

Understanding the Increases Youth Preferences towards Cloud Kitchens

Apurvi Gupta

Research Scholar, Amity Business School,
Amity University, Lucknow Campus, Uttar Pradesh, India.
apurvi.gupta1091@gmail.com

ABSTRACT

COVID-19 had an impact on the market, causing consumers' perceptions and attitudes regarding the dine-in business to shift, and their buying intent to migrate to online food and service delivery. This phase highlights people's business chances to demonstrate their culinary expertise and offer the local market via online meal delivery services. Cloud kitchen is the name given to this idea. The research looked at the aspects and how they influenced people's perceptions, and attitudes, and ultimately built the purchase behavior for the cloud kitchen. The data were collected from the youth. The sampling technique was stratified sampling. Smart partial least square was used to confirm the factors influencing the perception, attitude, and purchase behavior. The data were analyzed using partial least square modeling. The factors studied and their impact assessed which is forming the consumer perception. Perception builds attitude and purchase behavior. It was discovered that there is a strong impact and modifying the consumer purchase intention toward cloud kitchen in India. The analysis also revealed that factors affecting perception and attitude toward the cloud kitchen are strong and there is a positive purchase behavior in India. The research would be useful for the cloud kitchen companies already functioning in India. The factor assessment and confirmation help the existing and upcoming cloud kitchens to work efficiently and effectively in the context of satisfaction among the future of India, that is, among youth.

Keywords: Cloud Kitchens, Youth Preferences, Digital Food Services, Consumer Behavior, Online Food Delivery

INTRODUCTION

The food service industry has undergone a significant transformation with the advent of cloud kitchens, also known as ghost kitchens or virtual restaurants. These kitchens operate without a physical dine-in facility, leveraging online food delivery platforms to serve customers. The youth, being digital natives, have shown an increasing preference for this model due to its convenience, affordability, and variety. This paper investigates the factors influencing youth preferences towards cloud kitchens, offering insights into consumer behavior and market trends.

Over the next decade, the online food delivery market is projected to experience significant growth. It is predicted that by 2030, the worldwide market for delivering meals online will increase to ten times its current size. Post-pandemic there is a drastic shift in consumer behaviour. To thrive, generate income, and remain viable, restaurants must carefully evaluate and explore all available alternatives. This subsequently led to the alteration of most of the business models to ghost or cloud kitchens; this is a business framework that is turning out to be the most effective

in times of such crisis. A disruptive digital invention that is still emerging known as the cloud kitchen is a term used interchangeably with virtual kitchen or ghost kitchen. In light of current challenges, the notion of the cloud kitchen, which involves preparing and delivering food directly to customers' doorsteps, seems to be a viable solution for businesses. The perception of cloud kitchen and the pandemic Covid 19 has transformed the behaviour of consumers. Cloud kitchens are often located in low-rent areas that offer affordable leasing options. These areas are typically not in high-traffic commercial or residential zones, as the focus is on delivery rather than foot traffic. Cloud kitchens may also be located in industrial areas, as they often have lower rent prices and easy access for delivery drivers. The specific location may vary depending on local regulations and market demand. While there is a significant amount of research on restaurant and hotel selection criteria, such as those conducted by many researchers [5,6], there is currently limited research available on cloud kitchens. The notion of a cloud kitchen is critical since the pandemic has transformed how the public specifically "foodies" behave as consumers. The food delivery industry has maintained its significance and shown that the cloud model has a promising future despite unfavourable circumstances. The food and beverages business needs this upheaval brought on by cloud kitchens to be revitalized. This study's main objective is to conduct customer analysis and identify the market in India's food industry for the business model based on cloud kitchens. Specifically, to identify the consumer's expectancy and curiosity for online food delivery, his desired cuisines, etc. However, post-pandemic specifically many customers are ordering food online. Therefore, this study aims to conduct an empirical study and discover the aspects affecting the decision-making of the three basic generations: X, Y, and Z concerning cloud kitchens. The present study is based on the model that describes the process of making choices related to food and meals suggested by First, which provides the framework for the current study. This paper aims to explore the behaviour of decision-making of three primary generations, namely X, Y, and Z, regarding the success of cloud kitchens, by analyzing the various factors or aspects that influence their choices

