attention in order to cognize the adverse. Electronic CRM may attract regulatory compulsions due to its speedy and wild pace in customer relations. There is ample scope to explore and research as 'CRM' is driven by market or customer, it is the prompting question which can be taken aschallenge when we research CRM at Cyber space if not in physical space. Within the Apps dominated market – customer relations is an inevitable challenge for which business world need to develop compatible solutions.

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INFLUENCE OF CONSUMERS' CHARACTERISTICS ON IMPULSE BUYING TENDENCY

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ABSTRACT
Several decades of research has attempted to unveil the various factors that influence impulse buying behaviour in consumers. However, definitive conclusions have still not been arrived at, since a plethora of studies offer contradictory results. This study is an effort to shed light how certain consumers' characteristics namely,their ageand gender influence their tendency to buy on impulse. This knowledge would be highly useful to retailers who aim to enhance their profits by employing strategies that trigger impulse buying behaviour among customers.

Keywords: age, consumer behaviour, consumer characteristics, gender, impulse buying

1. INTRODUCTION
Post the liberalisation of Indian economy, various organised retailers have mushroomed across the length and breadth of the country. The Indian retail sector has also witnessed phenomenal growth in e-tailing due to scientific and technological advancements in telecommunications and transportation. The consumers of today are spoilt for choice as they have a wide assortment of merchandise to choose from.

The spurt in organised retail has been accompanied by a rise in disposable incomes in a large percentage of Indian households. This led to an increase in the Indian consumers' spending power. Accordingly, the consumption basket of the Indian consumer also changed dramatically over the last three decades. From buying mere necessities, Indian spending evolved to a more discretionary spending. Since the consumers have greater amounts to spend, shopping has transformed from being a chore to a recreational activity.The shopping experience has become as important for the consumers as the products bought, and retailers strive to provide a sensory immersion to the consumers through visual merchandising and unique store layouts.

The success of a retailer revolves around decoding how the consumers' go about the process of making their buying decisions. With the aim of attaining deeper insights into the behaviour of the consumer, various models of consumer behaviour have been proposed. Traditional decision making models in consumer behaviour rely on viewing the consumer as a rational being, who when faced with several alternative courses of action, will choose that alternative which offers maximum utility to him/ her. Thus, consumers, who evidently have finite resources to fulfil their needs and wants, must make an optimal choice, after due consideration of all the options available, to best fulfil their desires, within their resources.

The drawback of thesetraditional models is that they do not address purchase behaviours which are not completely under the consumer's volitional control.Though, the traditional models contribute greatly to the field of consumer behaviour by providing conceptual frames of reference, they have certain limitations in explaining certain distinctive kinds of consumer behaviour. An important supposition that is at the core of most models is the assumed rationality of consumer decision making which has been questioned due to its inability to explain many non-conscious consumer purchase behaviours.

Hoch &Loewenstein (1991) point out that the behaviour of consumers, which makes them act against their better judgement, to engage in purchase behaviours that they may later regret, is very perplexing. The researchers state that though much of the consumer behaviour can be explained by the rational choice model, a deeper insight into consumer behaviour is needed to understand that in making their buying decisions, consumers are not merely influenced by long term rational concerns. This was also highlighted by Mason (1984) who suggested that exceptional behaviours could not be explained using common consumer behaviour models.

A commonly observable behaviour, wherein the consumers seemingly depart from rational decision making is when the consumers give in to their sudden urges for immediate consumption without thought to future consequences. Thus, the phenomena of impulse purchasing/ excessive buying/ addictions refute the rational economic man theory as the consumer is no longer behaving rationally. For several decades, consumer behaviour theorists have been attempting to gain insights into these puzzling, yet highly prevalent forms of consumer behaviour.

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With the rise in disposable incomes and recreational shopping, a significant proportion of the consumption basket is bought on impulse. The evolution of India from a utilitarian subsistence economy to a consumption economy is now nearly complete. Easy credit availability, greater disposable incomes, expansion of organised retail to tier II cities and better shopping environments have all been instrumental in this transformation.Given the growing significance of impulse buying behaviour today, the present paper aims to add to marketers' understanding of impulse buying by examining how age and gender influence impulse buying.

2. LITERATURE REVIEW

The research pertaining to impulse buying has evolved over several decades. The research in this interesting yet puzzling area of consumer behaviour has seen a marked shift from being product-centric to consumer-centric (Rook, 1987).

Viewed byPiron(1991) as an unplanned, "on-the-spot" purchase arising out of being exposed to certain stimuli, he proposed classifying impulse purchases on the basis of emotional and/or cognitive reactionsexperienced by the consumer at the time of purchase. In agreement with him, Baun&Groeppel-Klein (2003) also highlighted the spontaneity and positive emotions associated with this type of "stimulus-controlled" purchase behaviour characterised by low cognitive control.In a more recent description of impulse buying, Sharma, Sivakumaran and Marshall (2010) reflected upon the "lack of cognitive control" resulting from a complex emotional appeal felt by the consumer in proximity of the product, and stated that the swiftness of the execution of the impulse purchase prevented any deliberation by the consumer on the future consequences of the action.

Weun, Jones and Beatty (1997) defined impulse buying tendency as the "degree to which an individual is likely to make unintended, immediate, and unreflective purchases (i.e., impulse purchases)." (p. 306). In agreement with Piron's (1991) proposition, Verplanken&Herabadi(2001) made a distinction between the cognitive aspects vis-à-vis the affective aspects of impulse buying tendency underlining that while the cognitive aspects referred toan absence of forethought, planning and deliberation, affective aspects referred to thepresence of an experiential component (positive feelings such as pleasure, excitement, etc. and/or negative feelings such as guilt) associated with the purchase.

There exist certain contradictions in the findings concerning the relationship of age and gender with impulse buying as reported by past researchers. While some researchers have reported that age and impulse buying are negatively related (McGoldrick, Betts and Keeling, 1999), others contend that age has a positive/ no significant influence on impulse buying (Obeidat, 1989). Also, Hausman (2000) reported that the consumer's gender did not have any significant effect on impulse buying, while other researchers (Dittmar& Drury, 2000; Coley, 2002)reported that women have a greater tendency to shop impulsively. Such mixed results are puzzling and might have been an outcome of sampling or methodological differences, creating a need for future researchers to focus on the role played by these sociodemographic factors in impulse buying behaviour. To address this, the present study is aimed at examining the relationships of age and gender with impulse buying tendency. The research hypotheses for the study are as follows:

H_1: The mean cognitive impulse buying behavioural tendency (CIBT) of consumers of at least one age group is different from the mean cognitive impulse buying behavioural tendency (CIBT) of at least one other age group.

H_2: The mean affective impulse buying behavioural tendency (AIBT) of consumers of at least one age group is different from the mean affective impulse buying behavioural tendency (AIBT) of at least one other age group.

H_3: The mean cognitive impulse buying behavioural tendency (CIBT) of male consumers is significantly different from the mean cognitive impulse buying behavioural tendency (CIBT) of female consumers.

H_4: The mean affective impulse buying behavioural tendency (AIBT) of male consumers is significantly different from the mean affective impulse buying behavioural tendency (AIBT) of female consumers.

3. METHODOLOGY

In line with the objective of this paper, since consumer characteristics were being studied, the unit of analysis for this research was individual consumers and sample size was 724.The sample was drawn from the Delhi/NCR region through non-probability snowball sampling.

The study made use of a structured, self-report questionnaire to obtain primary data from the respondents on the various variables of interest.The questions were closed ended questions. The independent variable age was measured on an ordinal scale and had six ordinal categories namely 20 or below (coded as 1), 21 - 30 (coded as 2), 31 - 40 (coded as 3), 41 - 50 (coded as 4), 51 - 60 (coded as 5), and Over 60 (coded as 6).The independent variable gender was measured on nominal scale and had two categories namely male (coded as 1) and female (coded as 2).

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The respondents' impulse buying behavioural tendency, which was the dependent variable in this study, was measured using a 20 items scale adapted from the retrospective self-report scale developed by Verplanken and Herabadi (2001). The 20 items of the scale were divided into two dimensions namely, cognitive (comprising ten items) and affective (comprising ten items). The measurement scale employed a five point Likert Scale (ordinal scale) wherein respondents indicated their degree of agreement/ disagreement with the statements contained in the questionnaire (responses ranged from strongly disagree (1) to strongly agree (5)). The Cronbach's alpha coefficients for both dimensions were greater than 0.7 indicating good internal consistency and establishing the reliability of the research instrument.

While the maximum respondents (43.9%) belonged to the age group of 21-30 years, the least number of respondents belonged to the age groups of 20 years or below(1.8%) and over 60 years of age (1.8%). The breakup of respondents pertaining to other age groups was: 34.7% (31-40 years) , 13.3% (41-50 years) and 4.6% (51-60 years).Gender-wise categorisation of the respondents indicated that 43.5% of respondents were women as compared to 56.5% male respondents.

4. ANALYSIS AND RESULTS

The tests of normality for data collected from each of the age groups (Kolmogorov-Smirnov statistic and Shapiro-Wilk statistic) indicated non-normality of the data. This necessitated the use of non- parametric tests to analyse the data and therefore,Kruskal-Wallis test was employed for data analysis.

The results obtained from the Kruskal Wallis Test (CIBT across age groups) test run on the data (Table 1) clearly indicated a significant effect of the age group of consumers on their cognitive impulse buying behavioural tendency (CIBT) (χ^2 (5) = 16.005, $p < .05$). Since the test was significant at the 0.05 level of significance,it led to rejection of the null hypothesis and acceptance of the alternate hypothesis. (H_1accepted). It led us to the conclusion that the mean cognitive impulse buying behavioural tendency (CIBT) of consumers of at least one age group is different from the mean cognitive impulse buying behavioural tendency (CIBT) of at least one other age group.

Table 1: Independent samples Kruskal Wallis Test Results(CIBT across age groups)

Total N	724
Test Statistic	16.005
Degrees of Freedom	5
Asymptotic Sig. (2-sided test)	.007

1. The test statistic is adjusted for ties.

Source: Analysis of primary data

A post hoc analysis shed light on the consumers' age groups which differed significantlyfrom other age groups in their mean cognitive impulse buying behavioural tendency (CIBT). Pairwise comparisons (Figure 1 and Table 2) conducted to ascertain which pairs of groups differ significantly from one another revealed that consumers of age group 51-60 years differed significantly in their mean cognitive impulse buying behavioural tendency from consumers of age groups 21-30 years and 31-40 years. The pairwise comparisons revealed that the highest mean cognitive impulse buying behavioural tendency was displayed by the consumers of age group over 60 years.

Figure 1: Pairwise comparisons of mean CIBT of different age groups

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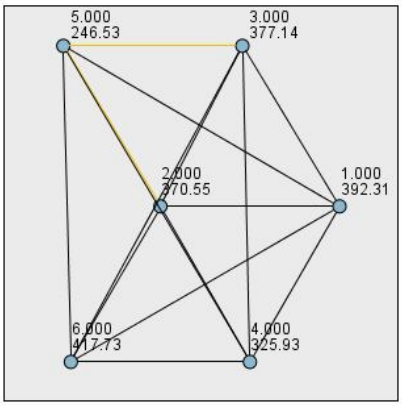

Each node shows the sample average rank of AGE.

Source: Analysis of Primary data

Table 2: Pairwise comparisons of mean CIBT of different age groups

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
5.000-4.000	79.397	42.134	1.884	.060	.893
5.000-2.000	124.017	38.187	3.248	.001	.017
5.000-3.000	130.605	38.663	3.378	.001	.011
5.000-1.000	145.777	68.373	2.132	.033	.495
5.000-6.000	-171.200	68.373	-2.504	.012	.184
4.000-2.000	44.620	24.316	1.835	.067	.998
4.000-3.000	51.208	25.057	2.044	.041	.615
4.000-1.000	66.381	61.708	1.076	.282	1.000
4.000-6.000	-91.804	61.708	-1.488	.137	1.000
2.000-3.000	-6.588	17.630	-.374	.709	1.000
2.000-1.000	21.761	59.083	.368	.713	1.000
2.000-6.000	-47.184	59.083	-.799	.425	1.000
3.000-1.000	15.172	59.392	.255	.798	1.000
3.000-6.000	-40.595	59.392	-.684	.494	1.000
1.000-6.000	-25.423	81.899	-.310	.756	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Source: Analysis of Primary data

The results of data analysis (shown at Table 3) using the Kruskal Wallis Test (AIBT across age groups) pointed to a significant relationship among the age group of consumersand affective impulse buying behavioural tendency (AIBT) (χ^2 (5) = 64.914, $p < .05$). Since we obtained significant test results at the 0.05 level of significance, we rejectedthe null hypothesis and accepted the alternate hypothesis. (H_2accepted). We thus concluded that the mean affective impulse buying behavioural tendency (AIBT) of consumers of at least one age group is different from the mean affective impulse buying behavioural tendency (AIBT) of at least one other age group.

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Table 3: Independent samples Kruskal Wallis Test Results(AIBT across age groups)

Total N	724
Test Statistic	64.914
Degrees of Freedom	5
Asymptotic Sig. (2-sided test)	.000

1. The test statistic is adjusted for ties.

Source: Analysis of Primary Data

A post hoc analysis determined the consumers of which pairs of age groups differed significantly in their mean affective impulse buying behavioural tendency (AIBT). Pairwise comparisons (Figure 2 and Table 4) conducted to ascertain which pairs of groups differ significantly from one another revealed that consumers of age group 21-30 years differed significantly in their mean affective impulse buying behavioural tendency from consumers of age groups 31-40 years, 41-50 years and 51-60 years. The pairwise comparisons revealed that the highest mean affective impulse buying behavioural tendency was displayed by the consumers of age group 21 - 30 years.The mean Affective impulse buying behavioural tendency displayed by the consumers of age group over 60 years was also fairly high.

Table 4: Pairwise comparisons of mean AIBT of different age groups

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
5.000-3.000	73.335	38.692	1.895	.058	.871
5.000-4.000	94.088	42.165	2.231	.026	.385
5.000-6.000	-176.272	68.423	-2.576	.010	.150
5.000-1.000	183.733	68.423	2.685	.007	.109
5.000-2.000	193.487	38.215	5.063	.000	.000
3.000-4.000	-20.754	25.075	-.828	.408	1.000
3.000-6.000	-102.937	59.435	-1.732	.083	1.000
3.000-1.000	110.399	59.435	1.857	.063	.949
3.000-2.000	120.152	17.642	6.810	.000	.000
4.000-6.000	-82.183	61.753	-1.331	.183	1.000
4.000-1.000	89.645	61.753	1.452	.147	1.000
4.000-2.000	99.399	24.333	4.085	.000	.001
6.000-1.000	7.462	81.959	.091	.927	1.000
6.000-2.000	17.215	59.126	.291	.771	1.000
1.000-2.000	-9.754	59.126	-.165	.869	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Source: Analysis of data

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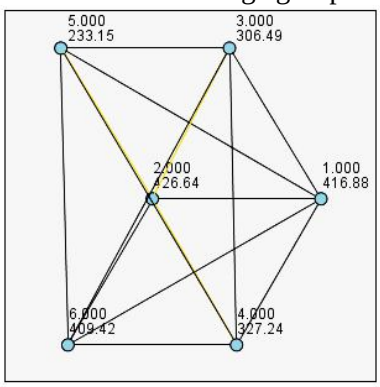
Figure 2: Pairwise comparisons of mean AIBT of different age groups



Source: Analysis of Primary data

The tests of normality for data collected from both genders (Kolmogorov-Smirnov statistic and Shapiro-Wilk statistic) showed that the data is not normally distributed for both genders. Thus, data was analysed using the Mann Whitney U test which is a non- parametric test.

