



## A STUDY OF CLOUD KITCHEN - THE FUTURE OF FOOD INDUSTRY

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**Abstract:**

A cloud kitchen business model is fully online, accepting orders via websites or mobile apps, in contrast to a regular restaurant, which normally serves patrons on-site.

The study paper examines the current trends—such as heightened sustainability, intensifying rivalry, technological integration, increasing customization, market expansion, and expanded collaboration—that point to cloud kitchens as the food industry's future.

This paper is mainly focused on the future of Cloud Kitchen in India

**Keywords:** Cloud Kitchen Business Model, Online Food Delivery, Food Delivery Apps

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**Introduction:**

A cloud kitchen business also known as a ghost kitchen or virtual kitchen, is a facility where food is prepared and cooked exclusively for delivery and takeout orders. Unlike traditional restaurants, cloud kitchen business models do not have a physical storefront for customers to dine in. Instead, they rely on online platforms and third-party delivery services to reach customers.

Cloud kitchen business models have various types, each with its own characteristics and operational focus.

Here are some common types of cloud kitchens:

## 1. Single-Brand Model:

Focuses on operating a single restaurant brand or cuisine from a virtual kitchen. This allows for a specialized and dedicated approach to a specific type of food.

## 2. Multi-Brand Model:

Operates multiple virtual restaurant brands from the same kitchen space. This model enables a kitchen to

offer diverse cuisines and menu options to cater to a broader customer base.

## 3. Commissary Model:

Provides a centralized space for multiple restaurants or food businesses to prepare their food. Each tenant has its own dedicated cooking space within the commissary kitchen.

## 4. Shared-Use Model:

Similar to a commissary kitchen, shared-use kitchens are facilities where multiple food businesses share equipment, storage, and other resources to operate independently.

## 5. Branded Virtual Model:

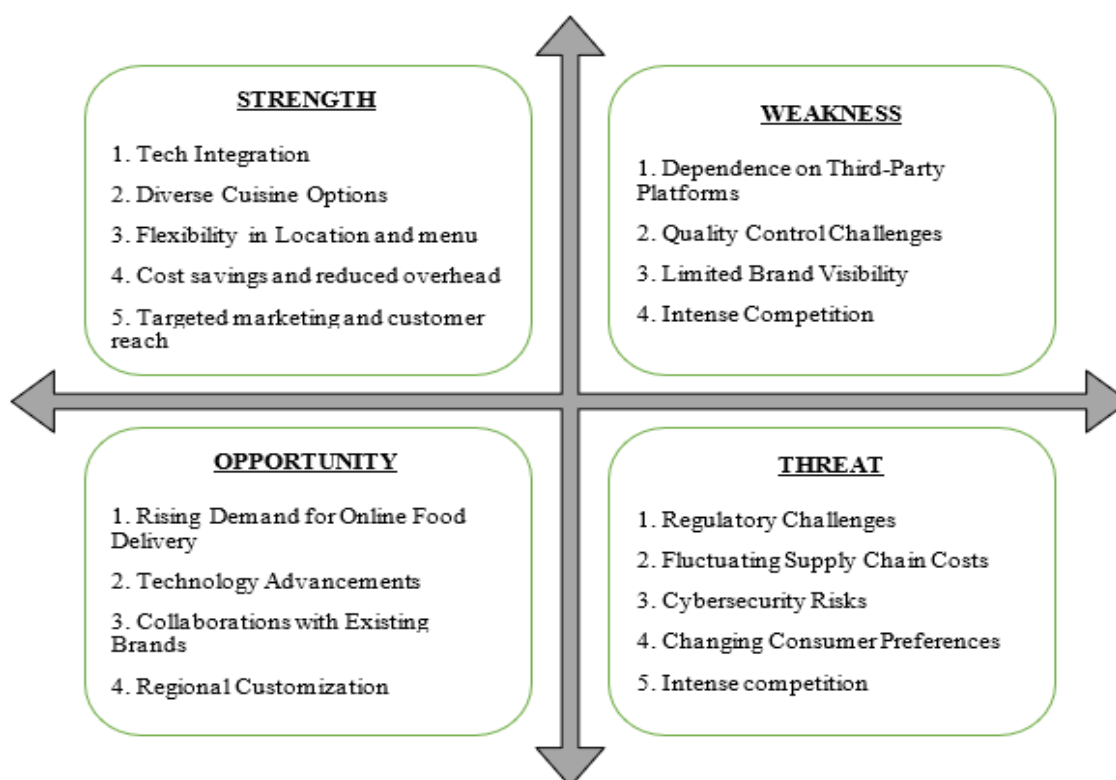
Focuses on building a strong online presence and brand identity, often without a physical storefront. These kitchens may have a virtual storefront on popular food delivery apps.

