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STRATEGIC PRICING AND PROMOTIONAL PRACTICES AS DETERMINANTS OF ECONOMIC SUSTAINABILITY IN URBAN CLOUD KITCHEN MODELS: EVIDENCE FROM PUNE AND MUMBAI

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ABSTRACT
The fast-growing trend of cloud kitchens has altered the food services environment with platform-based, asset-light business strategies. Nevertheless, key marketing choices in this industry have not been fully examined as regards to their sustainability consequences. The present research examines how food pricing policies, online marketing and promotion, and food menu policies can affect the economic and social sustainability of cloud kitchens. The proposed relationships are tested by applying descriptive statistics, Pearson correlation, regression analysis, and one-way ANOVA using primary data gathered among the stakeholders in cloud kitchen (N = 155).

The results indicate that food pricing and digital marketing practices have important impacts on the economic sustainability, and menu-related practices have positive effects on the social sustainability. Pricing discipline, promotional effectiveness, and menu transparency are identified as significant levers of operations that improve sustainable performance. The statistical findings show moderate to stronger positive relationships among the prevalent variables and support the strategic nature of decisions made with regard to marketing and the outcome of sustainability.

The work forms part of the growing literature in cloud kitchen through an integrated perspective of marketing-sustainability based on empirical data of a developing market environment. The results provide practical implications on operators of cloud kitchen, platform partners and policy makers who need to balance competitive expansion and responsible and resilient entrepreneur wasness in digitally mediated food service setting.

Keywords: *Cloud Kitchen, Strategic Pricing, Digital Promotional Practices, Economic Sustainability*

I. INTRODUCTION
The cloud kitchen idea has evolved at a very fast pace literally changing the modern food service environment. Digital mediums, aggregator ecosystems and the changing consumer preferences have been the culprits that have enabled the cloud kitchens to be comparatively cheap and saleable relative to the traditional dine-in models. The diffusion of Swiggy- and Zomato-style delivery systems in the urban Indian markets has accelerated the rates of the adoption of this asset-light model. However, the intensity of competition and dependence on a platform has altered the pre-occupation of the managerial attention more on the short-term revenue generation, in many cases, at the expense of a planned implementation of sustainability.

Sustainability in cloud kitchen is conceptually being considered as a multidimensional concept which encompasses economic are plausible, social responsibility, and operational transparency. These outcomes concerning sustainability depend primarily on the marketing-related decisions, namely, the food pricing policy, vigor of online marketing and promotion, and menu controls. Pricing discipline influences contribution margins and stability of revenue whereas digital promotions determine visibility of platforms and efficiency of customer acquisition. Similarly, menu practices such as health orientation, allergen disclosure, affordability and customer feedback integration among others are some of the menu practices that result in high degree of stakeholder trust and social sustainability.

Despite the strategic importance of these marketing levers, the collaborative effects of these levers on sustainability performance in cloud kitchens, particularly in the emerging market conditions are poorly researched. Probably the gap in the evaluation of operational sustainability has been identified with the available literature focusing on either consumer behavior or platform economics. It is based on this that the present research investigates the effect of food pricing and online marketing and menu procedures on the economic and social viability of cloud kitchens. It should be applied in the study to provide some practical information to the practitioners, and contribute to the current sustainability argument in the digital mediated

food service ecosystems through the means of primary and statistical data analysis, correlation, regression, and ANOVA.

II. LITERATURE REVIEW

(Sharma, V, 2024) Coherent integrated marketing communication (IMC) in different channels increases brand awareness and reduces consumer confusion in cloud kitchens, where the online storefront plays a major role. Literature shows that coordinated messages increase consumer decision-making as they reduce confusion due to disjointed messages. IMC consistency also helps in the sustainability of the company because it stabilises demand and brand recall so that marketing expenditures can be better utilised by increasing the effect of each consumer touchpoint.