The results of the Mann Whitney U Test(influence of gender on CIBT) are shown at Table 5 and Table 6. Mann Whitney U Test revealed that there was a significant effect of gender on cognitive impulse buying behavioural tendency (CIBT) (U = 71,569, p = .010). The test being significant at the 0.05 level of significance led us to reject the null hypothesis and accept the alternate hypothesis. (H_3accepted). We may thus conclude that the mean cognitive impulse buying behavioural tendency (CIBT) of consumers of both genders are significantly different from each other.Results presented at Table 6are a clear indicator that female consumers can be considered as having the higher mean cognitive impulse buying behavioural tendency (CIBT) (since they have the higher mean rank) when compared with male consumers.

Table 5: Test Statistics Table- Influence of gender on CIBT

Total N	724
Mann-Whitney U	71,569.000
Wilcoxon W	121,339.000
Test Statistic	71,569.000
Standard Error	2,785.370
Standardized Test Statistic	2.568
Asymptotic Sig. (2-sided test)	.010

Source: Analysis of Primary data

Table 6: Comparisons of mean ranks of both genders				
GENDER		N	Mean Rank	Sum of Ranks
CIBT	1	409	345.01	141111.00
	2	315	385.20	121339.00
	Total	724		
Source: Analysis of Primary data				

The results of the Mann Whitney U Test (influence of gender on AIBT) are shown at Table 7. Mann Whitney U Test revealed that there was no significant effect of gender on affective impulse buying behavioural tendency

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(AIBT) (U = 63,971, p = 0.873). Since the test did not yield significant results at the 0.05 level of significance, we rejected the alternate hypothesis and accepted the null hypothesis. (H_4rejected). This led us to infer that the consumers' gender does not significantlyinfluence their mean affective impulse buying behavioural tendency (AIBT).

Table 7: Test Statistics Table - Influence of gender on AIBT

Total N	724
Mann-Whitney U	63,971.000
Wilcoxon W	113,741.000
Test Statistic	63,971.000
Standard Error	2,787.396
Standardized Test Statistic	-.160
Asymptotic Sig. (2-sided test)	.873

Source: Analysis of Primary data

5. DISCUSSION OF RESULTS

5.1 Age and Impulse buying behavioural tendency

The consumer age variable has been of key interest to consumer behaviour theorists and marketers and there exists ample literature which suggests the use of age as a basis for market segmentation since product needs and consumption patterns vary with age (Gunter, 1998; Schiffman, O'Cass, Paladino, & Carlson, 2014; Lantos, 2015). Researchers examining impulse buying behaviour of consumers have also repeatedly deliberated upon theconnectionbetween this important variable and impulse buying. A study of Jordanian women's consumption patternsby Obeidat (1989) revealed that their impulsivity becomes lower as they grow older.McGoldrick, Betts and Keeling (1999) also suggested that consumers belonging to younger age groups were more likely to engage in spontaneous buying. Other researchers (Wood, 1998; Kacen& Lee, 2002; Tuyet Mai, Jung, Lantz & Loeb, 2003; Silvera, Lavack&Kropp, 2008; Ghani & Jan, 2010) also found support for a significant inverse relationship between age and impulse buying. Not only in the context of purchase, but when Steinberg et al. (2008) studied the general trait of impulsivity, they found evidence that it declines with age. Pentecost and Andrews (2010) compared fashion related impulse buying among four key cohorts - Generation Y, Generation X, Baby Boomers and Swing (Generation Y being the youngest among them) and found that Generation Y were more impulsive than the other cohorts in their purchases. However, some researchers (Verplanken&Herabadi, 2001; Dincer, 2010) reported on the basis of their analyses that there existed a lack of any significant correlation between consumers' impulse buying tendency and their age. These confounding conclusions might have been the consequence of the narrow age range of consumers studied by these researchers. Interestingly, Verplanken&Herabadi (2001) reported discrepant findings in their examination of relationship of age with impulse buying tendency in two separate studies conducted on different samples (first study conducted on a student sample; whereas the second study included a more age-wise diverse set of respondents).While findings of the first study indicated that there existed no significant correlation between consumers' impulse buying tendency and their age, the more age-wise diverse second study found that impulse buying tendency and age exhibited a negative correlation.

The results of our analysis show that there exists a significant difference in the mean cognitive impulse buying behavioural tendency and mean affective impulse buying behavioural tendency among consumers of various age groups. It was disappointing, however, that the direction of the relationship between age and impulse buying behavioural tendency was not conclusive. This was because even though there was evidence of decline of impulse buying behavioural tendency with growing age, we found an increase in both the mean cognitive impulse buying behavioural tendency and the mean affective impulse buying behavioural tendency in

consumers over 60 years. Although, the reason for this deviation in behaviour is unclear, it might be caused due to a higher disposition of consumers over 60 years to seek excitement from shopping episodes (as an escape from boredom in their lives) or due to effects of aging on cognition, memory and decision processes. Also, older consumers of present times are not confined and withdrawn like their predecessors one/two generations ago and many of them still lead active lifestyles, have much greater spending power as compared to other age groups and are more willing to spend (an indicator could be the large number of older people vacationing abroad). However, it needs to be highlighted that the number of respondents in this age group were quite less and hence it is felt that these relationships need further exploration.

5.2 Gender and Impulse buying behavioural tendency

Gender has been a key variable of study for the consumer behaviourists and its impact on consumer behaviour is well documented (Holbrook & Schindler, 1994; Rocha, Hammond & Hawkins, 2005; Otnes, &Zayer, 2012; Hoyer, MacInnis&Pieters, 2016). Speaking of impulse buying too, the role played by the consumers' gender has been studied by several scholars. While some researchers claim that gender has no significant influence on impulse buying (Hausman, 2000; Kwon & Armstrong, 2002; Dincer, 2010, Ghani & Jan, 2010), there are other researchers who report that women have a greater tendency to shop impulsively (Dittmar& Drury, 2000; Coley, 2002; Lin & Lin, 2005; Silvera, Lavack&Kropp, 2008; Pentecost & Andrews, 2010; Tifferet and Herstein, 2012). In stark contrast, however, Zhang, Prybutok and Strutton (2007), conducted a study of online shopping habits and revealed males to be more impulsive than females when it comes to online shopping. Dittmar, Beattie and Friese (1995) made a distinction in the types of goods bought impulsively by men and women highlighting that while instrumental and leisure objectsmade men act on impulse, women indulged in impulse purchases of products representing symbolism and self-expression. Interestingly, Verplanken&Herabadi (2001) reported discrepant findings in their examination of gender differences in impulse buying tendency in two separate studies conducted on different samples (first study conducted on a student sample; second study conducted on a more diverse sample in terms of age), and found that while in the first study women exhibited a higher impulse buying tendency than men, in the second study the difference in impulse buying tendency between men and women was not significant. Coley and Burgess (2003) stated that men and women were significantly different in their impulse buying related cognitive and affective processes and also the product categories bought by both genders on impulse were different. Gąsiorowska (2011) found gender to be a moderator in the relationship between impulse buying tendency and individual differences variables; and amplified that while sensation seeking and reactivity led women to shop impulsively; formal attributes of behaviour were related to impulse buying tendency in men.

In the current study, the analysis showed that men and women differ significantly in the cognitive aspects of impulse buying (women showed greater cognitive impulse buying tendency than men). However, the results of the analysis did not indicate any significant differences among men and women's affective aspects of impulse buying. This implies that a lack of attention, absence of forethought, poor planning/ deliberation, memory/information overload, indecisiveness were possible causes of significantly higher impulse buying in women as compared to men. However, our findings did not indicate any difference in affective triggers of impulse buying among men and women, such as intensity of urge to buy, depth of emotions associated with the purchase, and desire to change negative moods etc. Thus, these findings partially contradict the findings of Coley & Burgess (2003) who found that both cognitive and affective impulse buying related processes for men and women were significantly different. Researchers (Kimura & Hampson, 1994; Kimura, 1996; Putrevu, 2001; Cosgrove, Mazure& Staley, 2007) suggest that there exist gender based differences in brain morphology, brain function, neurochemistry, hormones and social roles leading to differences in cognitive patterns, information processing and different approaches to problem solving among men and women. This may be the probable cause why men and women exhibit differences in the cognitive aspects of impulse buying. Summing up, we found that both genders exhibited differences in their cognitive aspects of impulse buying tendency,but they weren't different from each other in the affective aspects.

6. SUMMARY AND RECOMMENDATIONS

A key concern of marketing activity is the formulation and evolution of strategies and optimisation of the marketing mix with a view to maximise profits. This requires a key understanding of the drivers of the consumers' product decisions. Numerous consumer behaviour models suggest that not only do the various environmental, social and marketing stimuli exerta major influence on purchase related decisions, but consumer characteristics also play a major role. Like planned purchases, excessive consumption behaviours like compulsive buying, addictions, and impulse buying too are impacted by these stimuli and consumer characteristics. The rising significance of purchase behaviours like impulse buying makes it important for the

marketers/ retailers to improve their grasp of the factors that promote/ inhibit such behaviours and to devise strategies to lure customers into buying more in every shopping trip.

The results of the present study revealed two key findings with respect to influence of age on impulse buying tendency. Firstly, impulse buying shows a declining trend with age, implying that as the consumers age their self-control strategies become more effective and they tend to shop more diligently. Thus, the target segment, for the marketers aiming to enhance impulse buying behaviour of their products, is young adults (children and adolescents were not part of the study). Utilising family life cycle concept marketers/ retailers may to some extent predict the purchase behaviour and consumption patterns of consumers. Since at this stage of life the consumers are likely to be setting out on their career paths or starting their married life, typical products that would interest them are likely to include clothing, footwear, books, grocery, cosmetics, personal care items, mobile phones, laptops, entertainment related products, cooking appliances, home appliances etc. Marketers of these product categories must actively target the young adults though competitive pricing, attractive window displays, floor merchandising, bundling of complementary goods, cross merchandising, and lucrative promotional offers. Shelf placement of items must be carefully planned, as placement of products at eye-level is likely to grab the attention of the shoppers.

Secondly, the analysis also revealed that older consumers (over 60 years) have a high tendency to shop impulsively. As described previously, the probable causes for this finding could be a decrease in cognitive processing abilities or the use of shopping as a means of alleviation from loneliness and boredom. In the present day, many consumers of this age group are affluent, with high disposable incomes and willingness to spend. However, marketing to this segment of consumers presents its own set of challenges and there aren't many products/ offerings designed catering to the specific needs of the elderly. Given their purchasing power, many products are likely to grab their attention such as clothing, jewellery, health foods, preventive health programs, tailor made vacations, stylish (but easy to operate) mobiles, electronics and home appliances, socially conspicuous goods, luxury products etc. Since consumers witness slowing down of cognitive processes and memory with growing age, easy to understand terms and conditions, easy operability and a promise of convenience are likely to catch their attention convincing them to buy on impulse. Relationship marketing strategies and personal attention of the salesperson are also likely to work well with these consumers as most of these consumers witness a decline in their social ties with age. Relationship marketing offers them the comfort of a personal touch which is likely to convince them to purchase the product. Many of these consumers are looking at shopping as a recreational activity and have a greater tendency to browse for products as they have a lot of time to spare. This is likely to give them more time to spend on non-planned shopping activities increasing the likelihood of impulse buying. Thus retail stores must work on enhancing the customer's retail experience to encourage these consumers to shop more.

In the present study, women shoppers were found to be more impulsive than male shoppers in terms of their cognitive impulse buying tendency. This finding is important because traditionally, women play the social role of buying products not only for themselves but also for the whole family. This makes women shoppers a very powerful market segment with immense purchasing power. Marketers need to understand that women make buying decisions differently when compared to men as they have their own set of preferences, attitudes and priorities. Tailoring products, services, marketing messages, media to suit the needs and mind-set of women is likely to enhance impulse purchases. Women are more people oriented than men so featuring people on the packaging is likely to differentiate the product on the retail store's shelf. Rather than facts and features, focussing on the benefits offered by the product help women to see the big picture of product usage more clearly and making them more likely to purchase the product. Even marketing communications must be designed around people, relationships and product benefits to catch women's attention. Sensory enhancement of the product through touch, texture, smell etc. is also likely to draw a favourable response from the women consumers. Ease of storage and longer shelf life are also likely to convince women to buy more as it is likely that they are the ones responsible for storage of the product post its purchase.

7. LIMITATIONS OF THE STUDY

In the present research work, the method used for data collection was snowball sampling technique which is a non-probability sampling technique. If future researchers can replicate the research findings using probability sampling techniques, it would improve the confidence with which generalisations regarding the relationships examined are made.

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COMPULSORY LICENSING AND GENERIC DRUGS: HEALING OR HARMING INDIAN ECONOMY

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ABSTRACT
The issue of compulsory licensing (CL) and generic medicines (GM) engrosses the concept of patent which is an essential part of patent. With the post 2005 amendments within the Indian Patent Act, 1970, several changes have appeared in the pharmaceutical sector for example i.e., changes within the market structure, changes in distribution policies, worth of the drugs, market competition and worth of branded drugs, the supply of drugs at the level of doctors, and lastly the accessibility of essential drugs to the people across the country. These changes stanch the verity that the Patent regime has been changed, which in one way causes deregulation on the prices of drugs where the firms are open to monopolize the market in respect of prices of newer drugs even without considering the very objectives of Doha Declaration. Secondly, the foreign investors are preventing life saving drugs in fact they are obstructing to reaching them to the Indian market because they have invested millions in research. Recently the 'Natco decision, 2012' has goaded severe ponder at the international front, specifically TNC and Pharmaceutical manufacturing units of USA. It was argued that India's licensing policy of sec 84 to 92A given under Chapter XVI violate the TRIPS agreement. Therefore by looking at the growing concerns and apprehensions rose over the above subject in India, this article is aimed to examine certain questions: How the current practices of CL affect the long run of pharmaceutical industry in India? Will the population of developing nations have access to essential medicines? Will the potential of pharmaceutical industry confirm India's position on CL in global market? Thus this article opens up with a brief analysis of the interaction between patents and GM. This includes an outline of the Indian market in respect of pharmaceutical trade and the right of access to medicines as an indication of human rights.

Keywords: BRICS, compulsory licensing, generic drugs, global economy, TRIPS.

1. INTRODUCTION
India's economy is a mixed economy that is still developing. It is the 6th largest nominal GDP economy in the globe and the 3rd largest by Purchasing Power Parity (PPP) and Gross Domestic Product (GDP) development, an average of 7.1% in 2016-17, which ranked India among the world's best-performing countries, but fell from 7.1% to 6.5% in FY 20 due to major reforms nevertheless it is estimated that India would be the world's fast major economy in future if India keeps improving the climate for rapid growth on the strength of its sustainable engines i.e., private investment and exports (Economic Survey, 2018). However, the other major components of this sustainable engine are the precious industries such as Information Technology, Telecommunications, ITES, Pharmaceuticals, Banking, Insurance, Light Engineering Goods, Auto Components, Textiles & Apparels, Steel, Machine Tools and Gems and Jewelry that are creating demand for Indian goods and services in global and domestic markets. Indian policymakers supported a deeply isolated, self-reliant economy after independence in 1947, with a primary focus on poverty reduction. Through state-driven industrialization, India attempted to accomplish advancement and pursued a socialist economic model.