LITERATURE REVIEW

After thoroughly examining a substantial amount of literature, it can be deduced that there is a mystifying variance and resemblances between the three generations: X, Y, and Z with referring to age groups, morals, ethics, work or personal values, and lifestyle. This study is on three generations: X, Y, and Z with a motive to discover their expectations and interest in online food delivery and explore the factors affecting the purchase decisions of the three generations for cloud kitchens. A challenge for any competitive business is adapting to the fast-changing needs of its customers. It has been evident that what one likes to eat may say a lot about what generation he or she belongs to. "Generation X" was introduced in a novel by Douglas Coupland published in the year 1991. This generation has been demarcated as an "in-between" generation. They were the best educated and the first technologically savvy generation in history. The world was going through a time of adjustment and transition when Generation Y was growing up. Their formative years were characterized by astronomical technological advancement, economic upheaval, and globalization. The Millennial generation is another name for Generation Y. Therefore, Generation "Y", has a very different outlook on life, as well as a different mindset and way of acting. This is primarily a result of the diverse experiences they had growing up (compared to their predecessor generation X). Whereas Generation Z is no exception, they're much smarter than Generation X, and way more ambitious than the Millennials. They are also known as iGen or Digital Generation/Natives, Media or .com Generation, etc [8]. Thus, this generation Z also known as post-millennials has comfort with technology and focus on health [9]. For this study, the term "Gen X" refers to individuals born between 1961 and 1980, "Gen Y" refers to those born between 1981 and 2000, and "Gen Z" refers to individuals born between 2001 and 2010. A. Cloud Kitchen The primary objective of nearly all food and beverage industries is to merge food with an enjoyable experience, such that customers are contented not only with satisfying

their hunger but also with the overall experience. And inevitable circumstances such as this pandemic have certainly had an impact on the way people order food. Cloud kitchens or virtual kitchens, are commercial facilities that are designed for food preparation and delivery only and are going to see a super inclination post-pandemic. This will automatically assist the organization in incurring reduced expenses, which could be in the form of offers, hampers vouchers, or gift coupons. The studies have suggested that cloud kitchens are a rapidly growing trend in the food industry, driven by changing consumer preferences and advancements in technology. While cloud kitchens offer many benefits, such as cost savings and increased flexibility, they also pose challenges, such as the need for efficient logistics and branding. It remains to be seen how cloud kitchens will evolve and impact the food industry in the years to come. While it has been observed that the pandemic has accelerated the growth of cloud kitchens, it remained to continue post-pandemic as well. However, with the ongoing shift towards online ordering and delivery, it is expected that cloud kitchens will keep enduring a significant role in the food business.

METHODOLOGY

This study is focused on three generations: Gen X, Gen Y, and Gen Z with a motive to discover their expectations and interest in online food delivery and explore the factors affecting the purchase decision of the three generations for cloud kitchens. This study's population encompasses individuals who were born from 1961 to 2010. Thus, the sample comprised consumers of various age groups between 14 and 61 years of age to capture the preferences for food points [cloud kitchen]. The research employed purposive sampling, as well as some elements of snowball sampling and convenience sampling.

REASONS FOR THE RISING POPULARITY OF CLOUD KITCHEN

1) Stiff Competition: Stiff competition in the industry, along with decreasing margins result in closing down of many restaurants. The food tech startups - from the big houses to the mid-sized and small ventures are moving to cloud kitchen to beat the competition and survive. Mast Kalandar has shut down restaurants in two of its four cities to cut down the cost. Ammi's Biryani has closed down some outlets and converted to cloud kitchen.

2) Changing Customer Preferences: With increasing time crunch, customers are increasingly opting for home delivery options. As the number of delivery orders increases, restaurants are now moving towards cloud kitchen operations. Zomato's operation is slightly different in this aspect. Instead of using its own food in kitchen, it is giving other restaurants its kitchen space to cook and get the food delivered.