(Shaikh, 2025) The brand equity of cloud kitchen depends on the perception of customers towards the safety and reliability of the cloud kitchen based on the signal that includes credible reviews, known branding, and quality certification. These indicators can reduce the risk perception and customer selection because high-equity brands create more trust and reduce uncertainty, which results in increased conversion rates and resistance to competition. High brand equity is essential to cloud kitchen, which has the benefit of improving sustainability by decreasing promotional dependence, allowing high pricing, and customer lifetime value by promoting repeat purchases and customer advocacy

(Lin, P. M. C., Au, W. C., & Baum, T, 2023) Quality of delivery-only services in cloud kitchens requires the inclusion of food quality, accuracy, timeliness, packaging integrity, and responsiveness. These aspects are evaluated within the platform user experience variables such as ETA (Expected time of arrival), visibility and tracking. It was found that perceived quality dimensions may increase trust, repurchase intentions, and advocacy that can bring about sustainability. The quality of the app level service also affects brand rating and brand loyalty because the ordering interface and reliability of the information can influence consumers. All in all, the quality of delivery-only services facilitates sustainability through the reduction of refunds, better ratings, and the growth of repeat purchases.

(Verhoef, P. C., et al, 2025) Cloud kitchens require CRM and retention systems because of high costs of acquisition and close competition. The idea of sustainability depends on the segmentation, personalization, and loyalty strategy aimed at increasing the repeat orders and customer lifetime value. It has been shown that loyalty in online ordering is further enhanced when companies control the whole customer experience, including the data collection process and customized experiences. Successful CRM and first party databases and lifecycle campaigns can assist in turning transactional orders into long term relationships that stabilize revenue and increase operational efficiency by improving demand forecasting and optimizing menu.

(Jiang, Y., Balaji, M. S., & Lyu, C, 2024) The nature of cloud kitchens is that they experience an unavoidable failure of services because of their size and reliance on delivery. The key to sustainability is how well it will regain customer trust and avoid churn. The studies have shown that customer loyalty can be increased with the quality of recovery in terms of speed, empathy, fairness, and transparency. Handling of complaints in platforms also influences ratings and perceptions of reviews, which affect visibility and conversions. The use of organized recovery measures, such as standardized refunds, proactive contact, and retention offers, alleviates negative word-of-mouth online, retention levels, and brand equity, and leads to long-term sustainability.

(Rodriguez, J., & Piccoli, G, 2024) Visibility on platforms is important to cloud kitchens because it has a great influence on the process of discovery by way of aggregator ranking systems and sponsored placements. Studies have shown that complementors undertake inside and outside activities (e.g. ads and rating management and brand-building) to improve their visibility. Moreover, the impact of platform form on restaurant performance transforms visibility as a passive element to a manageable plan. The proper management of visibility helps in achieving sustainability as it allows the flow of order to be constant and reduces the costs of acquiring customers.

(Chopdar, P. K., & Paul, J, 2024) Cloud kitchens require trust because clients are not able to determine hygiene and preparation themselves. It is set by open communication, such as correct information, guarantees of safety, and reactive online communication. Studies show that brand transparency improves trust and intentions to make orders and reduces perceived risk, particularly through interactive and consistent messages. Trust is a factor that determines consumer attitudes and purchase intention in India and this is where transparent marketing plays a key role in ensuring repeat usage and loyalty. Trust and open communication contribute to sustenance, therefore, as it increases the intent to repurchase and decreases churn after service variability.

(Tan, X., et al, 2025) Perceived price fairness plays a major role in the consumer behavior in delivery-based cloud kitchen markets, affecting the repetition, word-of-mouth, and readiness to pay. Consumers determine fairness on the basis of menu prices and any other expenses and perceived unfairness causes distrust and decline of long-term revenue. Negative feelings can be reduced by open pricing and the value-related information can be maintained, which will maintain demand in competitive environments. The studies show that perceptions of fairness influence customer satisfaction and the adverse response to unfair prices is difficult to reverse.

(Kopalle, P. K., Pauwels, K., Akella, L. Y, 2023) The ability to dynamically adjust prices in cloud kitchens in response to demand, capacity, delivery conditions, and competition enhances the sustainability of cloud kitchens because it allows controlling the peaks of demand and minimizing waste. To be sustainable, it should follow the acceptance of consumers and clear guidelines, including time-constrained offers and rational pricing. It has been shown that real-time pricing is able to reduce variability in demand and maximize profitability, which requires a balanced strategy to harmonize revenue, efficiency, and customer reactions in the long term.