In the name of generic, the Indian Pharmaceutical manufacturing units have made a noteworthy input to global healthcare by ensuring high-quality, inexpensive and available medications worldwide. Over the past decade, the sector has risen quickly and has been instrumental in global access to lashing generics. India is a remarkable hub for generic, R&D and pharmaceutical production due to its powerful value chain capacities (Khader and Feroz Ali, 2008). India's pharmaceutical industry ranks third in volume terms in the globe and 14th in value terms. India is contributing the world's second-largest share of pharmaceutical and biotech labor. The share of above industry rose by 9.5% in March 2018 (Gopal Nair, 2008). India also represents the second biggest amount of Abbreviated New Drug Applications (ANDAs) and, between April 2000-December, 2017, is the world leader in '*drug master files'* (DMFs) apps with the U.S. '*Indian Drugs & Pharmaceuticals'* IDP industry receiving cumulative US$ 15.59 billion in FDI. Currently, the supply over 80% of the antiretroviral medicines used worldwide to fight AIDS (Acquired Immuno Deficiency Syndrome) has been increased. India, however, did not have a product patent between 1970 and 2005. The Indian pharmaceutical industry evolved at a very rapid pace without any product patent. With the impact of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement of the World Trade Organization (WTO), India was needed to implement product patent protection in its patent law. The Indian government amended its patent law in 2005 despite objections to the implementation of a product patent. The Patents (Amendment) Act, 2005 specifically contains

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some sections directed at promoting a compulsory licensing scheme. The Indian government awarded the country's first compulsory license in 2012 against a foreign business namely Bayer Pharmaceuticals, which became a key problem on the global platform. Even United States had also pressurized India to revise its IPR policy for medicines as per their Office of the '*United States Trade Representative'* (USTR) sec. 301 which if effected would certainly harm the compulsory license purposive mechanism and Indian economy. Apart from that, as India is member of BRICS nation so access to medicine is a prerequisite to right to health. Even the constitutions of South Africa, Brazil and Thailand have provisions for guaranteeing a right to health to their citizens.

2. LITERATURE REVIEW

There was an abundance of literature accessible by many writers on Pharmaceutical Patents and Indian Economy, but the focus was on pre-TRIPS scenario literature, TRIPS agreement and post-TRIPS scenario in order to inculcate the significance this research then follows the effect of the Doha Declaration on access to essential medicines. Existing literature has been widely studied to lay the appropriate basis for a critical evaluation of the WTO TRIPS Agreement and the Doha Declaration, particularly with regard to medicine. Gopal kumar Nair (2008) noted the impact of TRIPS on Indian pharmaceutical industries in his article in particular. He focuses on the importance of the fresh pharmaceutical industry patent system in India. He also implemented amendments to the 1970 Patent Act to fulfill TRIPS commitments. In addition, Liu Jodie (2015) noted the flexibility of TRIPS with respect to compulsory licensing and ever-greening regulations, which raised the bar for what pharmaceutical companies had to demonstrate to acquire a drug patent in the first location with special regard to Patent Amendments 2005. In addition to the documents, Munnazzar Ahmed concentrated on problems such as access, affordability and availability with the distinctive mention of instances such as TRIPS and Doha Declaration in his book on Legal Implication of compulsory licensing in India-in the light of Natco v. Bayer. The author undertook a critical evaluation of the 1970 Indian Patent Act along with the 2005 amendments. He has affirmed strongly that since the introduction of TRIPS, access to medicine i in the limelight that has made generic drug manufacturing a strong determinant of the economy of India as it raises the amount of FDI. Therefore, establishing appropriate policies for generic drugs becomes crucial for the government. This book provides an open platform for discussion on the significance of generic drugs, which is the goal of the current studies. Further, Robin Feldman (2017) has recently argued about the elevated prices of prescription drugs that dominate public health. He shows the internal workings of the pharmaceutical industry in this groundbreaking job and shows how drug companies twist health policy achieves objectives that are contrary to the public interest. Also taken into consideration was the latest scenario of the Indian Economy due to branded medicines, generic drugs and mandatory licensing.

2.1. RESEARCH GAP

Although compulsory licensing is not new in India but generic drugs have been discussed between developing nations and advanced nations in regards to access to medicine. Recently, when India was extremely criticized for compulsory licensing regulations saying that, in its "National Manufacturing Policy," the Indian government unreasonably promoted compulsory licensing as a mechanism for carrying out technology transfer in certain industries, which suggests that the government is using compulsory licensing simply as a instrument to attain its industrial policy objectives rather than as a instrument. Many overseas pharmaceutical industries eventually became unwilling to apply for a patent in India by loosening India's FDI and transfer of technology. Finally, several difficulties have affected the pharmaceutical industry, such as the patent cliff, important price erosion, distributor-level consolidation, enhanced competition, and enhanced regulatory scrutiny in worldwide markets.

3. PATENT, COMPULSORY LICENSING AND INDIAN ECONOMY

Compulsory licensing and Generic Medicines is necessarily the subject of the patent idea. The term "patent" derives from the Latin phrase "*litterae patentes*" meaning a document issued by or on behalf of the sovereign, addressed to all subjects and with the large seal pendulum at the bottom of the document so that it can be read without breaking the seal (Philip W. Grubb 2004). The Great Council of Venice granted '*Ser Franciscus Petri of Rhodes'* the first patent for a technological invention in 1416. In India, the Patents Act, 1970 does not define what a patent is; it simply states that a patent is a patent for any invention issued under the Act that does not provide a clear image of the significance of the word patent. However, paragraph 2(1) (m) of the Patent Act offers that for an "invention" a patent may be granted. Furthermore, the concept of invention referred to in paragraph 2(1) (j) refers to a fresh product or method involving an inventive step capable of industrial application. Thus, three patentability conditions are "new" "inventive step" and "industrial implementation." Patents may be the most significant legal tools to protect intellectual property rights. An innovation must be novel to be patentable in the sense that it does not constitute portion of the prior art or, more usually, that it is not already in the public domain. An inventive step must also be involved in a patentable innovation, which

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means that it must not be obvious to an individual with normal abilities in the specific field of implementation. Innovation must also be helpful in order to be patentable; that is, it must allow the feature non- obvious to a specific issue. Where the permit is given by the patent proprietor himself or is known as a voluntary permit under his jurisdiction. However, it is known as mandatory permit where it was not so awarded but by the government in compliance with the provisions of the law in question. For any matter protected by a patent, compulsory licensing could usually be given. It can be a patented product, a patented method, and the products directly acquired through that method such as medicines, drugs, foods, etc. Article 31 of the TRIPS (which relates to use without the right holder's authorization) sets out the conditions governing the use of compulsory licensing by WTO members, the most important of which are:

(a) An entity (pharmaceutical company) providing compulsory licensing should not have been able to obtain a voluntary license from the right holder on' reasonable' terms of trade;

(b) Appropriate remuneration must be paid to the patent-holder if compulsory licensing is granted;

(c) The compulsory licensing must be granted primarily for domestic supply.

The WTO General Council in 2003 adopted a decision to implement paragraph 6 of the Doha Declaration on TRIPS and Public Health, which ultimately resulted in the form of a protocol to amend the TRIPS Agreement in 2005. The decision of paragraph 6 revised the requirement of Article 31(h) and permitted Member States to issue compulsory licenses to export patented pharmaceutical products to nations with insufficient or inadequate manufacturing capacity.

With regard to the above TRIPS clauses, sections 84 to 92 A of the Indian Patent Act, 1970 deal with compulsory licensing where sec. 92A, which was inserted with the 2005 amendment, was intended to take into consideration the primary goals as described at the Fourth Ministerial Conference, held in Doha in 2001. Pursuant to Section 84(1) of the Indian Patent Act, 1970, any interested individual may apply for a compulsory license on the grounds that the patented invention:

(a) if the invention does not satisfy the reasonable requirements of the public;

(b) is not available to the public at a reasonably affordable price; and

(c) is not worked in the territory of India.

In relation to the above-mentioned basis, compulsory license may also be awarded by the Patent Controller in accordance with a notification given by the Central Government if there is either a "national emergency" or "excessive urgency" or "government non-commercial use"

In 2004, however, Canada became the first nation to enforce the 2003 judgment on the basis of paragraph 6 of the Doha Declaration, enabling mandatory licenses to export generic versions of patented drugs to nations with calamitous government health tribulation (Vipin and Mahendra, 2016) and the first ever compulsory license issued to Hyderabad-based Natco Pharma for manufacturing on 9 March 2012. In *Natco case*, it was discovered that only 2% of the cancer patient population had simple access to the medication and that Bayer sold the medicine for a month's therapy at a very elevated cost of 2.8 lakh INR. The Indian Patent Office also granted a compulsory license to Natco Pharma on the basis that Nexavar was being imported into the land of India, ensuring that the tablets would be sold for Rs. 8,880/-per month. It was established that Natco Pharma would pay Bayer 6 percent of the drug's net revenues as royalty. This judgment raised controversy over the granting of the same as the businesses argued that developing such drugs implies investing a lot of cash in R&D, time and effort, and therefore they should be granted the freedom to enjoy the monopoly right to use it, receive profit, and thus balance the costs incurred during R&D. The other argument that was raised was that, as in this situation, the controller did not provide for a fair and affordable cost. While the controller approved the cost of Natco, for some parts of society the same may not be affordable. But by giving CL, the issue is that it harms our economy? In response, a 2015 Global Burden of Disease Study was performed in which many nations were analyzed between 1990 and 2015 for a span of 25 years. India landed 154th among 195 nations in the last quarter of the index. India's lagging behind nations such as Nepal, Bhutan, and even Bangladesh has conducted badly on the healthcare index. The research financed by the Bill and Melinda Gates Foundation disclosed that India improved 14.1 points in its index rating over the 25-year period from 30.7 in 1990 to 44.8 in 2015. However, in the fields of tuberculosis, diabetes, rheumatic heart disease and chronic renal disease, it did not perform well (Times of India, 2017). Besides that India has no manufacturing ability to produce fresh drugs, but in addition to these poignant reasons, if India keeps the compulsory license too free, innovators can be deprived of their monopoly rights in complete. As a consequence, large pharmaceutical companies could be discouraged from investing in drugs, such as malaria or dysentery, which only have a market in developing nations. It would

also become unattractive to collaborate with businesses in such nations. India could eventually become isolated, with less control over drugs that might be required in the future to treat its populations (Munnazzar, 2009).

4. ARE GENERIC DRUGS ELEVATING OR DISPARAGING THE LEVEL OF INDIAN ECONOMY?

According to the World Health Organization (WHO), nearly 30% of the world's population lacks access to essential drugs, and in some nations such as Africa and Asia the figure may increase. The price of the drug, its manufacturing and market process is hampering access to drugs and it appears that governments in LDC and DC nations are doing very little to address this issue. In India, the procurement cost of essential medicines is usually smaller than the International Reference Pricing (IRP) and the accessibility of these medicines in the public sector has always been an issue.

4.1. Evolution of Generic Medicines in Indian Pharmaceutical sector

The Indian pharmaceutical sector is one of Indian economy's fast-growing industries and has trampled rapidly over the years. Indian pharmaceutical industry growth can be split into four phases. The first phase is the pre-1970 era in which foreign businesses with little national involvement dominated the Indian market. Even the prices of drugs were high and ungoverned, and unbridled profiteering. But then India became the zenith among developing nations in encouraging production and technological capacity in pharmaceutical goods with the development of policy reforms and innovation with legal reforms over two decades (1955–1970). The second phase is the 1970-1990 period. Several national businesses began activities during this era which made the Indian Patent Act, 1970 to get implemented. In fact many export initiatives had been taken. The third phase was 1990–2010. The cost of an anti-ulclear medication–*Rantidine* in India was 16.58 times smaller than that marketed by Glaxo in the UK even in 1993. India's generic production was well recognized for its critical role in providing accessible medicines in the developing world, particularly for newer drugs such as anti-retrovirals (ARVs) required in HIV treatment. The price of HIV treatment in the first generation also fell from over $10,000 per patient per year in 2000 to $350 by 2001. Indian companies also created generic fixed-dose combinations (FDCs) that simplified AIDS treatment in resource-limited environments, including India, dramatically. Liberalization resulted Indian parts to start activities in foreign nations during this era. In 2005, the Patents Act, 1970 was revised, leading to the implementation in India of product patents. Also India became the global leader in the manufacture and supply of generic drugs. Generic Drug is a pharmaceutical medication equivalent to a brand name product in dosage, strength, route of administration, quality, efficacy, and scheduled use. The term may also refer to any drug that is marketed under its chemical name without advertising, or to a product's chemical composition instead of the brand name under which the product is sold. On the other hand, India's Medical Council's 2002 code of ethics makes it mandatory for physicians to prescribe drugs by their generic names. In addition, in an amendment to the Code of Conduct for Physicians in October 2016, the Medical Council of India (MCI) suggested that all physicians legibly prescribe medicinal products with generic names and guarantee that medicinal products are rationally prescribed and used.' All generic manufacturing, packaging and testing sites must meet the same quality standards as brand name drugs. The generic drug manufacturer must also show that its drug is the same as the (bioequivalent) brand name drugs. Henceforth India's pharmaceutical sector is developing, producing and marketing generic drugs. India's generic home is now entering a strategic alliance with global pharmaceutical companies to strengthen its generic portfolio. In addition thereto, India's generic drug amount accounts for 20 percent of worldwide exports, making India the largest generic medicine supplier in the world (Amanpreet and Rekha, 2015).

4.2. Major Indian generic drugs investment throughout the International Pharmaceutical Market–2017.

- In 2016, the generic industry stood at US$ 26.1 billion. Indian pharmaceutical companies also received approximately 300 approvals of generic medications in the U.S. in which the generic market is expected to touch US$ 88 billion by 2021.
- Sun Pharmaceutical Industries Limited, India's largest drug supplier, has entered a distribution contract with Japan's Mitsubishi Tanabe Pharma Corporation to market 14 prescription medicines in Japan.
- The worldwide U.S . based medication manufacturer Abbott Laboratories plans to establish an I&D center i n Mumbai to support the creation of the latest formulatios, signs, dosage and packaging for Abott's worldwi de generic brand.
- Dr. Reddy's worldwide generics segment accounted for about 80% of the company's income in 2018. The firm submitted 20 abbreviated new drug applications (ANDAs) as of March 2018 and had 110 generic applications pending authorization with the US FDA. Five first-generic-to-launch (FGTL) medicines were also introduced in Brazil, 2018.

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- In terms of market capitalisation, Lupin, India based pharmaceutical company is the seventh biggest generic pharmaceutical company worldwide. The generic company of Lupin accounted for 90% of the complete sales of the company in the US in 2018. As of March 2018, the IQVIA Generics Module ranked 51 of the company's 157 generic products as number one by market share in the US.
- Biocon is one of the leading biopharmaceutical companies that manufactures ACPs. Its total revenue in FY17 was 633.11 million dollars compared to 537.04 million dollars in FY16. The company's consolidated earnings in the third quarter reached Rs 1,057.9 crore (US$ 163.41).
- Sun Pharmaceutical Industries (Sun Pharma) recorded net sales of approximately $4.11bn in 2018. According to AIOCD AWACS MAT, an India-based pharmaceutical industry study firm, branded generics business in India contributed 31 percent to the company's total profits in 2018 and Sun Pharma had the biggest market share of 8.2 percent in the country's branded generics sales in the same year.
- Cipla is a pharmaceutical company based in India with a broad footprint covering the United States, Europe, Australia, New Zealand, South-East Asia, Middle East, Africa and Russia. According to IQVIA, US-based consulting firm, as of March 2018, the firm was listed as one of the top ten generic businesses in the U.S. with 13 out of 52 products ranked number one.