3) Operational Cost Reduction: The restaurant industry is known for having very high operational costs. Real estate costs are burgeoning across every city. This is severely impacting the bottom line of restaurants especially in terms of infrastructure cost. Also, the culture of going to restaurants is slowly fading away. Cloud kitchen restaurants try to reduce production and packaging cost and maximize number of orders per day. With the increase in customer base, the cost of production can be reduced. With every 150 orders per day from one Kitchen with \$6 Average Order Value (AOV), Cloud Kitchen business model promises a margin on the upwards of 25%

4) Food Quality: Traditional restaurants face a lot of overhead expenses, due to which they have very little money left to incorporate good quality food items in their dishes. This is the sole reason why restaurant food has traditionally

been considered to be unhealthy. However, due to the advent of cloud kitchens, more value is being added to the customers.

5) Increase in Personal Disposal Income: In India, the personal disposal income is at a descent figure of 11%. The millennial generation is now health conscious and investing a lot on healthy lifestyle. Indians are spending more on organic food, chocolates, desserts etc.

CLOUD KITCHEN MARKET IN INDIA

India's food delivery market is growing by leaps and bounds, and is valued at 15 billion dollars. There has been an increase of approximately 150 percent in the online food delivery system in 2017 as compared to 2018. The online food delivery system is valued at 300 million dollars, out of which cloud kitchen's market contributes to 200 million dollars. The revenue in the online food delivery segment will amount to US\$8,167m in 2019. The Revenue in online delivery market is expected to show an annual growth rate (CAGR 2019-2023) of 9.1%.

CHALLENGES FACED BY CLOUD KITCHENS

- 1) Late Delivery: The staff is not able to keep up to the expectations of on time delivery during a busy schedule or peak seasons. This often results in the late delivery of food, thereby resulting in uncertain repercussions.
- 2) Dependency on Internet: In the case of an internet outage, restaurants tend to lose the ability to complete basic operations such as taking orders, accepting payments and tracking orders. They also tend to lose access to data, thereby losing huge amounts of money in the system.
- 3) Absence of Human Touch: The cloud kitchen concept is devoid of human touch with no personal interactions between the vendor and the customer. The entire process, starting from food ordering to delivery of food has no face to face interactions.
- 4) Hygiene: Many times companies build their kitchens in unhygienic conditions, in order to reduce the operational costs as much as possible. Customers don't really want to be served from prime real estate. However, any chosen kitchen needs to be hygienic so that the food is edible.

DATA ANALYSIS

Customer Analysis Due to the centralization of the restaurants within major cities, it is feasible for the cloud kitchen players to target the customers residing in these cities. The cloud kitchen has already targeted approximately 120 million users in urban India, between age group of 20-30 years. It is going to target 50 million users in future. The findings for customer analysis are shown below.

Population	Total	1.37 billion (Growth rate – 1.26%)
Age breakup	18 – 24	34.4%
	25 – 34	44.6%
	35 – 44	20%
	45 - 54	2%
Median Age		27 Years
Gender	Male	709 million
	Female	664 million
Internet users		462 million Male – 71% Female – 29.55%
Occupation		
India's QWL	49	Out of 66
Cost of Living Index		23.88

With nearly 44.6% of Indian population being the consumers of online food services, the cloud kitchen has ample of opportunities to explore in future. The food service market in India is valued at 48 billion dollars, with revenue in the online food delivery segment is growing at an annual growth rate of 9.1%.

SEGMENTATION, TARGETING and POSITIONING

Both geographic and demographic segmentation is important because cloud kitchen needs to know which areas to target for customers. Cloud kitchen concept is foraying mostly into urban India

1)PG/ Hostel dwellers -This group shares the room with 2 to 4 people and sometimes lives individually. Cooking is not very high on their agenda, and skip meals often. Instant food and takeaways are their favourite. They always hunt for food that is available with less effort.

2)Young married couples -Not very keen on cooking and prefer to spend quality time with family and friends. High on entertainment quotient and takeaways. Prefer to taste food from various outlets on regular basis.

3)Working wives -With both the partners working, they experience time crunch. They earn decently and spend a major share of their income on food and entertainment. Takeaways are frequent, about 2–4 times in a week.

4)Students- They are mostly in their teens and majorly stay in hostels. They do not prefer meals from college canteens and often skip it. Ordering food via apps is high on their agenda.