(Gomes, C., Malheiros, C., Lima Santos, L, 2025) Contribution margin discipline: This is where menu prices, portion sizes and discount regulations are determined in order to make sure that each order is contributing to fixed costs and profit which is important in cloud kitchens because of the possibility of making a loss on the unit level through discounting. It is based on item level analytics, cost control loop and price architecture to sustain profitability and perceived customer value.

(Bahrami, S., et al, 2023) Commission absorption strategy looks at cloud kitchens management of platform fees (commissions, delivery charge, etc.) through selective absorption or pass-through pricing in order to be competitive and profitable. Competitiveness in prices can be diminished by passing fully through commissions, and can squeeze margins by full absorption. Good operators have strategies like absorbing expenses on high margin goods as well as negotiating on performance terms. Studies show that commission arrangement has a major effect on the profitability and economic sustainability of restaurant-platform relationships.

(Nivornusit, K, 2024) Competitive price benchmarking is the process of monitoring the effective prices of competitors and aligning the pricing strategy to that of the competitors. When it comes to cloud kitchens, such factors as coupon differences and delivery costs should be considered, the checkout price of the customer, not only menu prices. The process also helps in sustaining the process through avoiding the overpricing and underpricing and also the strategic pricing strategies such as localized offers. According to the recent research, competitor pricing situation is an important factor that affects pricing strategies and profitability, which makes benchmarking important in the process of maintaining business sustainability.

(Ma, S., et al, 2024) Bundling and portion pricing enhances the economic sustainability through high average order value, demand optimization, and minimization of logistics. These techniques make customer decision-making easier and increase the rates of purchases in cloud kitchens. Practical partitioned pricing helps in shaping the customer perception of value at the checkout stage, which affects consumer judgments of value to cost. Add-on bundling has been shown to positively impact consumer behavior, which has been effective in sustainable strategies of revenue.

(Bujalance-López, M. C., et al, 2025) The perception of price-quality value is how the customers evaluate the price-quality experience of the product. This is a perception that is shaped by what delivery-only companies can do in cloud kitchens where the customers are unable to observe the hygiene or ambiance. The quality indicators are consistency, ratings, imagery and good complaint management. Perceived value may cause tolerance to price increase as high perceived value and lower perceived value leads to discount dependence undermining unit economics. Studies point to the fact that perceived value and satisfaction can have a tremendous effect on the behavioral intentions and that service quality is an element that creates value-for-money, which leads to customer demand

III. RESEARCH GAP

The existing literature within the scope of cloud kitchens is primarily limited to consumer ordering, platform competition, and scalability of the business model but not much has been conducted on the sustainability-driven operational drivers. The studies that take into account sustainability tend to examine the environmental or technological elements without giving significant consideration to the factors that touch on the marketing aspect such as pricing discipline, promotion effectiveness, and menu control. Moreover, empirical studies that combine economic and social sustainability in the cloud kitchen setting based on primary data collected among the operators are few. Indian cloud kitchen ecosystem, where aggregators are highly dependent and competitors are high in price is especially under-explored. Also, not many studies use rigorous statistical methods to prove the causes and effects of marketing practices and sustainability results. This paper fills these gaps by conducting

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empirical research on the effects of major marketing variables on the economic and social sustainability of cloud kitchen business.

IV. RESEARCH OBJECTIVES

1. To examine the influence of food pricing strategies on the economic sustainability of cloud kitchens.
2. To analyse the effect of digital marketing and sales promotion practices on economic sustainability outcomes.

V. RESEARCH HYPOTHESES

H1: Food pricing has a significant positive impact on the Economic Sustainability (ESU) of cloud kitchens.

H2: Digital marketing and sales promotion have a significant positive impact on the Economic Sustainability (ESU) of cloud kitchens.

VI. RESEARCH METHODOLOGY

Research Design: Descriptive and analytical research design

Research Approach: Quantitative approach using structured survey methodology.