4.3. Market segment by value

India is an intriguing nation and is similar in terms of economic growth to other Asian nations. When the FDI is growing, technology is transferred in the health industry. The following table offers products and their market share in the Indian pharmaceutical industry:

Product	Market Share
Anti-infectives	16%
Cardiovascular	13%
Gastro Intestinal	11%
Vitamins, Minerals	8%
Respiratory	9%
Pain/analgesic	7%
Anti-diabetic	7%
Others	29%

Source: A brief report on pharmaceutical industry in India- July (2015)

5. GOVERNMENT GENERIC DRUGS INITIATIVE THROUGH JAN ANUSHADHI SCHEME (JAS)

The "Jan aushadhi scheme" was established in India by Jan Aushadhi Stores (JAS) for quality generic medicinal products at an affordable price for everyone, particularly the poor across the whole nation. The state governments is in the process to supply stores government hospital premises or other suited locations in order to operate this system. In addition, the Pharma PSUs of India (BPPI) will provide Rs.2.50 lakhs with one time support, including the expenses of furnishing and installation.

Any NGO / charitable organization / institution / self-help group may also open the Jan Aushadhi shop outside the clinic, provided that they have at least three years of good healthcare operations experience. The JAS is also eligible for a drug sales incentive @ 10% of monthly revenues, subject to a cap of Rs. 10000/-p.m. for the first 12 months. In the event of shops in the northeast and in other challenging regions, i.e. Naxal areas / tribal areas etc. the incentive level is 15%, subject to a cap of Rs. 15,000 per month.

More than 175 Jan Aushadhi stores in different countries / UTs have been established. As required by the company to open, JAS is launched at the places. Steps are also taken to open shops of Jan Aushadhi in the AIIMS, major hospitals and health institutes.

5.1. Other Initiatives:

- In March 2018 the DCGI announced its plans to launch a single window to provide authorization, authoriza tions and other data. The move seeks to push forward the initiative Make in India.

- In order to prevent misuse owing to simple accessibility, the government of India is planning to establish an electronic pharmaceutical platform to control the Internet under a new policy.
- "Pharma Vision 2020" was presented by the Indian Government to make India the worldwide leader in the production of end-to-end medicines. Time was decreased for approvals to encourage investment in new installations.
- Government implemented processes for dealing with the question of affordability and accessibility of medicine, such as the Drug Price Control Order and the National Pharmaceutical Pricing Authority.

6. CONCLUSION

A nation's wealth is said to heavily rely on its citizen's health. Not only for the third-world countries but also developed countries, the provision of public health care has always remained as a significant problem. These health problems have been raised through international treaties and conventions as well as many states constitutions and municipal regulations recognize the significance of a healthy life. Despite criticism and disadvantages of compulsory license, sovereign states have efficiently acknowledged at global level the right to compulsory license in order to prevent abuses of monopoly rights but to harm our Indian economy because it restricts the exploration of inventions. Since 1970, India has struggled to produce generic drugs that made India produce more than 20 percent of the generics in the world. Many measures have been taken by the Indian government to decrease costs and decrease health care expenses. The rapid market implementation of generic drugs has stayed focused and the Indian pharmaceutical companies are anticipated to profit. Furthermore, the focus on rural health programs, lifesaving drugs and preventive vaccines also augurs well for pharmaceutical firms. To increase our Indian economy with regard to generic medicines, all these initiatives are essential.

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TEXTILE AND CLOTHING EXPORT COMPETITIVENESS OF INDIA AND PAKISTAN IN WORLD TEXTILES MARKET: A POST MFA SCENARIO

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ABSTRACT
The present study analysed the competitiveness for Textiles and Clothing of India and Pakistan in world textile and clothing market. Balassa's (1965) Revealed Comaparative Advantage Index has been applied on Textiles and Clothing export data of these two countries after the phase-out of Multi-Fibre Agreement (MFA). For this purpose a period of ten years after the phase-out of MFA has been taken into account i.e. from 2006 to 2015. The results show that Pakistan has a greater RCA for both Textiles and Clothing over India but at the same time India enjoys a larger share in world Textiles and Clothing market. Government of both countries has been implementing number of productive remedial measures with a view to enhance the status of their T&C industry.

Keywords: Balassa's Index, Clothing, India, Pakistan, Revealed Comparative Advantage, Textiles.

1. INTRODUCTION
Textile industry has always remained crucial for both developed and developing countries. For developing countries this sector has always been a great source of income as it dominates around 45% of developed market imports and for developed countries a threat to their domestic industries. Because of this threat developed nations started imposing quota restrictions under an agreement called Multifibre Agreement (MFA) on export of textiles and clothing by developing countries. This MFA period (1974-1994) was the darkest period for textiles and clothing trade of developing countries. In order to protect their textiles and clothing sector, developing countries joined hands and started agitations against quantitative restrictions under MFA. These quotas started phasing out from 1 Jan 1995 and finally dissolved on 1Jan 2005 with the help of WTO. Removal of quota restrictions on one hand triggered the growth of textile and clothing industry of some developing countries but on the other hand increased competition among them. After the removal of restrictions under MFA South Asian belt experienced mixed feelings. Some developing countries loosed their battle while some emerged as the winners like India and China. Pakistan also registered its victory along with India and China. India recoded a 28% growth in textile exports and Pakistan recorded an average monthly growth of 22.1% for the first four month of 2005 (see World Economy & Development in Brief) . As far as the domestic status of T&C industry of India and Pakistan is concerned it is dominating in both the nations. In case of India it is the second largest employer just after agriculture and in case of Pakistan this sector dominates the agriculture and manufacturing sectors. In India T&C sector contributes 14% to industrial production, 4% to GDP and accounts nearly 15% of total exports (see Ministry of Textiles, GOI). In Pakistan T&C sector contributes around 55% of the international exports, 8.5% to GDP and employees nearly 15 million of country's production labour force (Fibre2Fashion.Com). It is very clear that both India and Pakistan have rich textiles base and produce low priced products but still these two nations are not able to take the full advantage of availability of abundant cotton and cheap labour supply. In spite of this fact both countries have competitiveness in producing textiles and clothing and trying hard to improve and maintain their competitiveness in international market.

This paper is an attempt to measure and compare the competitiveness of textile and clothing industry of India with Pakistan. In order to achieve this objective Balassa's (1965) Revealed Comparative Advantage (RCA) concept is used for export data.

Why Pakistan Textiles Industry?
In Pakistan T&C sector dominates the agriculture and manufacturing sector. Textiles and clothing exports dominate the total export basket of Pakistan. It contributes around 50% of the international exports, 8.5% to GDP and employees nearly 38% of country's total production labour force (Textile Industry Division, Govt. of Pakistan). The size of Pakistan textiles sector is much larger than that of India.

2. LITERATURE REVIEW
Chaudhary and Saleem (2001) studied Pakistan's exports, comparative advantage of exports, compatibility and commodity concentration of exports and export volatility by applying different indices such as comparative advantage index, commodity concentration index, export instability index, complementarity index etc. The results indicate that, from 1972 to 1998, the growth rate of Pakistan's exports has increased, despite the wide variation in growth rates of demand for exports, across the trading member states. The results of Complementary Index suggests that Pakistan's exports are not closely linked to the dominant trading partners

imports, the commodity concentration index indicates that Pakistan's exports consist upon few products, concentrated in few markets whereas Comparative advantage index shows mixed results i.e. the only the minor exports group (carpets and rugs) has enjoyed comparative advantage, while exports like textile and leather group did not experience comparative advantage. **Widodo (2009)** applied Revealed Symmetric Comparative Advantage in order to investigate the dynamic changes in comparative advantage of the ASEAN +3 (China, Republic of Korea and Japan). The author find out the changes and concluded that the increase in overall comparative advantage are encouraged by the higher increases in comparative advantage of groups of products that had no or lower comparative advantage in the past, moreover the comparative advantage pattern of the ASEAN is becoming similar with that of Japan. **Le Phuong (2010)** analysed comparative advantage of Vietnam since its economic reform that began in 1986. For this analysis the author uses 1-digit level with ten commodities and 3-digit level with 269 commodities and selected three representative years i.e. 1991, 1996 and 2005 in order to get overall picture of Vietnam's comparative advantage structure. He finds out that in spite of the fact that Vietnam's comparative advantage has shifted from primary products to labour-intensive manufacturing and technology-intensive manufacturing still the comparative advantage largely depends on country's endowments of labour and natural resources. The researcher further adds that exports based on such existing comparative advantage do not deliver significant value-added earnings. It is recommended that relevant policies should be implemented to move the economy and its export sector towards a desirable comparative advantage sector. **Minondo, A.(2011)** analysed whether the products in which a country has specialisation over other countries can explain its exports' diversification level. The author calculated proximity indexes by using 4-digit level data. RCA is also calculated in order to get countries' diversification possibilities. By using parametric and non-parametric techniques the author shows that the diversification possibilities index is a strong predictor of countries actual diversification level, even if differences in GDP per capita across countries can be controlled. It is argued that the products in which a country has comparative advantage play a very important role in explaining the level of export diversification; therefore, export diversification might not be an automatic outcome of the process of development. **Shahab & Mahmood (2013)** applied Revealed Comparative Advantage Index inorder to analyse the trade specialization in leather products of selected Asian countries with special focus on Pakistan leather industry. The researchers find out that Pakistan's leather industry has an increasing trend in comparative advantage as compared to that of China, India and Iran. The study recommends that a Leather Board should be established in Pakistan as an independent body, funded by the government. Besides this latest machineries and equipments should be imported and that should be free from customs duty, sales tax and income tax, Value-added exports where no further value-added can be done should be free from Export Development Surcharges in order to give boost to this major contributor of national economy. **Shahzad (2015)** analysed the static and dynamic competitiveness of textiles and clothing sectors of Pakistan, India and Bangladesh by applying Balassa'a Index. The study concludes that Pakistan has highest RCA for textiles, Bangladesh is competitive in clothing whereas India has revealed comparative disadvantage in textiles when competing with Pakistan and Bangladesh.

3. OBJECTIVES

1. To understand and analyse the performance and trend of T& C industry of India and Pakistan.
2. To analyse the competitiveness of T&C industry of India and Pakistan after the phase-out of MFA in World T&C market.

4. PERIOD OF STUDY

The period of study is from 2006 to 2015 i.e. 10 Years. As MFA was phased-out in 2005 so period after the phase-out of MFA is taken for the study.

5. DATA SOURCE AND METHODOLOGY

5.1. Data Source

This paper uses data on exports of textiles and clothing published by WTO. WTO generally sources product data from UNSD Comtrade. So SITC product number of textiles and clothing are traced from the site of UN Comtrade. In this paper 3-digit Standard International Trade Classification (SITC) has been taken into account. According to UN Comtrade data base textiles fall under SITC 65, which includes textile yarn, fabrics and made-up articles (further calssified in Table 1) and clothing falls under SITC 84 which includes articles of apparel and clothing accessories (further classified in Table 2).

Table - 1

SITC Product Number	Product Category
651	Textile yarn & thread.
652	Cotton fabrics, Woven ex. Narrow or spec. Fabrics

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653	Text fabrics woven ex narrow, spec. Not cotton
654	Tulle, lace, embroidery, ribbons, trimmings
655	Special textiles fabrics and related products
656	Made up articles, wholly or chiefly of text. Mat.
657	Floor coverings, tapestries, etc.
658	Made-up articles, wholly or chiefly of textile materials, nes.
659	Floor coverings, etc.

Source: WTO

Table - 2

SITC Product Number	Product Category
841	Clothing except fur clothing
842	Not knitted or crocheted: women's/girl's coats, capes, jackets, suits, trousers, shorts, shirts, dresses, and skirts.
843	Fur clothing and articles of artificial fur
844	Women's, girls, infants outer wear, textile, not knitted or crocheted
845	Under garments of textile fabrics, not knitted or crocheted
846	Outer wear knitted or crocheted, not elastic nor rubberized under-garments, knitted or crocheted
848	Articles of apparel, clothing accessories, non-textile, headgear.

Source: WTO

5.2. Methodology

Why Balassa's Revealed Comparative Advantage Index?

Adam Smith (1776) stated that one country enjoys absolute advantage over the other if it can produce same amount of goods with lesser resources (Siudek, T., & Zawojska, A. 2014). David Ricardo (1817) (Denisia, V. 2010) argued that international trade take place when countries are efficient to produce exported products. Countries produce and export goods in which they have cost advantage and import those goods in which they have cost disadvantage. Heckscher (1919) and later Ohlin (1933) pointed out that countries which are rich in labour should export labour intensive goods and countries with rich capital base should export capital-intensive goods (Leamer, E. E. 1995). Ricardian theory considers labour as the only factor for comparative advantage where as H-O theory considers factor abundance for comparative advantage. Ricardian theory is based on 2x2x1 (2 countries. 2 commodities and 1 factor of production) where as H-O theory is based on 2x2x2 (2 countries, 2 commodities and 2 factors of production). Ricardian theory assumed that countries could have comparative advantage over one another if they have differences in technology and labour cost wheras H-O theory assumed that comparative advantage results due to capital and labour costs. Porter (1985) developed a model of competition strategies possessed by the nations in order to produce high-quality products and to sell them at high cost in market. Porter advocated three generic strategies i.e. Cost leadership, Differentiation and Focus (Cost Focus and Differentiation Focus).

Revealed Comparative Advantage Index of Balassa (1965) and White (1987) and Vollrath (1987) explained the concept of competitiveness (Seyoum, B. 2007). The RCA index was introduces by Bela Balassa and Clark Noland (1965). It was assumed that H-O theory and Recardian theory are not as suitable as RCA index for calculating comparative advantage (Balassa, Bela 1965). RCA index is defined as the ratio of two shares and it is calculated by applying the following formula:

$$RCA_{ij} = \frac{\frac{Xij}{Xit}}{\frac{Xwj}{Xwt}}$$

Where, Xij= Export of product j by country i

Xit= Total exports from country i

Xwj= Total export of product j by rest of the world

Xwt= Total exports from world

A country is said to have comparative advantage over another country if RCA index is greater than unity (RCA > 1) and if RCA index falls below unity (RCA< 1), it means the country is having revealed comparative

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disadvantage in the particular commodity (Yu, R., Cai, J., & Leung, P. 2009). In present study the RCA index has been applied in two categories i.e. Textiles and Clothing.

India's Export Performance of Textiles and Clothing

India's export of textiles in 2008 increased to US$ 10372 million compared to US$ 8880 million in 2006. The value of textiles export declined in 2009 and again improved to US$ 18339 million in 2014. Export value of clothing increased to US$ 12005 million in 2009 from US$ 9564 million in 2006 and declined in 2010 and 2012. It again improved to US$ 18254 million in 2015 as compared to US$ 13928 million in 2012 (see Table 3).

Table – 3: India Textile & Clothing Export (US dollar at current prices (Millions))

Year	India's Total Export to the World	India's Textiles Export	%age Growth	India's Clothing Export	%age Growth
2006	121808	8880	-	9564	-
2007	150159	9617	8.30	9930	3.83
2008	194828	10372	7.85	10968	10.45
2009	164909	9111	-12.16	12005	9.45
2010	226351	12833	40.85	11229	-6.46
2011	302905	15340	19.54	14672	30.66
2012	296828	15348	0.052	13928	-5.07
2013	314848	17417	13.48	15542	11.59
2014	322694	18339	5.29	17742	14.16
2015	267444	17289	-5.73	18254	2.89

Source: WTO

Pakistan's Export Performance of Textiles and Clothing

Export value of textiles increased to US$ 9082 in 2011 against US$ 7469 million in 2006 and of clothing increased to US$ 4550 as compared to US$ 3907 million in 2006. Textiles export declined in 2015 to US$ 8232 as compared to US$ 9341 million in 2013 but at the same time clothing export increased to US$ 5023 million in 2015 as compared to US$ 4214 million in 2012 (seeTable 4).