5)Hardcore foodies- They are the first to try new restaurants and love boasting about their food knowledge to friends and family. They earn a decent salary and love to spend a major percentage on food. In their spare time, Hardcore Foodies like to attend college food fest, restaurants and cookery channels.

User benefit based (In terms of time, parking and cost) and pricing positioning strategy is used by cloud kitchen to attract customers from different strata of the society. Consumers want to avoid long waiting and commuting time, and do not mind spending extra for the instant food offered by cloud kitchen.

PESTLE ANALYSIS OF CLOUD KITCHENS

Political	Current trends affect the online food industry. As public health policies are focusing on fresh food ingredients with lower sugar and sodium, the food sector are adding healthier options in their menus. Political regulations such as food quality, hygiene, packaging, food safety, and wages require cloud kitchens to adhere to standards.
Economic	The rate of unemployment, which is currently at the rate of 6.1% affect the online food delivery system. Healthier food options are pricier compared to fast food or instant food. But the convenience of readily available food outweighs cooking food from scratch. The discounts and promotions offered by cloud kitchen as well the convenience are promoting the greater expansion of food business. Moreover, interest rates, taxation and consumer expenditure explores the opportunities prevailing in online food industry.
Social-cultural	Consumer's wants and healthier options affect the trends of food industry. Consumers have become conscious in terms of hygiene, safety, calories and nutritional value of food offered. Demands for organic and whole food, vegan and pescetarian diet is becoming the lifestyle of younger generation. Also with the increase in the number of migrant population, there is surge in the demand for 'Regional food'. To attract more customers, cloud kitchens are implementing their own branding makeovers. Social media and health Gurus have also made the consumers aware of the healthy diet

Technological	Technological advancement in terms of packaging, food labels, food brands and food production, can give a competitive edge. Technology has helped cloud kitchens to roll multiple brands from same kitchen. E.g. Fassos is using brands Behrouz for biryani and Firangi Bake. Online food delivery segment has transformed from local to inventory-led business model. Cloud kitchen are using their websites to provide information on calorie intake, allergy, nutritional value and promotions.
Legal	Food industry in any country is affected by laws. Food norms and laws have affected the food quality and nutritional standards. The food items should be produced in safe, clean and healthy environment. In India, consumers will be provided with all the necessary information, as per the Food Safety and Standards (FSS) Act, and only fresh food to be delivered to consumers. Also food products offered for sale are subjected to sampling at any point in the supply chain. Packaging, Waste management and Marketing & Sales laws create new demands in the online food industry
Environmental	Changing government laws and norms have made the online food industry to adopt a greener approach. The food related regulations and quality standards have turned stricter in every country. With stringent quality and safety standards, the food brands are pressed to adopt strategies towards waste management, environment movements, energy saving initiatives, and children food. Adopting a greener approach has helped to enjoy improved customer loyalty, and sustainable development.

DATA COLLECTION & ANALYSIS

The pilot test was conducted on the questionnaire by surveying 50 respondents. The main part of the questionnaire is comprised of five-point Likert-scaled items to measure food, price, marketing, technology, hygiene, aesthetics, and other miscellaneous aspects. Then survey was conducted in November 2022 amongst consumers of different age groups to test the hypotheses. In total, 600 questionnaires were circulated among the customers who are in the practice of ordering food for home. For data collection, respondents were contacted personally as well as through digital mode. The targeted group consisted of individuals who had used online methods to order food within the past year. The responses were gathered through online means, and the survey participants were contacted directly through email, LinkedIn, and other social media channels. The respondents were chosen based on information provided by many cloud kitchens, with the understanding that their comfort and assent were required due to the strictly academic nature of the research. The items in the study were derived from relevant literature sources. The scale was validated using SPSS[v26]. For this research, the target population was three generations: X, Y, and Z who were born between 1961 to 2010 i.e., the age group from 13 and 61 years of age to know the preferences for food joints [cloud kitchen]. Out of 358 respondents, 192 were male [53.8%] and 165 were female [46.2%], 102 [28.6%] were undergraduate, 118 [33.1%] were graduate courses and 137 [38.4%] were postgraduate. Whereas 90 [25.2%] were from Generation X, 123 [34.5%] were from Generation Y, and 144 [40.3%] were from Generation Z