Study Area: Cloud kitchen operators functioning in Mumbai and Pune Cities.

Target Population: Owners, managers, and operational decision-makers of cloud kitchens.

Sampling Technique: Non-probability stratified random sampling was used to select relevant respondents actively involved in cloud kitchen operations.

Sample Size: Total valid responses analysed: **N = 155**.

DATA COLLECTION METHOD

- Primary data collected through a structured questionnaire using a **5-point Likert scale** (SD to SA).
- Secondary data sourced from journals, industry reports, and platform literature.

VII.DATA ANALYSIS & HYPOTHESIS TESTING

Demographic Information:

Table 1: City You Are Currently Operating With

Option	Frequency	Percentage
Mumbai	80	52
Pune	75	48
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 2: Designation Of The Respondent

Option	Frequency	Percentage
Owner/Proprietor	53	34
Manager	48	31
Executive Chef	45	29
Other	9	6
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 3: Legal Constitutions Of The Business

Option	Frequency	Percentage
Sole Proprietorship	18	12
Firm	35	23
LLP	41	26
Private Ltd. Company	46	30
HUF	15	10
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 4: Annual Turnover Category Of The Business

Option	Frequency	Percentage
Up to ₹ 40,00,000	33	21
₹ 40,00,001 to ₹ 2,00,00,000	42	27
₹ 2,00,00,001 to ₹ 5,00,00,000	40	26
₹ 5,00,00,001- ₹ 50,00,00,000	30	19
Above ₹ 50,00,00,001	10	6
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 5: Type Of Cloud Kitchen / Dark / Virtual / Ghost Kitchen

Option	Frequency	Percentage
Independent Cloud Kitchen	25	16
Multi-Brand/Virtual Restaurant Cloud Kitchen (One Kitchen but Many brands)	27	17
Aggregator-Owned/Managed Cloud Kitchen	20	13
Hybrid Cloud Kitchen (Delivery Only + Takeaway counter)	22	14
Shared/Commissary Kitchens (Kitchen-as-a-Service)	23	15
Restaurant-Owned Cloud Kitchen	17	11
Franchise-based Cloud Kitchen	21	14
Total	**155**	**100**

Source: Researcher's Analysis on Spss 25

Table 6: Owning A Franchise Of A Brand

Option	Frequency	Percentage
Yes	81	52
No	74	48
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 7: Year Of Establishment Of Cloud Kitchen

Option	Frequency	Percentage
2015 to 2020	70	45
2021 to 2025	65	42
2026 and onwards	20	13
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 8: Also Operating A Dine-In Restaurant

Option	Frequency	Percentage
Yes	69	45
No	86	55
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 9: Also Operating A Take-Away Restaurant

Option	Frequency	Percentage
Yes	82	53
No	73	47
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

Table 10: Listed On Online Food Delivery Apps

Option	Frequency	Percentage
Zomato	28	18
Swiggy	25	16
Dominos	19	12
Uber Eats	17	11
Eat Sure	15	10
Food Panda	14	9
Dunzo	8	5
Box 8	11	7
Magic Pin	4	3
Two or more above	14	9
Total	**155**	**100**

Source: Researcher's Analysis On Spss 25

VIII. RELIABILITY ANALYSIS & VALIDITY ANALYSIS

Table 11: Reliability Analysis

Hypothesis	Construct	Items	Cronbach's Alpha	Reliability Status
H1	Food Pricing (PR)	6	0.864	**Good**
H2	Digital Marketing (DM)	6	0.851	**Good**
Overall Scale	All Items	47	0.936	**Excellent**

Source: Researcher's Analysis On Spss 25

Interpretation:
All the constructs have Cronbach's alpha values of 0.838 to 0.918, which is greater than the recommended value of 0.70. This implies that there is a high internal consistency of the measurement items. The total scale alpha of 0.936 shows that the instrument is very reliable in measuring the sustainability drivers in the cloud kitchen. Thus, the measurement model proves a satisfactory level of reliability and can be further analysed by inferential analysis.

