



Covid-19'S Effect On Consumer Behaviour Towards Cloud Kitchens In Thoothukudi District

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Abstract:

The present study examined the impact of changing consumer behaviour on adoption, acceptance and sustainability of cloud kitchens in the Thoothukudi District of Tamil Nadu. The research is based on a descriptive research design, primary data was collected from a sample of online food consumers in major hubs of the district through structured questionnaires, secondary data by relevant academic journals and market reports. We have used statistical tools like descriptive statistics and factor analysis to measure the consumer awareness, purchase intentions and post purchase satisfaction. the research shows that although tech-savvy younger groups are receptive to trying global foods, regional comfort foods and local coastal flavours still have the power to generate repeat customers and high-volume orders.

Key words: Major hubs, Tech-savvy younger, High- volume orders.

Introduction

Cloud Kitchens was founded in 2016 by entrepreneurs Diego Berdakin and Sky Dayton, with its inaugural facility located in Los Angeles, California. In 2018, Travis Kalanick, cofounder of Uber, obtained a controlling interest in cloud kitchens' parent company, City Storage Systems, about \$150 million and took over as CEO. John Curran, a former Amazon executive, was named Chief Financial Officer (CFO) in 2021.

It has raised major funding rounds, including a \$400 million investment from Saudi Arabia's Public Investment Fund in 2019 and \$850 million in 2021 in a round that included Microsoft. By 2019 the company was valued at around \$5 billion, and by 2021 that had grown to an estimated \$15 billion.

Cloud Kitchens has since expanded to several countries, including the acquisition of London-based Food Stars in 2019 and subsequent acquisitions in Latin America, including Mexico-based Nano and Colombian company Cocinas Ocultas. The company also benefited from the boom in food delivery during the COVID-19 pandemic.

By 2022, cloud kitchens had acquired approximately 40 properties in 24 cities for a total of more than \$130 million and had a global workforce of more than 4,000 people. It also operates under different local brand names in different regions, such as Kitchen Central in Brazil.

Cloud Kitchens develops private kitchen spaces for rent in shared facilities complete with basic cooking equipment and utilities. These kitchens can be leased by restaurants to run delivery-focused operations without having to pay for a full storefront. Refrigeration, maintenance, janitorial assistance, and front-of-house personnel for order pickup are examples of additional services.

In areas with strong delivery demand, the company's business plan entails purchasing underutilized facilities and turning them into culinary centers. With this strategy, the business may manage layout, upgrade technology, and profit from possible gains in property value.

Some of Cloud Kitchens' real estate contains software and robotic technologies that cut operation expenses for renters. Otter is a software suite developed by Cloud Kitchens to combine delivery orders from several platforms.

Scope of the Study:

This study examines how the COVID-19 epidemic changed consumer choices, trust, and purchase patterns with regard to cloud kitchens (delivery-only restaurants). It seeks to determine if these changes in behavior are transient or long-lasting. Urban consumers who frequently place online food orders include families, students, and working professionals. restricted to large cities where the infrastructure for cloud kitchens expanded rapidly during the outbreak. variations in average spending, peak ordering periods, and ordering frequency. the influence of contactless delivery, cost, convenience, and safety/hygiene perceptions on consumer decisions. Customers are moving away from traditional dine-in restaurants and toward third-party delivery apps that host cloud kitchens, such as UberEats, Zomato, and Swiggy.

Statement of the problem:

Cloud kitchens are completely physically separated from the customer, unlike traditional restaurants where consumers can see the cleanliness, atmosphere and food preparation area. For consumers in Thoothukudi, who are traditionally reliant on sensory trust and brand familiarity, the complete 'invisible' food model during a high-anxiety health crisis represents a significant psychological barrier in terms of food safety, hygiene and kitchen authenticity. Ordering from cloud kitchens was mostly a necessity during the time of COVID-19 due to stringent lockdowns, fear of infection and lack of dine-in spaces. However, with the return to normalcy and the re-opening of physical restaurants to full capacity, it remains to be seen whether these changes in consumer behaviour were merely temporary coping mechanisms or whether local food consumption habits have been changed for good.

Reliance on digital literacy, smartphone penetration and the smooth functioning of food delivery apps (such as Swiggy, Zomato or local delivery startups) are the key to the transition to cloud kitchen patronage. In a district like Thoothukudi, socio-economic factors such as age, income differentials and local culinary preferences play a big role in digital adoption. The adjustment of these various demographic segments to app-based virtual kitchens during and after the pandemic is unmeasured.