BEHAVIOURAL DIFFERENCE AMONG THE THREE GENERATIONS

In conclusion, the study conducted a comprehensive examination of the expectations and interests of three generations: X, Y, and Z regarding online food delivery, with a specific reference to cloud kitchens in the post-COVID period. Several important conclusions were drawn after rigorous examination and investigation. Firstly, it was observed that online food delivery services sparked a significant interest in all three generations. This statistic underlines the growing importance of convenience and efficiency in the dining experience, particularly in the aftermath of the COVID-19 pandemic. The convenience offered by cloud kitchens, with their quick and hassle-free delivery options, proved to be highly appealing to respondents across all generations. Secondly, there were notable differences in priorities among the generations. Generation X, for instance, placed more emphasis on food quality and pricing, while Generation Y showed a higher preference for menu variety and convenience. Generation Z, being the youngest group, exhibited a greater inclination towards digital engagement and innovative food concepts. Additionally, the study revealed the profound impact of the pandemic on the perceptions and behaviours of these three generations towards online food delivery. This pandemic acted as a catalyst for the adoption of cloud kitchens and online food ordering, as it highlighted the need for contactless and safe dining options. This shift in consumer behaviour is likely to have long-lasting effects, even as the pandemic recedes. Lastly, the findings of this study underline the significance of understanding the expectations, interests, and purchasing decisions of different generations in the context of online food delivery and cloud kitchens. Identifying and catering to the exceptional preferences and priorities of each generation can provide valuable insights for businesses in the food industry, enabling them to better adapt and tailor their offerings to meet the evolving needs of their target consumers.

THEORETICAL IMPLICATIONS AND PRACTICAL IMPLICATIONS

The theoretical implications of this study lie in understanding the factors that influence the purchase decisions of different generations (X, Y, and Z) when it comes to cloud kitchens. By examining the impact of various aspects such as food, price, marketing, technology, hygiene, and aesthetics on consumer behaviour, the study aims to contribute to the existing body of knowledge on consumer decision-making in the food industry. Further, the scale used in the study is to evaluate consumer behaviour for restaurant selection dining-in or ordering food at home from a cloud kitchen and having it delivered, although in the past the same was with reference to dining out. Nevertheless, consumer behaviour has changed both during and after the COVID-19 pandemic. Consumers have begun to consider "dining in" rather than "dining out" following the pandemic, and this effect is anticipated to last for a long time. The study found that Generation Z showed a predilection for environmentally friendly and memorable food experiences. They expressed a desire to encounter unique, extraordinary, and fascinating moments. Furthermore, factors such as their life courses, engagement with emerging trends, apprehension about the future, and personal values, including a sense of moral responsibility and environmental concern, influenced their embrace of sustainable practices. Therefore, the current study contributes to the Furst [7], food choice process model by including miscellaneous factors i.e., eco-friendly or sustainability aspects, memorable food experience under influences component. These miscellaneous factors are now increasingly becoming more important in the process of making purchase decisions, specifically in Generation Z. Thus, this research contributes to the advancement of the food choice process theory Furst [7], by demonstrating that miscellaneous aspects have a positive influence on consumer food purchase decisions. Therefore, this study provides an opportunity to examine the model of the food choice process from a new perspective, potentially expanding and enhancing the existing model. The findings of the study can provide insights into the preferences and expectations of different generations, which can help businesses in the food industry, particularly cloud kitchens, to develop effective strategies to attract and retain customers. The conclusions that can be drawn from the analysis have practical applications and implications, which may include actionable insights or recommendations for decision-making in relevant fields. Understanding the factors that influence consumer decision-making can help businesses tailor their offerings to meet customer expectations and preferences. For instance, by focusing on food quality and diversity, cloud kitchens can attract customers who prioritize these factors in their food choices. Similarly, pricing strategies can be designed to provide good value for money and attract price-sensitive consumers, especially among younger generations. Effective marketing strategies can help create brand awareness and influence consumer behaviour in favour of cloud kitchens. Embracing technology in the operations of cloud kitchens can enhance efficiency and customer experience, thereby attracting tech-savvy consumers. The marketers could direct their efforts in a focused manner according to the result implied in the study. Marketers are advised to go beyond simply offering standard attributes like excellence, amount, taste, or cost when promoting their products. Instead, they should aim to create a unique and memorable experience that generates a "wow" or "aha" moment for the consumer. By doing so, they can increase customer satisfaction and encourage repeat purchases.