Table – 4: Pakistan Textile & Clothing Export (US dollar at current prices (Millions))

Year	Pakistan Total Exports to the World	Pakistan Textiles Export	%age Growth	Pakistan Clothing Export	%age Growth
2006	16930	7469	-	3907	-
2007	17838	7371	-1.31	3806	-2.59
2008	20323	7186	-2.50	3906	2.63
2009	17523	6510	-9.40	3357	-14.06
2010	21410	7848	20.55	3930	17.07
2011	25383	9082	15.72	4550	15.78
2012	24567	8705	-4.15	4214	-7.38
2013	25121	9341	7.31	4549	7.95
2014	24706	9077	-2.82	4991	9.72
2015	22089	8232	-9.31	5023	0.64

Source: WTO

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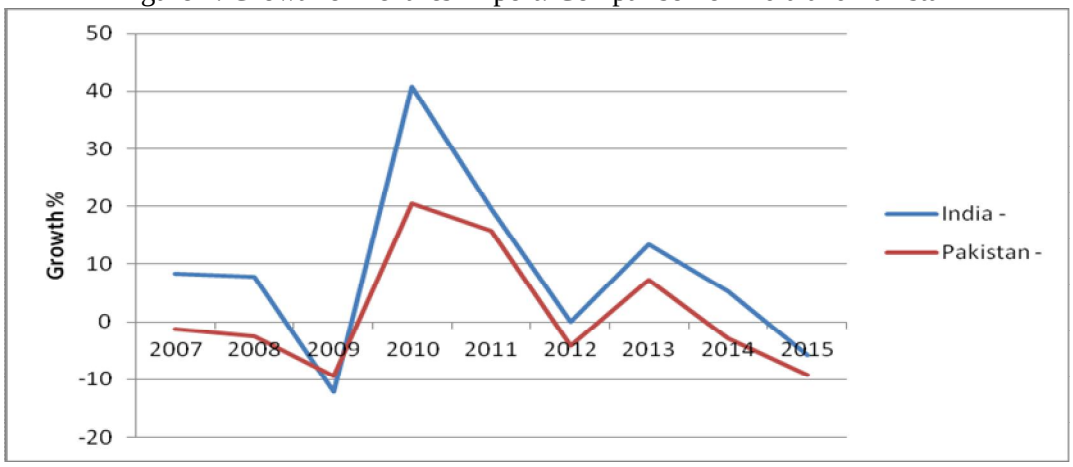
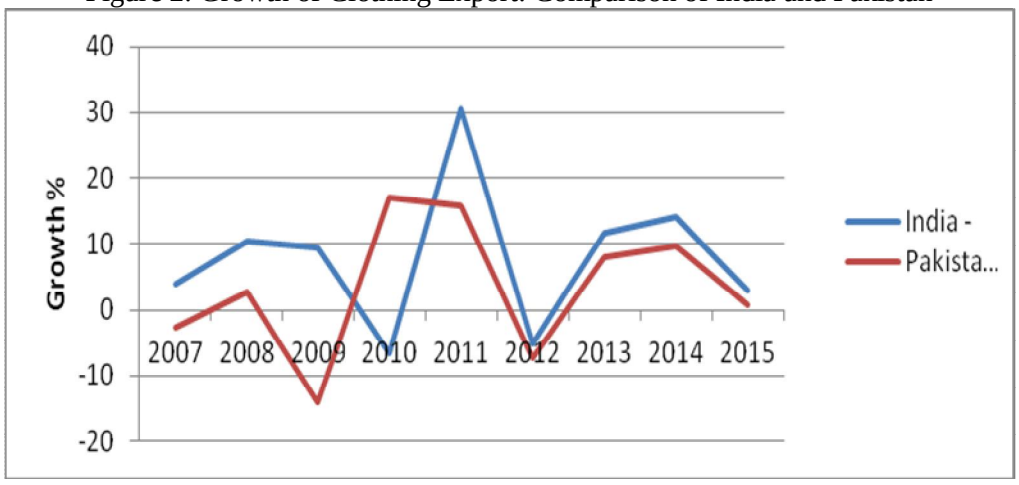
Figure 1: Growth of Textiles Export: Comparison of India and Pakistan



India's textile export showed positive and negative trend from 2007 to 2015 with similar trend in Pakistan. India's textiles export dipped by a greater percentage in 2009 as compared to decline in Pakistan's export. Both countries showed highest growth trend in 2010 and 2011. After 2010 and 2011 India showed a positive growth trend in textiles export whereas Pakistan showed a negative trend (see Figure 1).

Figure 2: Growth of Clothing Export: Comparison of India and Pakistan



India's clothing export increased by 3.83 percent in 2007 whereas Pakistan's export declined by -2.59 percent. This positive and negative trend remained continued till 2015. India showed highest trend growth of 30.66 percent in 2011 almost double of Pakistan's growth (see Figure 2).

Table – 5: World Total Textiles & Clothing Export (US dollar at current prices (Millions))

Years	World total exports	Total Textiles Export by Rest of the World	Total Clothing Export by Rest of the World
2006	12131000	213576	314790
2007	14023000	232381	352711
2008	16160000	241397	371097
2009	12555000	202454	322877
2010	15301000	240104	359973
2011	18338000	278447	419060
2012	18496000	267690	417544
2013	18952000	284278	453369
2014	19005000	293687	477803
2015	16489000	273284	448129

Source: WTO

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Table – 6: Textiles (percentage share)

Years	India		Pakistan	
	As Share of Total Domestic Exports	As Share of Total Textiles Export by Rest of the World	As Share of Total Domestic Exports	As Share of Total Clothing Export by Rest of the World
2006	7.29	4.16	44.12	3.50
2007	6.40	4.14	41.32	3.17
2008	5.32	4.30	35.36	2.98
2009	5.52	4.50	37.15	3.22
2010	5.67	5.34	36.66	3.27
2011	5.06	5.51	35.78	3.26
2012	5.17	5.73	35.43	3.25
2013	5.53	6.13	37.18	3.29
2014	5.68	6.24	36.74	3.09
2015	6.46	6.33	37.27	3.01

Source: Author's calculations on the basis of data given in Table 5).

The share of India's textiles export in world's total textiles export is about 6.33 percent while it is 3.01 percent for Pakistan in the year 2015. This shows that India enjoys a greater share of textiles trade in world textiles market (see Fig. 3). Textiles export share in India's total export fell to 5.06 percent in 2011 from 7.29 percent in 2006. Pakistan's share of textiles export in its total exports also fell from 44.12 percent in 2006 to 37.27 percent in 2015. But still this percentage is greater than that of India because textile is the leading export commodity in export basket of Pakistan (see Fig.4).

Table – 7: Clothing (percentage share)

Years	India		Pakistan	
	As Share of Total Domestic Exports	As Share of Total Textiles Export by Rest of the World	As Share of Total Domestic Exports	As Share of Total Clothing Export by Rest of the World
2006	7.85	3.04	23.08	1.24
2007	6.61	2.82	21.34	1.08
2008	5.63	2.96	19.22	1.05
2009	7.28	3.72	19.16	1.04
2010	4.96	3.12	18.36	1.09
2011	4.84	3.50	17.93	1.09
2012	4.69	3.34	17.15	1.01
2013	4.94	3.43	18.11	1.00
2014	5.49	3.71	20.20	1.04
2015	6.83	4.07	22.74	1.12

Source: Author's calculation on the basis of data given in Table 5.

Figure 3: Textiles and Clothing Export as % of Total Textiles Export by Rest of the World

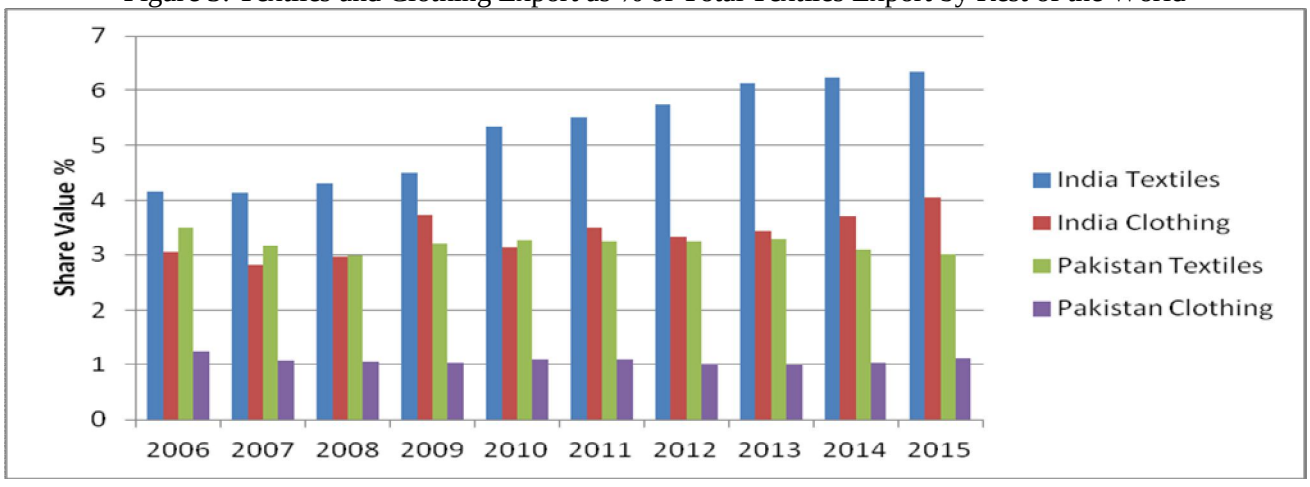

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Figure 4: Textiles and Clothing Exports as % of Total Exports

India's share of clothing exports in total world clothing exports improved from 3.04 percent in 2006 to 4.07 percent in 2015 while Pakistan's share decreased from 1.24 percent in 2006 to 1.12 percent in 2015. In clothing also India enjoys greater share in world clothing export market (see Fig.3). India's clothing exports account about 6.83 percent of total domestic exports while Pakistan accounts 22.74 percent of total domestic exports in 2015. As clothing leads other commodities in total domestic export by Pakistan so it has greater share in country's export basket as compared to India (see Fig.4).

6. ANALYSIS AND INTERPRETATION

Table - 8 : RCA for India and Pakistan

Year	India		Pakistan	
	Textiles	Clothing	Textiles	Clothing
2006	4.14	3.03	25.06	8.89
2007	3.86	2.63	24.94	8.48
2008	3.56	2.45	23.67	8.37
2009	3.43	2.83	23.04	7.45
2010	3.61	2.11	23.36	7.80
2011	3.34	2.12	23.56	7.84
2012	3.57	2.08	24.48	7.60
2013	3.25	2.06	24.79	7.57
2014	3.68	2.19	23.78	8.04
2015	3.90	2.51	22.49	8.37

Source: Author's calculation.

The RCA values of India for both textiles and clothing decrease over the years. In 2006 the RCA for textiles was 4.14 and fell to 3.25 (2013) lowest in ten years but in 2015 it improved to 3.90. For clothing the RCA was 3.03 in 2006 and fell to 2.06 in 2013 (lowest in ten years) but showed some improvement in 2014 and 2015. The RCA for textiles is much better than that for clothing (see Table 8).

The values for Pakistan show a decline in RCA for textiles from 2006 (25.06) to 2015 (22.49), and for clothing from 8.89 in 2006 to 8.37 in 2015, indicating a decline in the country's comparative advantage in both these sectors (see Table 8).

Pakistan has greater RCA for both textiles and clothing as compared to India. This shows that Pakistan has competitive advantage in production of textiles as well as clothing over India (see Fig.5).

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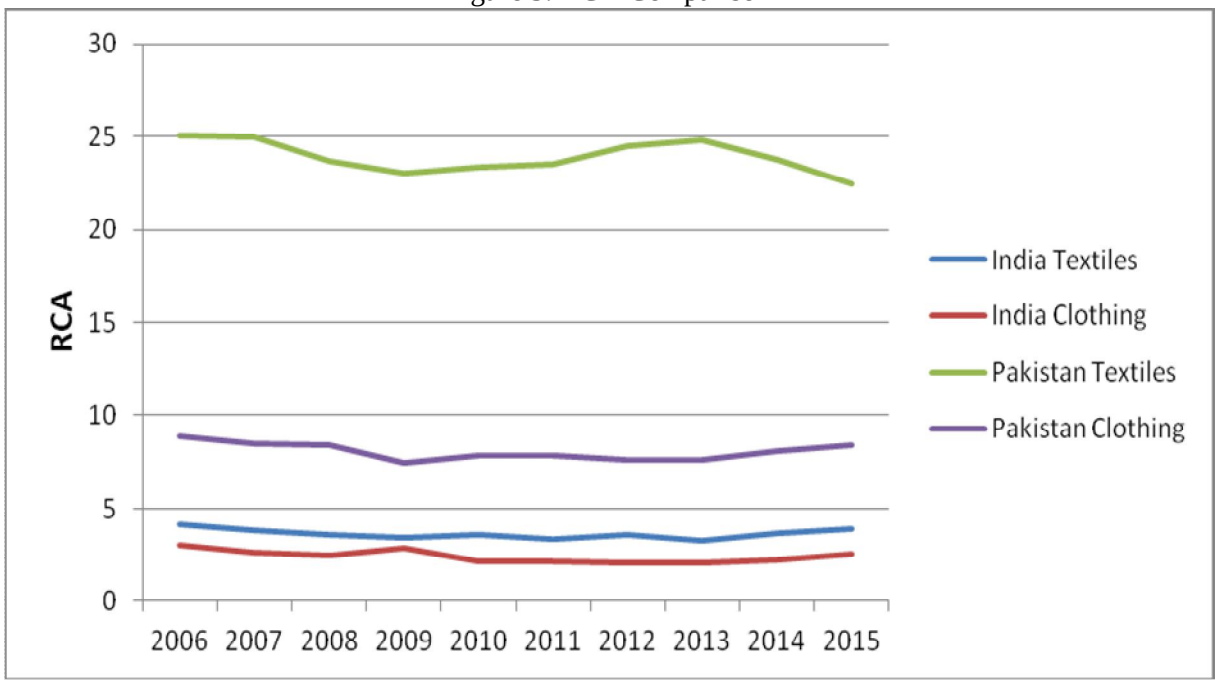
Figure 5: RCA Comparison



Reasons for Low Textiles & Clothing Export Competitiveness for India in World T&C market

Indian T&C industry has been the largest employment generating industry but in recent years things have changed. Now the textiles industry is on bumpy ride and feeling shocks over the past few years. Numbers of textile firms have been shut down. Exports is continuously declining because of which there is no creation of new jobs, infact the old workers are loosing their jobs. The reason for this decline is Indian textiles industry itself. The sales and distribution channel of Indian textiles industry is very complex as it consists of atleast 15 intermediaries (Verma, 2002) which in turn increases the costs. There are other factors also like costs of logistics, lack of proper electricity supply which is a part and parcel of textiles industry, low quality rawmaterial. Apart from these factors there are some international factors that led to decline in Indian textiles industry like the Trans-Pacific Partnership (TPP) trade deal between 12 specific countries. As India was not the member of this trade deal so Indian textile industry faced ignorance on the part of exports. The reason is TPP members used to import inputs from TPP members even if the cost of such inputs was least in Non-TPP member countries. This led to diversion of trade from efficient producers to non-efficient producers. However, this TPP was primarily to discourage the Chinese manufacturers of yarn and fabrics but it equally created a comparative disadvantage for Indian T& C industry. The other factors that hamper the performance of Indian T&C industry include export incentives, government decisions like curtailment in duty drawback rates, withdrawal of interest rate subvention on export credit and increase in minimum support prices for cotton. There is one another important factor that is affecting the Indian textiles industry is cost efficiency. In spite of the fact that India has a rich and diversified textiles base, the cost-efficiency of Indian textiles industry is much lower than China, Bangladesh and Vietnam.