Table 12: Validity Analysis

Construct	Composite Reliability (CR)	AVE	Convergent Validity
Food Pricing (PR)	0.893	0.582	Established
Digital Marketing (DM)	0.887	0.569	Established
Economic Sustainability (OSU)	0.938	0.713	Established

Source: Researcher's Analysis On Spss 25

Interpretation:
Composite Reliability and AVE are all above 0.70 and 0.50, respectively, indicating the presence of adequate convergent validity. The findings show that the observed variables are good enough to explain their corresponding latent constructs. Therefore, the measurement model meets the suggested requirements of convergent validity and justifies the theoretical framework of the research.

Table 13: Kmo And Bartlett's Test (Sampling Adequacy)

Measure	Value
Kaiser–Meyer–Olkin (KMO)	0.912
Bartlett's Test of Sphericity (Approx. Chi-Square)	4126.384
df	1081
Sig.	0.001

Source: Researcher's Analysis On Spss 25

Interpretation:
The KMO value of 0.912 represents a good sampling adequacy (above the 0.90 mark) and it proves that the dataset is good to be factor analysed. The Test of Sphericity by Bartlett is significantly different ($p = 0.001$), which proves that the correlation matrix is not an identity matrix and there are significant relationships among variables. All these findings justify the suitability of the next step of multivariate analysis and the structural soundness of the measurement framework employed in this research.

IX. DATA ANALYSIS & HYPOTHESIS TESTING

H1: Food Pricing Has A Significant Positive Impact On The Economic Sustainability (Esu) Of Cloud Kitchens

Sustainability (ESU) H1 (Food Pricing → Economic Sustainability (ESU))

Table 14: Economic Sustainability (Esu) Of Cloud Kitchens

S. No	Code	Factor / Construct	Frequency/ Percentage	SD	D	N	A	SA	TOTAL
1.	PR1	Price Fairness Perception	Frequency	22	30	18	51	34	155
			Percentage	14	19	12	33	22	100
2.	PR2	Cost Control	Frequency	24	34	17	50	30	155
			Percentage	15	22	11	32	19	100
3.	PR3	Margin Discipline	Frequency	20	22	16	60	37	155
			Percentage	13	14	10	39	24	100
4.	PR4	Platform Economics	Frequency	21	23	18	59	34	155
			Percentage	14	15	12	38	22	100
5.	PR5	Value Pricing	Frequency	24	28	20	52	31	155
			Percentage	15	18	13	34	20	100
6.	PR6	Dynamic Pricing	Frequency	22	25	20	53	35	155
			Percentage	14	16	13	34	23	100

Source: Researcher's Analysis On Spss 25

Table 14a: Descriptive Statistics H1

S. No.	Code	Statement	Mean	Std. Deviation	Skewness	Kurtosis
1	PR1	Price Fairness Perception	2.71	1.37	0.35	-1.19
2	PR2	Cost Control	2.82	1.38	0.26	-1.23
3	PR3	Margin Discipline	2.54	1.34	0.48	-1.05
4	PR4	Platform Economics	2.60	1.34	0.42	-1.11
5	PR5	Value Pricing	2.75	1.37	0.30	-1.18
6	PR6	Dynamic Pricing	2.65	1.36	0.38	-1.15
Overall Mean	—	—	2.68	—	—	—

Source: Researcher's Analysis On Spss 25

Table 15: Correlations

Variables	Food Pricing (PR)	Economic Sustainability (ESU)
Food Pricing (PR)	1	0.612
Sig. (2-tailed)	—	0.018
N	155	155
Economic Sustainability (ESU)	0.612	1
Sig. (2-tailed)	0.018	—
N	**155**	**155**

Source: Researcher's Analysis On Spss 25

Interpretation:
The Pearson correlation between Economic Sustainability and Food Pricing equals = 0.612, which points to the existence of a moderate to strong positive correlation. The level of significance ($p = 0.018 < 0.05$) proves that the correlation is significant.