Furthermore, the study highlights the importance of hygiene and aesthetics in consumer decision-making. Cloud kitchens need to prioritize food safety and cleanliness to instill confidence in customers, particularly in the post-pandemic era where hygiene concerns have heightened. Additionally, paying attention to the aesthetics of food presentation can enhance the overall dining experience and attract customers who value visual appeal. The results of the present study could be beneficial for restaurant owners who are struggling with financial constraints caused by the COVID-19 pandemic. One potential opportunity that they could explore is transitioning their business model to operate as a cloud kitchen. Almost every restaurant has a client database, which may be utilized to inform existing customers about the new services available to them at their doorstep by highlighting your facilities' top features, such as cleanliness, hygiene, contactless delivery, etc. Moreover, by providing superior services, this will be a fantastic opportunity to foster ties with clients and broaden the clientele. By considering these theoretical and practical implications, businesses in the food industry, particularly cloud kitchens, can adapt their strategies to meet the

evolving needs and preferences of consumers, ultimately improving their competitiveness and success in the market. The restaurant and cloud kitchen industries, which place a premium on customer service, may gain from not only knowing what customers want but also teaching them what they deserve

LIMITATIONS AND FUTURE SCOPE OF RESEARCH

Despite the limitations of this study, the identified drawbacks also present opportunities for future research. Firstly, the samples used in the present investigation were all drawn from India. As a result, the consumer preferences of many nations can be investigated for greater generalizability. One potential area for improvement in future research is the use of probability sampling techniques instead of convenience sampling, which was employed in this study. Additionally, future studies could expand their scope by examining various brands that operate cloud kitchens to provide a more comprehensive understanding of the phenomenon. Some of the hypotheses [H3, H4, and H6] were not supported by the data. Further investigation could explore the reasons behind these findings and examine potential factors that may influence the purchase decision but were not considered in the current study. Overall, while the research presented offers valuable insights into the factors influencing consumer decision-making regarding cloud kitchens, there are limitations and opportunities for further investigation. Addressing these limitations and exploring the suggested future research directions would contribute to a deeper understanding of consumer behaviour in the context of cloud kitchens and help businesses make informed decisions.

REFERENCES

- Asimakopoulos, G., Hernández, V., & Peña Miguel, J. (2019). Entrepreneurial intention of engineering students: The role of social norms and entrepreneurial self-efficacy. *Sustainability*, 11(16), Article 16. <https://doi.org/10.3390/su11164314>
- Attri, D. R., & Bairagi, M. R. (2020). Chronicle of a Foodpreneur. *Psychology and Education Journal*, 57(9), Article 9. <https://doi.org/10.17762/pae.v57i9.609>
- Beniwal, T., & Mathur, D. (2021). Cloud kitchen: A profitable venture. *IARJSET*, 8. <https://doi.org/10.17148/IARJSET.2021.81010>
- Bandura, A. (1993). Perceived Self-Efficacy in Cognitive Development and Functioning. *Educational Psychologist*, 28, 117–148. http://dx.doi.org/10.1207/s15326985ep2802_3.
- Chen, Chao C., Greene, Patricia Gene and Crick, Ann, (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?, *Journal of Business Venturing*, 13, issue 4, p. 295–316.
- Chhabra, N., & Rana, A. (2021). Rise and the future of cloud kitchens in India: A consumer study. *International Journal of Research in Engineering, Science and Management*, 4(7), 158–165.
- Choudhary, N. (2019a). Strategic analysis of cloud kitchen – A case study. *Management Today*, 9, 184–190. <https://doi.org/10.11127/gmt.2019.09.05>
- Choudhary, N. (2019b). Strategic analysis of cloud kitchen—A case study. *Strategic Analysis*, 93.