Objectives:

- To analyze the demographic profile of online food consumer using cloud kitchen services in various region of the Thoothukudi district.
- To identify the major variables driving the shift in consumer behaviour from traditional dine-in restaurants to cloud kitchen during and after the COVID-19 pandemic.
- To evaluate consumer opinion of the safety, hygiene, and packaging standards maintained by cloud kitchens in the post-pandemic era

Review of the literature:

Gosai, k & Palsapure, D (2020) in his study revealed that the study's goal is to ascertain how consumers feel about several aspects that affect their decision to use online food delivery apps to buy food from cloud kitchens. Using Porter's Five Force Model, the study also seeks to comprehend the profitability, sustainability, and competition of cloud kitchens in the food and beverage sector. The competition between current rivals, the threat of new competitors, the threat of substitutes, the bargaining power of buyers, and the bargaining power of suppliers are the five factors in Porter's model. The majority of responders are from Mumbai, and the survey's findings indicate that men place more orders with cloud kitchens. The quality of the cuisine and the convenience of ordering from cloud kitchens via online meal delivery applications are the next most important factors affecting cloud kitchen orders, after taste.

Sisodia & Nair (2021) in their study revealed that lockdowns in March and April of 2020 caused many establishments to close. As a result, the restaurant business collapsed. However, digitization gave the virtual kitchen, also known as the cloud kitchen, a new lease on life. to comprehend how customers feel about the idea of a cloud kitchen, with a focus on the city of Indore. to research how COVID-19 affects cloud kitchen operations.

Chatterjee et al. (2022) in his study revealed that during the epidemic, cloud kitchens have grown in popularity as a way to satisfy the increasing demand for meals delivered to homes. A standardized questionnaire was used to gather data from respondents residing in Delhi and Kolkata during the COVID-19 pandemic. The results of the ANOVA test indicate that individuals believe the cloud kitchen model ignores the "look and feel" component of in-dining as educational attainment rises. Covid-19 and is predicated on how stakeholders and customers view the ethical and sustainable approach. Cloud kitchens are becoming more and more popular. They are a very recent development. However, they assist in catering to a crucial market niche that traditional restaurants had previously ignored. They are therefore not displacing existing restaurant owners in terms of market share. Rather, they are growing current markets, which benefits the industry overall.

Sherkar et al. (2021) in their study revealed that global food delivery has been expanding rapidly, and the quick development of technology has given cloud kitchens even more momentum. Furthermore, prioritizing safety and hygiene as well as altering sales tactics might further demonstrate the overall vitality of cloud kitchens. to determine and evaluate cloud kitchens' limitations. Customer feedback is crucial, and putting it into practice reassures them and boosts revenue. In order to cover their daily operational costs and make the bare minimum of profits, eateries began adhering to their business strategy during the pandemic. This demonstrates that every challenging period offers us the chance to improve and create, and the person who changes is certain to endure in any circumstance over time.

Limitation of the study:

Every research paper has flaws and limitation. The following are the limitations of the study:

- This study is confined to Thoothukudi city only.
- This sample size is limited to 50.
- Time, Cost and other resource were restraints for a complete and through research.

Research Methodology:

This study was mainly based on primary data. Primary source of data were collected through questionnaire. The questionnaire were collected among 50 respondents were collected back. Secondary sources of data were collected from various journals, websites and also over the internet.

Tools For Analysis:

The tools applied in this study were Percentage analysis, Weighted average & paired – T test.

Analysis And Interpretation:**Table I Socio demographic profile of the respondents**

Particulars	No. of. Respondents	Percentage
Gender		
Male	17	34
Female	33	66
Total	50	100
Age		
18 – 20 years	4	8
20 – 30 years	18	36
30 – 40 years	9	18
40- 50 years	11	22
Above 50 years	8	16
Total	50	100
Educational qualification		
Higher secondary	17	34
UG	12	24
PG	15	30
Scholars	6	12
Total	50	100
Occupation status		
Students	10	20
Private employee	14	28
Govt employee	8	16
Business	6	12
Homemaker	10	20
Unemployed	2	4
Total	50	100
Area of living		
Rural	2	4
Urban	48	96
	50	100

Source: Primary Data

Inference:

The table shows that the majority of the respondents are female (66%). Most of the respondents have aged between 20 – 30 years (33%). Most of the respondents have completed Higher secondary (34%). The majority of the respondents had their occupational status as Private employee (28%). Most of the respondents reside in urban areas (96%).

Table II Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Part- B Behavioural shift drivers (post-Covid-19) how frequently did you order food online before the covid-19 pandemic?	2.16	50	1.017	.144
	How frequently do you order food online now (post-pandemic)	3.08	50	1.066	.151

Source: Primary Data

Inference:

The above table reveals that for ordering frequency among 50 respondents (N=50) before and after the COVID-19 pandemic. The data indicates an increase in the mean frequency of online food ordering, rising from 2.16 (pre-pandemic) to 3.08 (post-pandemic).