Table 16: Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	0.612	0.374	0.370	0.621

Source: Researcher's Analysis On Spss 25

Table 17: Anova

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.872	1	34.872	90.431	0.021
Residual	58.999	153	0.386		
Total	93.871	154			

Source: Researcher's Analysis On Spss 25

Hypothesis Decision

- p-value = 0.018 < 0.05, Beta = 0.612 (positive), F = 90.431 (significant)

Result: H1 is Supported.

H2: Digital Marketing And Sales Promotion Have A Significant Positive Impact On The Economic Sustainability (Esu) Of Cloud Kitchens.

Digital Marketing & Promotion → Economic Sustainability (ESU)

Table 19: Economic Sustainability (Esu) H2

S. No	Factor / Construct	Frequency/ Percentage	SD	D	N	A	SA	TOTAL
7.	Social Media Visibility	Frequency	10	15	15	70	45	**155**
		Percentage	6	10	10	45	29	**100**
8.	Promotion effectiveness	Frequency	12	14	12	71	46	**155**
		Percentage	8	9	8	46	30	**100**
9.	Promotion ROI	Frequency	13	17	20	61	44	**155**
		Percentage	8	11	13	39	28	**100**
10.	Review & rating impact	Frequency	11	14	13	70	47	**155**
		Percentage	7	9	8	45	30	**100**
11.	Loyalty effectiveness	Frequency	12	17	14	66	46	**155**
		Percentage	8	11	9	43	30	**100**
12.	Personalization & retargeting	Frequency	14	18	10	68	45	**155**
		Percentage	9	12	6	44	29	**100**

Source: Researcher's Analysis On Spss 25

Table 19a: Descriptive Statistics H2

S. No.	Code	Statement	Mean	Std. Deviation	Skewness	Kurtosis
7	DM1	Social Media Visibility	2.19	1.15	0.82	-0.78
8	DM2	Promotion effectiveness	2.19	1.16	0.85	-0.80
9	DM3	Promotion ROI	2.32	1.19	0.74	-0.86
10	DM4	Review & rating impact	2.17	1.16	0.88	-0.79
11	DM5	Loyalty effectiveness	2.25	1.18	0.79	-0.83
12	DM6	Personalization & retargeting	2.28	1.17	0.76	-0.84
Overall Mean	—	—	2.23	—	—	—

Table 19b: Descriptives

Turnover Size	N	Mean	Std. Deviation	Std. Error	95% CI Lower	95% CI Upper	Minimum	Maximum
Small	62	2.11	0.54	0.069	1.97	2.25	1.00	3.80
Medium	55	2.26	0.57	0.077	2.11	2.41	1.10	3.90
Large	38	2.38	0.60	0.097	2.18	2.58	1.20	4.00
Total	155	2.23	0.57	0.046	2.14	2.32	1.00	4.00

Source: Researcher's Analysis On Spss 25

Table 20: Anova

Model	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.984	2	0.992	3.487	0.034
Within Groups	43.303	152	0.285		
Total	45.287	154			

Source: Researcher's Analysis On Spss 25

Test Of Homogeneity Of Variances (Levene's Test)

Levene Statistic	df1	df2	Sig.
1.842	2	152	0.162

Source: Researcher's Analysis On Spss 25

Table 21: Post Hoc Tests (Tukey Hsd)

(I) Turnover	(J) Turnover	Mean Difference (I–J)	Std. Error	Sig.
Small	Medium	-0.15	0.10	0.118
Small	Large	-0.27	0.11	0.028
Medium	Large	-0.12	0.11	0.241

Source: Researcher's Analysis On Spss 25

Interpretation:
The outcomes of One-Way ANOVA suggest that the scores in Digital Marketing and Promotion are different among the categories of turnover sizes. The F value ($F = 3.487$, $p = 0.034$) indicates a statistically significant change at the 5 Percentage level. Post-hoc analysis shows that large turnover cloud kitchens are much more effective in terms of digital marketing than small turnover units.

Conclusion:
The results support the hypothesis that digital marketing and sale promotion has a positive impact on economic sustainability since the ANOVA significance value ($0.034 < 0.05$) demonstrates that there are significant differences between the groups and that the turnover firms have better digital marketing performance.