Reasons for Low Textiles & Clothing Export Competitiveness for Pakistan in World T&C market

Pakistan's T&C industry is the centrepiece of its economy as it contributes more than 60 percent of the country's export earnings. But for the last few years Pakistan's textiles industry is loosing its competitiveness in international market. There many factors that are hurdling the production and export performance of textiles and clothing. According to experts and analysts the domestic reasons for disintegration of Pakistan T&C industry are the high cost of doing business, increasing tax burden, expensive bank credits, shortage of energy and power cuts, use of obsolete and outdated technology and methods of production. Thousands of factories have shut down because of high cost of energy as the production of energy was severely hampered because of low investment, inefficient power network and lack of enough revenue inorder to cover the costs. Their clients are turning to Vietnam or Bangladesh or India. Apart from these factors Pakistan is plagued with political and policy instability, apostasy, violence and bombing. Because of these factors players in international market are diverting from Pakistan as they feel that if they purchase inputs from India or Vietnam or Bangladesh instead of Pakistan, it will be safer for their people as these places are much safer than Pakistan (textileexcellence.com). Lower proceeds from rawmaterial, low value-added products like cotton yarn and fabrics, depreciation of

Pakistani currency that has raised the prices of imported inputs, high inflation rates, high cost of financing has also effected seriously the export competitiveness of Pakistan T&C industry.

7. CONCLUSION

The study's RCA analysis of textiles and clothing for India and Pakistan in world T&C market reveal that RCA values for both these countries has been decreasing over the years but still Pakistan has a comparative advantage in both textiles and clothing over India. However, for the last few years neither textiles nor clothing showed any improvement and are thus categorised as threatened products. India's weak RCA should be studied very cautiously because no doubt that India has a weak RCA in both textiles and clothing corresponding to Pakistan but at the same time India occupies a greater share of trade in textiles and clothing in world textiles and clothing market (see Table 4 & 5). Moreover, the reason for high RCA for T&C of Pakistan is that the economy of Pakistan is not very much diversified and largely depends on textiles constitutes nearly 57% of its total domestic exports.

After the phase-out of MFA it was a common thought that amongst other developing countries India and Pakistan will gain and will become the leading T & C exporters but because of their weaknesses the two could not alleviate their status in T & C world. However, government of both these nations are trying their best with the hope of rejuvenating their T& C industry. Indian government has been implementing various development schemes and initiatives for overall growth and development of T&C industry such as Technology Upgradation Fund Scheme (TUFS), Schemes for the development of Powerloom Sector, Schemes for Technical Textiles, Integrated Processing Development Scheme (IPDS), National Handloom Development Programme (NHDP), Comprehensive Handloom Cluster Development Scheme (CHCDS), Yarn Supply Scheme etc. Government of India has also established various textiles technology parks under the Scheme for Integrated Textiles Park in different cities with a view to provide state of the art facilities. Pakistan government has taken various steps to improve the situation of T&C industry. In 2016, Trade Development Authority of Pakistan organised an international exhibition for textile products in order to boost cotton exports. Government has taken various other measures to boost country's overall textiles export such as reduced electricity tariffs to reduce the cost of doing business, cutting import duties on key cotton and fabric inputs, immediate payment of Exporters Refund Claims, withdrawal from Gas Infrastructure Development Cess (GIDC), levelling of gas and electricity prices with regional competitors, zero-rating sales tax policy, etc. (see www.just-style.com)

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IMPACT OF DEMONETIZATION ON INDIAN EXPORTS: A CASE STUDY OF HANDICRAFTS INDUSTRY

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ABSTRACT
Demonetization announcement on November 8, 2016, aimed to curb corruption, black money, terror financing. Later it was said to make India a digital economy. Even after two years of Demonetization, still many Industries are not able to cope up with the effects of demonization. Indian Handicrafts industry as its one of the important sectors for the Indian economy with a large share in employment and exports is believed to be impacted hugely by demonetization. As a cash-dependent, unorganized and labour-intensive sector, demonetization has created huge working capital crunch to the industry which is estimated as one of the important reasons for the sudden downfall in exports by about US$ 1363.03 Cr in the year 2017-18.

The present study aims to highlight the impact of demonetization on Indian Handicraft Industry and specifically its exports. The authors analysed the Indian Handicrafts sector as one of the promising and productive sectors in India economy through its high contribution in trade, throughout the last decade. The study highlights the trends and issues concerned with the sector post-demonetization with the help of cases from different handicrafts producing zones. The study is descriptive in nature and is based on the secondary data available from various research reports of RBI & EPCH, etc., and other published and online work in the public domain. There is a scope of qualitative analysis too based on the availability of the respondents.

Keywords: Demonetization, Exports, Handicrafts, Informal sector

INTRODUCTION
Government of India's sudden move to demonetize Rs 500 and Rs 1,000 currency notes in 2016 has made the country shocked. However, it is not new to the nation, it has been done earlier in the 1946 and 1948 by previous governments but this time it has received criticism more than any earlier attempt. The main objective of demonetization to combat corruption, black money, terrorist funding and to promote digital transactions in the country. Not only India, but it has also been done by many countries in the past such as Germany, Pakistan, Zimbabwe, South Africa, etc. and the results obtained are mixed. Some got successful in their attempt while some economies faced several economic issues after hyperinflation, contraction in money supply and sometimes severe downfall in the economic activity. In case of India, although demonetization has positively impacted the digital transactions and since then the digital transactions has been doubled but almost 99.3% of banned currency has returned failing the main aim of 2016 demonetization by Indian Government (RBI Annual Report, August 2018). Many existing studies say that hardly 6% of India's black market wealth is actually kept in cash. There are certain pros and cons of demonetization while some studies finds a mixed response of demonetization on Indian economy. On one hand, it has helped the Indian banks in increasing their deposits base, one the other hand it has slowed down the growth of Industrial sector in India (Ashwani & Nataraj, 2018). However, keeping its success and failure aside, current study focus is to access the impacts of demonetization on macroeconomic indicators of which 'Exports' is one of the major one.

Exports are very crucial for any country as it helps to earn foreign exchange for the country. Many existing studies have assessed the impact of demonetization on overall economic growth and exports but sector specific studies are very less available especially on the sectors which are most cash dependant like Handicrafts. Indian Handicrafts Industry is one of such sector which is most decentralized and unorganized at the same time the most important source of foreign exchange for India. Prior to Demonetization also, the handicrafts industry was suffering was from so many problems of which shortage of finance and lack of financial support is the major problem for small artisans and businesses. With Demonetization, these issues have come up more severely and have shown hard situations to the small and medium businesses.

Indian handicrafts industry is highly fragmented with more than seven million regional artisans and around 67,000 exporters/export houses promoting regional art and craftsmanship both in the domestic and global markets. The handicrafts sector plays an immense role in economic development by earning huge foreign exchange as well as creating employment for millions. Handicrafts is not merely an industry, it symbolizes the culture, local skills, and artistry of a region. Handicraft items in India comprise of Art metalware, wood wares,

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hand-printed textiles and scarves, embroidered crocheted goods, shawls, zari goods, imitation jewelry items, attars, and other miscellaneous handicraft items. As these items are highly labour intensive and more artistic in nature, it mostly falls under the ambit of unorganized and cash dependant sector which is more sensitive to initiatives like demonetization. With two years passed of demonetization, still many industries are not able to cope with the effects of demonetization. Present study tried to analyse the impact of demonetization on Indian Handicrafts Industry and more importantly on the exports of Handicrafts from India. As the sector is mainly unorganized and labour intensive, it is more dependent on cash for their working capital requirements.

Handicrafts industry being of the highly fragmented sector with more than seven million regional artisans and around 67,000 exporters/export houses promoting regional art and craftsmanship both in the domestic and global markets. SMEs in the handicrafts sector got an immediate shock as they had no mechanisms of the transaction except cash. There manufacturing and production has disturbed and ultimately exports. However, there are big and medium size businesses which has not much effected but in some way or other the overall impact on the industry is significant. Study will put light on the situation of the Industry, both pre and post demonetization and will highlight the concerns and feedback of the industry.

LITERATURE REVIEW

Due to the short period, literature available in this regard is very less. Some available studies showcasing India post Demonetization, indicated many short term losses for exports, labour and capital management in the market. Unskilled labour has impacted badly and employment rate has fallen. Loss in production due to liquidity crunch with negative impact on working capital of small and medium firms. Given the share of informal workforce absorbed in industry, manufacturing & MSME were amongst the worst hit sectors from Demonetization (**Singh, 2018)**. **Kumar & Bumra** (2017) analyzed the impact of demonetization on various prominent sectors of Indian economy such as automobile, pharmaceutical, agriculture and consumer market sector. Comparing sectors performance pre and post demonetization, a crash crunch has been created in the economy where in every sector was effected with evidenced downfall in sales and production activity. Although, author indicated only short term implications for cash intensive sectors. **Sonia & Girdhar (2017)** studied the impacts of demonetization on various key sectors of the economy and suggested that demonetization has impacted every sector in different way. The small business and service industry faced major problems in their day to day business life. Their sales have been slow down due to lack of currency in the market as cash transactions play a very important role in the life of service industry. **Datta & Bhattacharyya (2016)** highlighted the problems and prospects of Indian Handicraft Sector. Sector providing employment to millions generates substantial foreign exchange, while preserving the country's cultural heritage. However, sector suffers for being unorganized, low capital, poor exposure to new technologies, absence of market intelligence and poor institutional framework. Artisans are heavily dependent on the middlemen for raw materials, finance and market for finished products.

Saqlain (2018) indicated the fall in exports, rise in cost of production and low productivity in Indian textile industry. To see the impact of demonetization on demand, productivity, cash flow and digitization in Indian Textile Industry, a detailed questionnaire has been designed, the responses are collected and analysed from the top and middle level management around 300 respondents have been approached. Findings shows that demand of textile products shows a decreasing trend due to reduced currency circulation in the textile market, this resulted in inventory accumulation leading to decrease in overall textile productivity. The cash flow certainly took a back-step n distorted the entire value chain from farmers to textile manufacturing companies. **Shah & Patel (2017)** based on the primary data, interview schedule, and focus group discussion and observation methods to see the problems faced by handicrafts artisans of Gujarat. Findings shows that despite of various government and non-government efforts, the reality is not satisfactory. The handicraft artisans suffer a lot due to being unorganized, poor exposure to new technologies, absence of market intelligence and a poor institutional framework.

Karigoleshwar (2017) based of secondary data, highlighting the negative impacts of demonetisation on jobs and the small and medium enterprises (SMEs) in the country. Author indicated downfall in the employment rate, sales, and trader's incomes as well as in the production. Mostly, MSMEs have lost their shelter and market as the effect of demonetization. **Ahmad Bhat and Yadav (2016)** reflects Indian Handicrafts sector as one of the promising and most productive sectors in Indian economy. With strong contribution of Handicrafts in foreign inflows and its growth in the last 15 years, study shows that sector have huge potential for growth both in the domestic and the foreign markets. More focused efforts are required on the part of government to make it a more organised sector. **Bano (2016)** assessed the role of Handicrafts, especially the carpet industry of India in the economic development of the country. Based on the secondary data, author finds that the Indian carpets are

almost 100% export oriented in quality and providing direct employment to millions. Author suggest that use of machines and introducing new technology to weavers, more connectivity of carpet producing regions and exposure can take Indian carpet industry to the next level. With the unavailability of studies focusing on Handicrafts sector and exports, current study aims to fulfil the gap by studying the trends of handicrafts export from India and the possible impacts of Demonetization on exports. The paper seeks to highlight the importance of Indian handicrafts industry with strong contribution in exports and employment opportunities in the country.

OBJECTIVES

- To highlight the trends and contribution of handicrafts Industry in Exports.
- To identify and highlight the problems faced by the handicraft sector in India.
- To analyses the impact of demonetization on the exports of Handicraft products.

RESEARCH METHODOLOGY

Study is descriptive in nature and is based on the secondary data available from various research reports of Reserve Bank of India (RBI) and Handicrafts Export Promotion Council (EPCH) and other published and online work in the public domain. There is scope of qualitative analysis too based on the availability of the respondents.

INDIAN HANDICRAFTS INDUSTRY

There are about 36 million micro, small and medium enterprises (MSMEs) contributing around 40 % to India's exports and employment to over 80 million persons. Within the MSME sector, handlooms and handicrafts are highly labour intensive sectors and more dependent on cash for their working capital requirements. The Handicraft sector occupies a pivotal role in India's economy as it contributes significantly to export earnings and employment generation. Handicrafts sector was traditionally considered as a cottage industry dependent on social, economic and regional factors. However, the status have changed now as the rich craft traditions of the past. Many Indian Traditional Handicrafts continues to flourish due to their popularity in local as well foreign markets. Indian made handicrafts like rich brocades and zari work, etc. have huge popularity in both domestic and foreign markets. There is a huge domestic market for a utilitarian craft items such as bedcovers, tablemats, garden pots, jute and coir items etc. in the international market. Apart from the textiles, Indian brass and wooden items are equally popular in foreign markets of USA, Europe and UK. Many sectors of the handicrafts industry have now become full scale large industries like carpet weaving, traditional textiles, gem cutting and polishing, gems and jewellery, leather, jute products etc. are some industries, which are mounting with great pace. Indian intricate design of carpet and Brassware has attracted the world markets. Indian handicrafts are exported across geographies, with the top 10 destinations being the US, the UK, the UAE, Germany, France, Latin American countries (LAC), Italy, the Netherlands, Canada and Australia.

PROBLEMS FACED BY THE INDIAN HANDICRAFT SECTOR

Low education - Mostly rural and tribal people are involved in this profession and their literacy percentage is comparatively very low. This is the root of all problems faced by artisans of handicraft. In recent report of DASRA (2013), it is clearly stated that nearly all problems faced by craftsman is outcome of low literacy level in them. Mahesh Prasad. (2002), has also found that uneducated craftsman have suffered more of all things in handicraft industry.

Lack of skilled labour - The development and popularity of handicraft industry in almost all the handicrafts hubs is lack of skilled labour.

Lack of financial support - Scarcity of Working capital is one of the most important reasons behind the suffering of Indian Handicrafts sector. Majority of the people engaged in this profession are facing lack of capital and funding problems.

Lack of information - Poor exposure to new technologies is yet another major problem being faced by Indian Handicraft sector. As most of the artisans are not much educated, they are not linked with the information channel properly and remain unaware of the recent advancements and techniques in their field. Though government has introduced some easy

loan plans and financial schemes for this group in its recent five year plan but because of improper information channel and linkage they are unaware of these plans to avail them.

Lack of organized identity– Indian Handicrafts sector is highly fragmented and unorganized which is the main reason for their ignorant and backwardness. It is true that Indian Handicrafts have been globalized today but not artisans.