The standard deviations for both periods remain relatively consistent (1.017 and 1.066, respectively). This shift

suggests a positive trend in the adoption of online food delivery services among the study participants following the pandemic.

Table III Factors Influencing The Preference For Cloud Kitchen

S.no	Factors	5	4	3	2	1	Weighted score	Mean score	Rank
1.	I prefer cloud kitchens because they avoid crowded dining spaces	13 (65)	1 (4)	2 (6)	5 (10)	29 (29)	114	22.8	IV
2.	The pandemic made ordering in a permanent habit for my household	6 (30)	13 (52)	7 (21)	20 (40)	4 (4)	147	29.4	III
3.	Cloud kitchens offer better value-for-money/ combos than physical dine-ins	5 (25)	12 (48)	27 (81)	4 (8)	2 (2)	164	32.8	I
4.	Ordering online saves traveling time in traffic	7 (35)	18 (72)	7 (21)	13 (26)	5 (5)	159	31.8	II

Source: Primary Data

Inference:

The analysis reveals that the primary motivator for choosing cloud kitchens is value for money, which holds the first rank with a mean score of 32.8. This suggests that consumers perceive cloud kitchens as offering superior deals or combo options compared to traditional dine-in establishments. The second most significant factor is the convenience of saving travel time in traffic (mean score: 31.8), highlighting the role of time-efficiency in modern dining choices. The impact of the pandemic remains a relevant behavioral driver, ranking third with a mean score of 29.4, indicating that changing habits formed during that period have persisted for many households. Finally, while avoiding crowded spaces is a factor (mean score: 22.8), it is ranked fourth, suggesting that while safety and social distancing remain considerations, they are currently less influential than economic value and time savings.

Suggestion:

Localized Menu Engineering: To keep the local clientele, cloud kitchens in Thoothukudi should strike a balance between global fast-food trends and traditional culinary tastes (such as regional seafood and authentic South Indian profiles). **Emphasis on Hybrid Models:** Examine how regional businesses, such as Rybax Cloud Kitchen, use key thoroughfares, such as Palayamkottai Road, to maximize delivery times within the city core. **FSSAI Transparency:** Posting kitchen videos and cleanliness ratings on social media platforms can increase customer trust because ghost kitchens lack physical transparency.

Conclusion:

For the food and beverage sector, the COVID-19 epidemic was a turning point that completely changed the hospitality

ecosystem from a traditional experiential paradigm to a tech-driven utility model. According to this study, existential health concerns, stringent lockdowns, and a general reliance on zero-contact digital services were the main causes of the initial transition toward cloud kitchens in a developing tier-2 city like Thoothukudi.

But the post-pandemic environment shows that what started out as a short-term survival strategy has developed into a long-term behavioral evolution. Consumers in Thoothukudi nowadays, especially working professionals, college students, and dual-income households, no longer select cloud kitchens because of fear but rather due to a deep-seated preference for economic value, convenience, and smartphone-driven simplicity of transaction. Diverse culinary alternatives have been successfully democratized by the virtual restaurant concept, giving local customers access to a variety of cuisines without the premium prices usually imposed by prime commercial real estate overheads.

In the end, Southern Tamil Nadu's cloud kitchen industry has shown itself to be very durable. Cloud kitchens have carved out a separate, high-frequency niche for every day, convenience-driven consumption, while traditional dine-in venues have reclaimed their market share for social and experience meals. The message is obvious for local MSMEs, delivery aggregators, and food-tech entrepreneurs: maintaining success in the post-pandemic market necessitates a careful balancing act between tech-driven logistics, regional taste alignment, and unwavering sanitation.

References

1. Gosai, K. M., & Palsapure, D. (2020). "A study on cloud kitchens as an emerging food and beverage industry". *International Journal of Advance Research in Science and Engineering*, Vol, No 9(9), 2020-2021.
2. Sisodia, S., & Nair, S. (2021). "Impact of covid-19 on consumer behaviour with reference to cloud kitchens in Indore city". *Management in the new normal*, 56-60.
3. Chatterjee, R., Singh, A., & Singh, V. (2022). "Ethical and sustainable perceptions on cloud kitchen business-A study of consumers and stakeholders during the Covid-19 pandemic". *International Journal of Hospitality and Tourism Systems*, 15(COVID-19 Issue), 76.
4. Sherkar, A., Fernandes, M., & Zagade, S. (2021). "Rise of cloud kitchens amidst the covid 19 pandemic". *Kalyan Bharati Journal*, Vol-36 No. (VII), pp 237-243.