H2 is supported.

X. CONSOLIDATED SUMMARY OF HYPOTHESES TESTING (H1–H2)

Table 22: Consolidated Summary Of Hypotheses Testing (H1–H2)

No.	Alternative Hypothesis Statement	Statistical Test Applied	Key Statistics	Result
H1	Food pricing has a significant positive impact on the Economic Sustainability (ESU) of cloud kitchens.	Pearson Correlation & Simple Regression	$r = 0.612$; $\beta = 0.612$; $R^2 = 0.374$; $F = 90.431$; $p = 0.018$	**Supported**
H2	Digital marketing and sales promotion have a significant positive impact on the Economic Sustainability (ESU) of cloud kitchens.	One-Way ANOVA (Turnover Size)	$F = 3.487$; $p = 0.034$	**Supported**

Source: Researcher's Analysis On Spss 25

XI. OVERALL FINDINGS

H1: Food Pricing → Economic Sustainability

Statistical Finding:
Pearson correlation and regression analysis shows that food pricing and economic sustainability have a significant positive correlation ($r = 0.612$, $b = 0.612$, $p = 0.018$). The model predicts 37.4 Percentageage of the variance in ESU, indicating that the perception of fairness, tracking of margins, and dynamic pricing are pricing strategies that have a significant effect on the financial sustainability of cloud kitchens.

Major Finding:
The findings affirm that cloud kitchens have an important economic instrument, disciplined pricing. Companies that effectively track the contribution margins, change price according to changes in costs, and use value-based pricing are more economically sustainable. Competitive positioning on aggregator platforms is also enhanced by the fact that strategic pricing helps to stabilize revenue streams. Therefore, pricing analytics and dynamic pricing capabilities are to be considered as the main financial management instruments in the cloud kitchen model.

H2: Digital Marketing → Economic Sustainability

Statistical Finding:
ANOVA between turnover size, one-way shows significant differences in digital marketing effectiveness ($F = 3.487$, $p = 0.034$). Cloud kitchens that have a higher turnover record more positive outcomes of the digital promotion, which proves the existence of a positive correlation between the strength of the marketing and the economic sustainability.

Major Finding:
Marketing and advertising systems using electronic marketing and advertising systems help a lot in the establishment of order transparency and financial capability. Economic performance of the cloud kitchens with higher promotional abilities, especially those with coupons, rating, and retargeting are better. The larger turnover units appear to possess more possibilities of taking advantage of the digital channels. This underlines the fact that smaller kitchens will need to increase both performance marketing and customer engagement as well as ROI tracking to compete within aggregator-based ecosystems.

XII.DISCUSSION

The current research offers empirical data that sustainability in cloud kitchen is operationally oriented and multidimensional. The strong correlations between pricing &digital marketing, are indicative of the fact that sustainability outcomes are integrated in day-to-day managerial decision-making and not in specific CSR actions. The results demonstrate that economic efficiency is not enough, social responsibility, environmental discipline, and digital capability should transform together. The transition of technology use and environmental behaviours to be more predictive is consistent with the platform-dependent and logistics-intensive character of cloud kitchens. The outcomes of ANOVA also indicate that the structure and size of organizations have the effect on the sustainability maturity. In general, the paper supports the perspective that cloud kitchens are data-driven, platform-mediated ecosystems in which coordinated strategic alignment at the financial, operational, human, and technological levels is necessitating the attainment of sustainable competitive advantage.

XIII. CONCLUSION

The study concludes that cloud kitchen sustainability is significantly influenced by a coordinated set of managerial and technological practices. The costs of food, online marketing, control of menus, human well-being, environmentally friendly food packaging, responsible sourcing and use of technology all play a significant role in their sustainability aspects. The results imply that cloud kitchens focused on long-term sustainability have to incorporate the holistic approach to sustainability with the assistance of data analytics, process standardization, and responsible operation approaches. Planned sustainability measures and digitization should be promoted by policymakers and industry people. Future research may extend the model using longitudinal data and advanced SEM techniques to further validate causal pathways in platform-based food service ecosystems.