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Lack of knowledge about latest designs/current market demands – India is a land of multiple ethnicities and cultures giving birth to 100's of local handicrafts and artistry. Most of them are living in rural and semi-urban areas where knowledge is not properly disseminated to these artisans to make their product competitive from the latest machine made products produced on large scale in big industries. As machine made products are cheap, identical and fast to be produced, they are posing serious threat to Indian Handicraft artisans.

Less information about exports – Even many sectors are having high contribution in exports such as textiles and brassware, but still many of the artisans located in rural or remote areas, are not even know what exports is. Even the product produced by them is fantastic in quality but they are not able to find the market for their product. They generally have very less information about Market and Marketing.

Above mentioned are some major problems faced by the handicrafts sector. Unorganized image and lack of financial support is one of the major concerns hampering the growth of the sector. There still may be many places in India which has the potential to grow by showcasing their indigenous products. Such products may be very attractive with high potential in the foreign markets but are not given an opportunity due to the lack of knowledge and support to the small manufacturers. Arrangements for Finance for the business have always been the major hurdle for small business. Due to lack of sufficient collateral, they are forced to take the loans from the unorganized sector. Demonetization has created more problems for the business in terms of finance. Businesses which are running on cash basis or which are usually dependent on the local unorganized money lenders has left with no option other than to shut down their business. However, this was in case of very small business, even medium level firms has also faced sever working capital crunches which has closed down their production activities and therefore the overall sales and exports has been affected.

HANDICRAFTS EXPORTS FROM INDIA

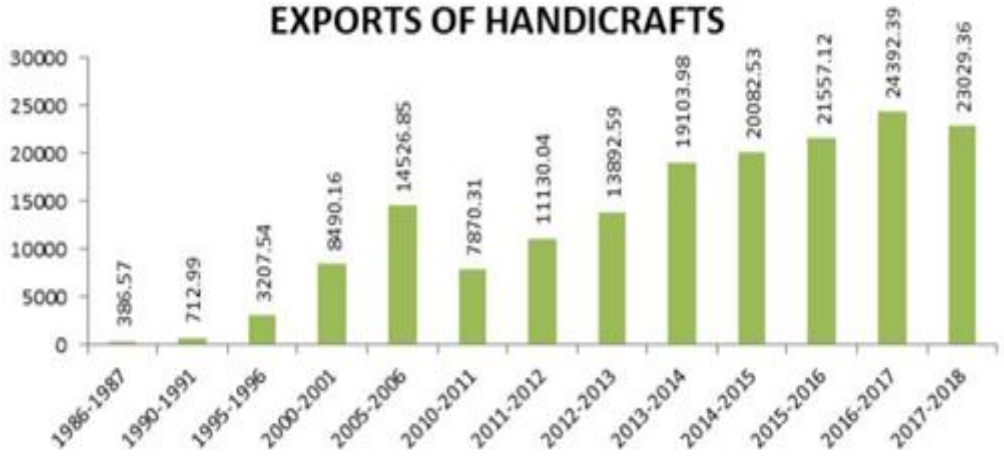
As per the data available from Handicrafts Export Promotion Council (EPCH), Handicrafts export from India has seen a continuous increasing trend since the past 7 years. Export has increased more than 3 times from Rs. 787.31 Cr in 2010-11 to 24329.36 Cr in the year 2016017 but has fallen suddenly by 1363.03 Cr in 2017-18.

Fig. 1 is showing that the Handicraft's exports is continuously rising in the last 8 years and has shown a decrease of ₹1363.03 Crores (5.59%) in the FY2018. This has not happened in the last many years, demonetization is one of the major anticipated reason for this downfall.

During the period, the exports of Wood wares, Embroidered & Crochetted goods, Shawls as Art wares, Zari & Zari goods and Agarbatties & Attars showed the increasing trends of 8.97%, 2.42%, 31.40%, 42.99% and 7.71% respectively. However, Art Metal wares, Hand

Printed Textiles, Imitation Jewellery and Misc. Handicrafts got decreased by 15.93%, 4.74%, 4.84% and 14.50% respectively. Both the Art ware and Textiles export has fallen during the year 2017-18, which has the maximum share in Indian Handicrafts exports.

Figure 1: Exports of Handicrafts (in Crores)



Source: EPCH Trade Data, DGCI & S, Kolkata

Figure 2: Components of Handicrafts Exports

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STATEMENT SHOWING EXPORT FIGURE OF HANDICRAFTS DURING THE PERIOD OF APRIL-MARCH 2017-2018 COMPARED TO THE CORRESPONDING PERIOD OF APRIL-MARCH 2016-2017

ITEMS	₹ IN CR.		INCREASE /DECREASE IN % OVER 2016-17	US$ IN MILLIONS		INCREASE IN % OVER 2016-17
	2016-17 (APRIL-MARCH)	2017-18		2016-17 (APRIL-MARCH)	2017-18	
				67.0295	64.445	
ARTMETAL WARES	4705.64	3955.81	-15.93	702.51	613.73	-12.64
WOODWARES	3916.01	4267.37	8.97	584.09	662.47	13.42
HANDPRINTED TEXTILES & SCARAVES	3847.40	3665.0	-4.7	573.85	568.6	-0.9
EMBROIDERED & CROCHETTED GOODS	3227.00	3305.16	2.42	481.05	512.79	6.60
SHAWLS AS ARTWARES	3.85	5.06	31.40	0.57	0.83	45.61
ZARI & ZARI GOODS	69.02	98.69	42.99	10.30	15.37	49.22
IMMITATION JEWELLERY	1619.09	1540.80	-4.84	241.59	239.05	-1.05
AGARBATIES & ATTARS	912.50	982.82	7.71	136.19	152.48	11.96
MISC. HANDICRAFTS	6091.89	5208.64	-14.50	908.90	808.15	-11.08
TOTAL	24392.39	23029.36	-5.59	3639.05	3573.49	-1.80

Source: EPCH Trade Data, DGCI & S, Kolkata

IMPACT OF DEMONETIZATION ON EXPORTS

India's vibrant handicraft and artisan sector which provided employment to millions of people had hard hit by the government's decision on Demonetization. As, the work has still to pick up imposition of GST has made the condition more worse by increasing the problem of working capital with the small and medium enterprises. The contractual labour in the apparel, handicrafts and gems and jewellery sectors reportedly suffered as payments from employers became constrained. The cash shortage also adversely affected informal sources of finance. Below are some cases of short interviews conducted by different media groups and research organisations to highlight the concerns and problems of industry after demonetization.

ASSOCHAM conducted a survey on December 19, 2016 on assessing the impact of demonetization in selected industry and areas. Findings indicated a sharp decline in arrivals of raw material to cities like Agra, Kanpur and Kolkata. In the view of constraints on availability of raw material as well as transportation and labour bottlenecks, about 60 out of 100 respondents indicated that they were no longer taking export orders.

Surat Power looms – There are around 6.5 lakh power looms in Surat, employing about 7 lakh workers. With 400 textile processing units employing over 3 lakh workers, Surat produces 40 million meters of fabric every day. As per the interviews conducted by around 95% of the wages to the textile workers are paid in cash. Due to severe liquidity crisis after Demonetization, weaving and textile processing units drastically cut down production by almost 70% which has negatively impacted their exports.

Tirupur textile industry (Tamil Nadu) - The story is the same across the country. Tirupur have 8,500 small scale, medium and large firms with a turnover of over Rs 40,000 crore every year. These companies were supplying to larger companies who in turn were exporting a large part of these textiles. Following demonetisation, there are not even 500 companies functioning here with large numbers of the women workers having been laid off. Many exporters in Tirupur are expecting their business revenues to fall by 30-40%, due to the Demonetization which comes when global apparel consumption is facing a downtrend. With the severe cash crunch, they have been unable to adequately source material, labour and capital to process and fulfil the orders.

Peetal Nagri (Moradabad) - Brassware export industry in Moradabad earns the city over $1 billion in annual revenue. In fact, Moradabad is one of the largest handicrafts exporters in India. Workers in Peetal Nagri in Moradabad pointed out that artisans and laborers who work in the brass industry continue to be hard hit. Earnings have shrunk to less than half with many people having lost their jobs. The brassware industry with a turnover of Rs 8,000 crore employing 3-4 lakh artisans and workers have seen the workforce come down substantially as also have earnings. Spiraling prices of raw materials such as aluminum and copper sheets have made things worse for the brassware industry. For the production, raw materials are obtained from scrap which is totally cash-driven, Demonetization lead to prices rise of raw material with is either making prices of our products uncompetitive in the foreign market or the manufacturers have to bear the losses. Rising raw material prices are affecting the bottom line of exporters, as foreign buyers are not ready to accept higher prices. In this situation, only the big and medium exporting firms was able to sustain and many small firms has shut down their businesses and incurred losses. Not only in case of the new orders, the orders in hand with the exporters has got delayed and cancelled due to unavailability of funds in hand.

Babugarh's moodas and chairs - Babugarh in the heart of Ajmer which is home to over 1,100 families complaining that note ban dealt them a body blow from which they have not recovered. Ramwati is a small manufacturer and supplier, look what she says: "It's been one year since the note ban took place and the orders

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have still to pick up. The main problem is there is no money in the market. We buy our raw material on credit. Once our chairs, moodas, chattais etc. are made, we sell the stuff to the wholesaler. In the past, the wholesaler paid us for the entire consignment. Now they will pay us for every item sold. That means we are left to pay interest on our credit amount and sometimes a payment can take up to three months to come in."

Handloom saris (West Bengal) - Workshops of Shantipuri taant saris employing over 30,000 weavers in Phulia and Shantipur nosedived after Demonetization and weavers who used to be paid between Rs 250 to Rs 500 per day were forced to work for as little as Rs 25 per day. Sales have picked up marginally but they are nowhere close to what they were prior to Demonetization.

The famous 120 leather factories supplying the distinctive leather work in the Shantiniketan region resulted in over 1,000 artisans lose their jobs The trade was gasping for breath as demand had dipped since the second week of November last year. Many small factories had been forced to lay off workers and most of those laid off have not resumed their jobs since. There was no handloom and artisan sector which was not hit by demonetisation.

Workers in the lak bangles industry complained against Demonetization and GST. As Noor Mohammed of Jaipur who makes lak bangles said, “Demonetization brought our sales down by half. Now with GST, we are being taxed 5% and that has worsened our plight."

Thousands of handloom weavers weaving the legendary Benarasi saris also complained how this "twin evil" has affected them. Thread suppliers, wholesalers and even weavers are now being expected to pay GST on the saris. This twin complaint against demonetization and GST resounds across all sectors.

FINDINGS & CONCLUSION

Indian Handicrafts Industry, especially in the rural India have been worst hit by demonetisation. Things, however, are more complicated for the small exporters in labour-intensive sectors, where most of the transactions happen in cash. Although the cash-crunch is not acute any more, the impact is continuing because it is like a process. Many businesses are still down and is not the same as it is before the demonetization. Japanese financial major Nomura, in a recent report, had said demonetization has hit export volumes much more than imports, and that the cash crunch induced by demonetization has hurt cash-intensive export sectors such as gems & jewellery and textiles. Major impacts of demonetization on Handicraft’s Industry

1. Demand drops, production costs soar
2. Unskilled labour have been badly affected (Worst-hit are the artisans who work on a contractual basis)
3. Affected informal sources of finance.
4. Risen Unemployment
5. Huge working capital crunch, Factories operating below capacity
6. Costs are up (Making Indian products competitive in the foreign market)
7. Downfall in exports

No doubt that demonetization was a great initiative by Government of India with clear cut objectives to curb corruption and promote digital transactions. On the grass root level, Demonetization has said to negatively impact the country’s export in the short term especially the informal sector. It can be said that it has significantly impacted the exports of Indian Handicrafts which is one of the major source of livelihood and foreign earnings for the country. All indicators exports, sales, traders’ incomes, production, and employment are down. A study by the India Development Foundation showed that the slowdown had triggered gloomy forecasts as businesses struggled to come to terms with the after-effects of the demonetization. Even now, no organization has come up with a comprehensive survey on how adverse its impact has been on the Handicrafts industry.

LIMITATIONS & FUTURE SCOPE

This study has the inherent limitations that adequate research has not being carried out on the phenomenon of demonetization especially in case of Handicrafts sector. Hence there is no

Sufficient review of literature available for the inferences to be made through an exhaustive reference. Only observational and exploratory study was done. And there is scope of qualitative analysis based on the availability of the respondents.

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A COMPARATIVE STUDY ON DIFFERENT STYLES OF MANAGEMENT: A CASE OF INDIA AND CHINA

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ABSTRACT
Even after the emergence of cross-border business world, the advent of "culture-free" business practices has yet to be transpired that brings with itself the complexities are associated with distinct values and beliefs in spite of the growing interdependence among countries. Both India and China are the countries with great diversity with substantial regional, cultural and religious variations across the country. The existence of a standard management practice that can be applied in any culture is still unsettled. The paper aimed to offer a comparative approach to the management practices followed by Indian and Chinese Organizations. This paper reviews the previous literature that has focused on comparing various issues related to business and management in India and China. The findings indicated that though there are substantial differences in staffing, leading and controlling activities of both the countries, planning and organizing activities offer a vague variation. Moreover the reason for persistence in practices scaled using dimensions of hofstede's model. Finally the paper concludes with the acceptance that no 'one' management practice can be adopted across every culture and country.

Keywords: Culture, India-China, Management, Management elements, Management practice.

1. INTRODUCTION
The Asia's economic giants- China and India- have always had an erratic history. They share a border, have fought a bitter war and continue to compete for geopolitical supremacy in the region. Political ambitions and distrust on either side have sometimes been at the cost of better economic sense **(Bhatia, 2016).** Despite these incongruities, these countries have fascinated each other over the past two millennia with unique examples of unbroken civilizations extant for over 3000 years, and with significant mutual influence in areas like religion and ordinarily cultural symbols like art, literature etc **(Subramanian, 2007, Anand, 2013).**

Both share a past as two of the most prosperous nations on earth **(Kalish, 2006).** Long before the emergence of Europe, China and India have in their name, a considerate amount of inventions and discoveries, and a higher standard of living **(Bhasin, 2007).** However, in the early 19th century, both countries suffered a huge plunge and were surpassed by Europe and the US. The situation further became worse, when in the mid 20th century; both countries faced an extreme poverty. For China, fortune began to change when Deng Xiaoping came to power in 1978. He brought about changes in market-oriented and economic policies in the country. For India, the situation actuated as a setback for the financial crisis that was faced in early 1990s. The government started taking gradual steps along a market-oriented path. The consequences of this remarkable upturn are profound and far-reaching and are causing the world economies to relentlessly draw towards them **(Quer et al, 2014).**

A considerable interest in differing attitudes, behaviour, management style and values of managers has arising, attributing to the rapid globalization of the world's economy and cultural diversification **(Hofstede, 2001**. Therefore by establishing relationships between these concepts and management practices and effectiveness, one can deduce the impact of cultural variables on management practices and effectiveness **(Anant, 1975).**

2. LITERATURE REVIEW
A great attention has been given in literature regarding the management practices and styles of the international companies, especially China. But the comparison between India and China is very limited and scarce. Moreover, the comparisons have been made on the basis of economic growth, FDI and GDP **(Bosworth & Collins, 2008, Agrawal & Khan, 2011)**, quality practices **(Ragunathan et al. 1997, Zhao et al, 1994, Rao, 1999),** talent management **(Cooke et al. 2013, Ariss et al., 2014).**

When it comes to comparing the management styles, U.S. and Japan have received a lot of attention. There is an abundance of literature on both U.S. and Japanese management since they present contrasting managerial approaches. Like in a paper by **Culpan & Kucukemiroglu (1993),** the management styles of US and Japan is compared in a conceptual model using different six managerial dimensions: supervisory style, decision-making, communication pattern, control mechanism, interdepartmental relationships, and paternalistic orientation. The findings indicated that there is a considerable amount of variations in the management styles of the countries and within each dimensions also. In yet another paper by **Weihrich, (1990),** Chinese managerial practices were identified and an analysis was made to know which of the two managerial approaches, i.e. U.S. and Japan, would be appropriate to make Chinese businesses more effective and efficient. Some studies have

also analogized the culture of countries using Hofstede's model like the one by **Migliore, (2011).** The inter-relational aspects of personality traits has been assessed quantitatively by the author using five-factor model of personality and Hofstede's five dimensions of culture.