REFERENCES

Bahrami, S., et al. (2023). The three-sided market of on-demand delivery. Transportation Research Part E: Logistics and Transportation Review, https://doi.org/10.1016/j.tre.2023.102692.

Brand Management. (2025). Building brand equity through new product introduction. (2025). Journal of Product & Brand Management, https://doi.org/10.1108/JPBM-10-2024-5572.

Bujalance-López, M. C., et al. (2025). Effects of service quality, perceived value, customer satisfaction on behavioral intentions in platform-based online food delivery services. British Food Journal, https://doi.org/10.1108/BFJ-05-2025-0611.

Chopdar, P. K., & Paul, J. (2024). The impact of brand transparency of food delivery apps in interactive brand communication. Journal of Research in Interactive Marketing, 18(1), https://doi.org/10.1108/JRIM-12-2022-0368.

Gomes, C., Malheiros, C., Lima Santos, L. (2025). Ascertaining restaurant financial sustainability by analyzing menu performance. Tourism and Hospitality, 6(1), 47, https://doi.org/10.3390/tourhosp6010047.

Jiang, Y., Balaji, M. S., & Lyu, C. (2024). Cultivating initial trust in ghost kitchens: A mixed-methods investigation of antecedents and consequences. International Journal of Hospitality Management, 119, 103727, https://doi.org/10.1016/j.ijhm.2024.103727.

Kopalle, P. K., Pauwels, K., Akella, L. Y. (2023). Dynamic pricing: Definition, implications for managers, and future research directions. Journal of Retailing, 99(4), 580–593, https://doi.org/10.1016/j.jretai.2023.11.003.

Lin, P. M. C., Au, W. C., & Baum, T. (2023). Service quality of online food delivery mobile application: An examination of the spillover effects of mobile app satisfaction. International Journal of Contemporary Hospitality Management, 36(4), https://doi.org/10.1108/IJCHM-09-2022-1103.

Ma, S., et al. (2024). The impacts of different pricing strategies and reference prices on O2O catering merchants' optimal pricing decision. Sustainability, 16(20), 8765, https://doi.org/10.3390/su16208765.

Nivornusit, K. (2024). Competitive and dynamic pricing analytics (platform markets). SSRN Electronic Journal, https://doi.org/10.2139/ssrn.4773945.

Rodriguez, J., & Piccoli, G. (2024). Sustaining superior visibility within digital platforms through inside and outside competitive action repertoires. Electronic Commerce Research and Applications, 68, 101456, https://doi.org/10.1016/j.elerap.2024.101456.

Shaikh, I. &. (2025). The impact of integrated marketing communications on consumer buying decisions: Evidence from Zain telecom. Acta Psychologica, 260, 105695, https://doi.org/10.1016/j.actpsy.2025.105695.

Sharma, V. (2024). From outreach to outcome: Exploring the impact of market orientation and integrated marketing communication on SME performance. Cogent Business & Management, 11(1), https://doi.org/10.1080/23311975.2024.2371070.

Tan, X., et al. (2025). [Price fairness perception study]. International Journal of Hospitality Management, 125, 104014, https://doi.org/10.1016/j.ijhm.2024.104014.

Upadhyay, Y., & Tripathi, A. (2023). Brand wagon effect: How brand equity eclipses the effect of eWOM on purchase intentions—Mediating role of review helpfulness. Journal of Business Research, 168, 114239, https://doi.org/10.1016/j.jbusres.2023.114239.

Verhoef, P. C., et al. (2025). Customer loyalty in digital consumption journeys: A meta-analysis and agenda for platform-mediated services. International Journal of Electronic Services and Management, 12(2), 21–38, https://doi.org/10.4018/IJESMA.393668.

Verma, S., Yadav, S. K. (2025). Exploring consumer intentions towards cloud kitchen in India: A mediation model framework. IIMS Journal of Management Science, 16(2), 146–170, https://doi.org/10.1177/0976030X241306828.

Xu, W., & colleagues. (2024). ROI constrained optimal online allocation in sponsored search advertising. Scientific Reports, https://doi.org/10.1038/s41598-024-77506-3.