The comparison between India and China is multi-dimensional. **Raghunathan et al. (1997)** pointed out significant differences among USA, India, and China with respect to quality management practices. **Patrick et al. (2003)** in their paper compared the management style of marketing managers in Australia with their counterparts in the People's Republic of China (PRC). Managers in PRC scored higher than their counter parts with respect to the dimensions like information utilization, complexity, group decision-making, risk acceptance and technology orientation. In the paper by **Quer et al (2014),** a comparative approach to the reality of China and India as regards business and strategic management were presented, analyzing the main similarities and differences between the two Asian giants. The comparison was done on the basis of key factors for success, the entry modes that can be used and the business opportunities offered.

A management style when applied in another culture loses its effectiveness. With the increasing trend of globalization in most organizations, there is an admissible increase in the study of management practices in different countries and how they lead to organizational efficiency. For the purpose of this study, the five managerial functions (Planning, organizing, staffing, leading, and controlling) will serve as a framework for comparing and analogizing the managerial approaches in these two countries. The managerial functions will then be further elaborated and expanded to know the managerial activities.

3. OBJECTIVES

The main objective of this paper is to compare the management practices in India and China and to find out the reason for the differences, if any, in their management. The objectives are framed as follows:

1. To study the management practices prevalent in Indian and Chinese organizations.

2. To analyze the similarities and differences between the management practice of both countries.

3. To know the reason behind the differences in the management practices.

4. RESEARCH METHODOLOGY

The present study is based on secondary data only. The major sources of data are management books, articles, journals, and different related research studies. The previous literature that has focused on comparing various issues related to business and management in India and China has been reviewed and synthesized the literature findings in relation to management practices and other spheres as an initial effort towards identifying the differences and similarities between the two countries. Although various models for comparing management practices have been proposed, the present study shall adopt the model used by **Weihrich (1990),** using the elements of managerial functions.

5. MANAGEMENT PRACTICES IN INDIA AND CHINA

To understand the management practices prevalent in India and China, Weihrich model (1990) has been used. The managerial elements involving planning, organizing, staffing, leading and controlling will serve as a framework for the comparison of managerial activities in both countries.

In both Indian and Chinese organizations, planning has a short and long-term orientation based on the circumstances. The decision making in Indian companies seems to be time-consuming, but when one is able to adjust with these circumstances, a better understanding and smooth decision-making process are achieved **(Mark, 2012).** Subordinates actively participate in planning, ideation, and related processes, but they look to their leader to finalize and bring closure to the process **(Laxman, 2015).** Whereas in China, the managers had their authority to make any decision in the organizations acknowledged by their employees but it is not desirable of subordinate to disagree on manager's idea and communicate directly **(Khairullah & Khairullah 2013).** Decision making is strongly centralized and hierarchical, where decision flow is from top to down **(Weihrich, 2000).**

Majority of the Indian Companies follow a functional structure **(PwC, 2013)**, rigidly organized and hierarchical and they maintain a highly centralized power structure **(Walker, 2010).** The Chinese organization followed a structure that is formal and bureaucratic. As the Chinese economy grows more diverse and new private and foreign-run firms become more common, the organizational structure of all firms is likely to become more flexible and decentralized **(Walker, 2010).** Moreover, there is a strong organizational culture in China **(Weihrich, 2000).**

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Sources of recruitment in Indian companies are campus recruitment, referrals, and consultancies with increasing online employment agencies and social media hires **(Dasgupta, 2018),** whereas Chinese firms relied more heavily on schools than on other firms as sources of new employees **(Weihrich, 2000, Li et al. 2015).** Indian companies invest heavily in their employees, especially their new hires, because they see employees as key to building the organizational capabilities that drive competitiveness (Peter et al., 2010) that applies not only to their current jobs but is used to enhance employee capabilities to accomplish various tasks and to create a flexible workforce **(Erwee & Paelmke, 2008)**. In contrast, Chinese managers do not have a positive attitude to train employees, the training system is defective and there is lack of a superior and tracking system which causes training inefficiency **(Sun, 2015).** While promotions were supposed to be based on performance, potential ability, and education, the reality was that family ties and good relations with top managers were extremely important for advancement **(Weihrich, 2000).** In India, work experience, contribution, etc. of the professionals and business managers have more avenue to success, 'relations' are not the only reason for success **(Capelli et al, 2013).**

Indian managers and workers prefer a paternalistic style of leadership where managers assume social support roles in addition to their work-related roles for their employees **(Roopal & Sangya, 2012).** The Chinese leadership style is also predominantly paternalistic in nature where the leaders are less likely to give rationales for decisions and are more inclined to issue directives known as the 'directive' leadership style **(HayGroup, 2007).** Indians are motivated by both individual and group achievements whereas employees in China are motivated through the group rather than individual achievement **(Walker, 2010).** The Chinese leader sought to avoid confrontation and come forward to resolve the conflict and establish peace among his subordinates (**Weihrich, 2000 & Rahul, 2011).**

The Indian managers set the well-specified targets and control the performance to maintain the efficiency and competitiveness. Indian system is based on individual targets because they prefer to be evaluated to be more on qualitative aspects of their work **(Shrivastava & Shrivastava, 2012).** With respect to China, the group leader is expected to exercise control over the group and the group assumed responsibility for pursuing and achieving group goals and objectives **(Weihrich, 2000).**

6. COMPARISON IN MANAGEMENT PRACTICES OF INDIA AND CHINA

With the help of Weihrich model, various managerial practices that are prevalent in India and China have been analyzed. Every activity has various sub-dimensions, which is used to draft the following figure that compares the managerial activities in both countries.

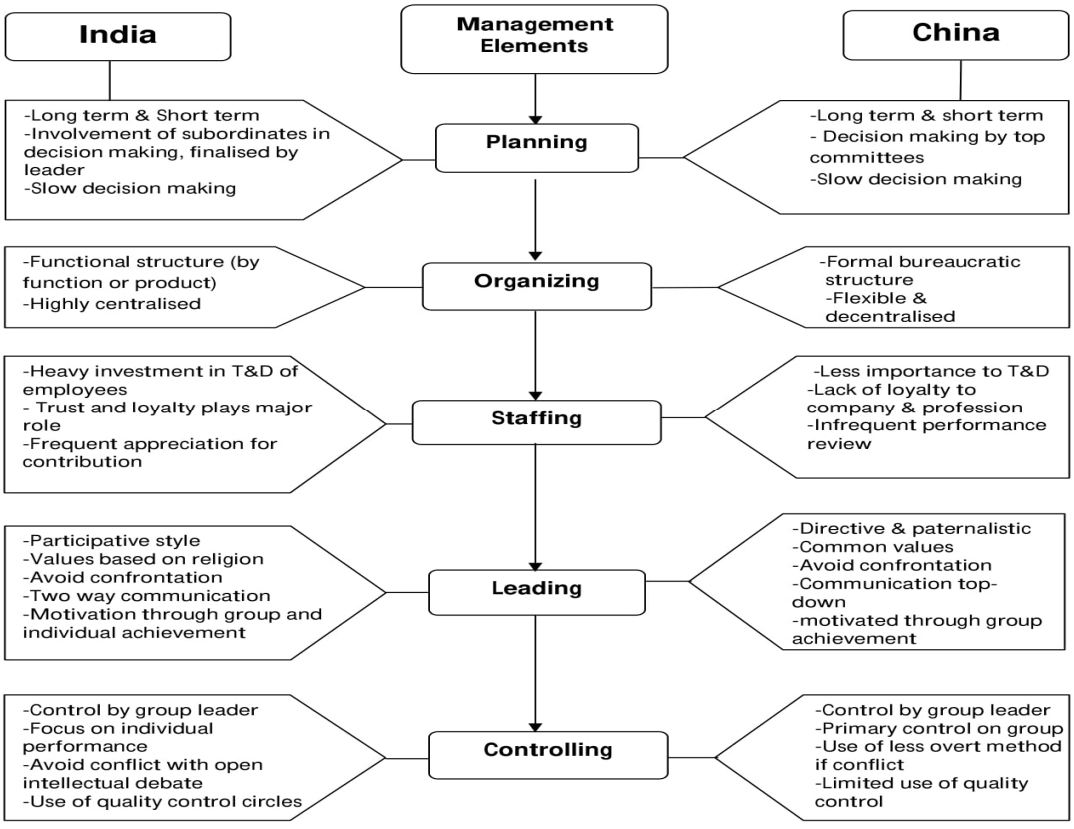

Figure-1: Comparison of Management Practices

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7. PROBABLE REASONS FOR DIFFERENCES IN MANAGEMENT PRACTICES

Management practices vary considerably across countries and across firms. While practices of some countries are considered better than another, the question arises, why one would not just simply adopt the 'better' management practices for their own country. The probable reason may be the difference between their cultures **(Hofstede, 2001)** or due to environmental constraints **(Farmer & Richman, 1965).** For the purpose of current study Hofstede's dimensions are used. The comparison of both the countries is presented below based on their overall score in each dimension.

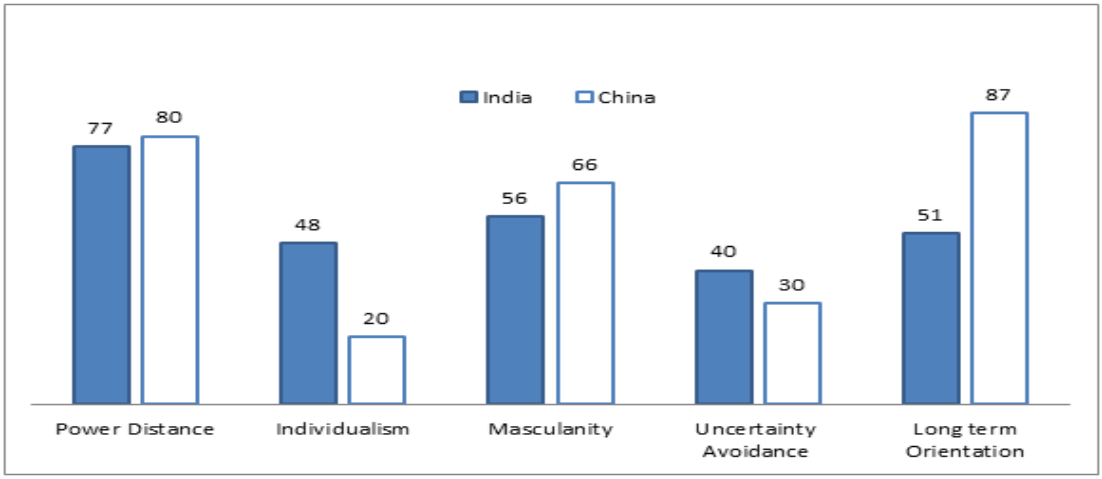

Figure-2: Comparison of countries based on Hofstede's dimensions (HofstedeInsights)

, It can be seen that the power distance score is higher for both the countries. It indicates a high level of inequality and wealth distribution within the society. But the society accepts it as a cultural norm. Real power is centralized and communication is top- down in directive style **(Juhasz, 2014).** The individualism score is higher for India which depicts that the people here deal favourably with those they know and trust, and the opinion of close ones including workgroup, neighbours influence the actions of individuals (**Thakur, 2010)**, whereas in China, people place group interest prior to their own interest. In-group considerations affect hiring and promotions with closer in-groups (such as family) are getting preferential treatment. Personal relationships prevail over task and company **(Stone, 2012).** Both India and China are considered a masculine society as can be seen in the figure 2, meaning they are very driven by successful, competition, and achievements. Long working hours, pays promotion, etc are considered as a measure of success **(MarketMeChina, 2014).** In India, there is acceptance of imperfection; nothing has to be perfect nor has to go exactly as planned. India is traditionally a patient country where tolerance for the unexpected is high **(Juhasz, 2014).** Chinese people need a structure and a plan and would prefer stability to adventure. Chinese people don't like taking risks, which is why it is so important to build Xin (trust) with them **(Stone, 2012).** Long-term orientation score of Indian managers is higher than Chinese managers. The culture is more persistent. It is expected that the Indian businessperson will provide detailed business plans because of their need for Long-Term Orientations (**Juhasz, 2012)**. Owing to the high score for Chinese managers, they will dedicate whatever time is required to achieve their goals. This is seen in the very time consuming Chinese negotiation process **(Stone, 2012).**

China is still more or less a communist country. This means that all the enterprises there are run by the state. State-run enterprises are usually not efficient and definitely not innovative. On the other hand, the Indian industry is based on innovative enterprises. Given the competitive nature of the world economy, the Indian industry stands a better chance at success in the future **(Management study guide, 2016).** Relationship building is a very important factor in India, especially at the professional level. In India trend of giving ideal deals to a known person is followed. Therefore, more you maintain the cordial and friendly relations more it is useful whereas Chinese follow very formal relationships in business **(Business maps of India, 2010).**

8. CONCLUSION

Even after the emergence of cross-border business world, the advent of "culture-free" business practices has yet to be transpired that brings with itself the complexities are associated with distinct values and beliefs in spite of the growing interdependence among countries. In fact, the variation in management practices is one of the main variables for the large differences in productivity across firms and countries. Both India and China are the countries with great diversity with substantial regional, cultural and religious variations across the country. It should be impossible to generalize about the society, organizations, and leaders in both countries and also the management practices in the country.

Both these management cultures are in a time of transition—on a local level, cultural values and norms continue to exert a strong influence, while on an international level, the influences of globalization, technology, and Western management practices have increased over the past decades. While China and India are striving to have an exposure and experience of western management practices, the countries around the world, on the other hand, are seeking market penetration and business growth in these countries. Regardless of the pace of change, it is important to appreciate the traditional cultural values such as the concept of hierarchy, the nature of social and community networks, the implication of continuity and stability, and prevalence for flexibility and ambiguity, continue to impact managerial practice and remain influential features of the cross-cultural management landscape.

From the present study, it is evident that the major difference between the countries lies in the areas of staffing, leading and controlling whereas the planning and organizing activities offer vague variations. With their own management practices and styles, we can say that both the countries are taking crucial ladder towards the escalation to reach pinnacles in their own way.

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Liu, W.B, Wongcha A, & Peng, K.C. (2012), "Adopting Super-Efficiency And Tobit Model On Analyzing the Efficiency of Teacher's Colleges In Thailand", International Journal on New Trends In Education and Their Implications, Vol.3.3, 108 – 114.

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Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2007). *Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies* (3rd ed.). New York: McGraw-Hill.

S. Neelamegham," Marketing in India, Cases and Reading, Vikas Publishing House Pvt. Ltd, III Edition, 2000.

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