## 6. Delivery-only model:

Operates exclusively for delivery and takeout, with

- no dine-in option. These kitchens may or may not be associated with an existing physical restaurant.
7. Franchise Model:  
Extends an existing restaurant brand into the virtual space, allowing franchises to operate without the need for a traditional brick-and-mortar location.

8. Catering Model:  
Specializes in catering services, providing food for events, parties, or corporate functions. This type of cloud kitchen focuses on large-scale orders rather than individual consumer deliveries.



### SWOT Analysis:

#### Market of Cloud Kitchen:

Aspect	Description
Market Size and Growth	The global cloud kitchen market is growing rapidly, driven by the increasing demand for online food delivery services.
No. Cloud Kitchen in India. (2020)	3500 Cloud Kitchens
Global cloud kitchen market size	US\$ 57.51 billion in 2022
India cloud kitchen market size	US\$ 969.5 Million in 2023
Key Players	Box8, Rebel Foods, Zuul Kitchens, and others.
Target Audience	Restaurants looking to expand without the need for a physical presence, entrepreneurs launching new food concepts.
Technology Integration	Integration with online ordering platforms, use of automation and data analytics for efficient operations.
Geographic Presence	Urban areas with high population density and demand for food delivery services are prime locations for cloud kitchens.
Cuisine Diversity	Caters a wide range of cuisines, adapting to local preferences and global food trends.

**Objectives:**

1. To know the concept and popularity of Cloud Kitchen.
2. To understand the functioning of Cloud Kitchen.
3. To comprehend the Cloud Kitchen market in India.
4. To evaluate the future scope of Cloud Kitchen.

**Hypothesis**

1. An integrated technology system is needed for the functioning of Cloud Kitchen.
2. Cloud kitchens are high-profit, low-risk business ventures.
3. The cloud kitchen has changed the landscapes and dynamics of the food industry.

**Review of Literature:**

**Nita Choudhary** in the case study titled “**Strategic analysis of cloud kitchen- a case study**”, explores the world of cloud kitchen in terms of business model, marketing strategies and analysis in terms of customers, competitors, market and environment. The study focuses on the intensity of competition, cloud kitchen service needs to continuously analyze the market position and adapt to market changes with innovative marketing strategies.

**Nilesh Upadhye and Dr. Suvarna Sathe**, in the research paper titled “**Cloud Kitchen - Case Study of Swiggy Cloud Kitchen in Pune**” studied the concept of cloud kitchen. The researchers focus on the food aggregator Swiggy platform for delivering food to customers. The researchers state that there is a lot of scope for the restaurant industry to generate the maximum revenue through cloud kitchen. The initiative taken by Mr.Sriharsha Majety and Nandan Reddy can relate to Lokmaya’s vision of Swadeshi as a Cloud kitchen contributing to the Indian economy. Also, they are creating a platform for the locals to start their new venture.

**S. Ramesh Babu and R. Arthy** in the research paper titled “**Ordering of food through online - an**

**empirical study among young adults**” explained the surge of increase in online food ordering in the youngsters. The researcher identified 301 young adults in Madurai market by using convenience sampling method and structured questionnaires are used to gather data from the young adults. The gathered data are analyzed by using various analyzing tools like, bar chart, perceptual mapping, chi-square and regression. The finding shows that young adults are giving importance to website design and security while ordering food online. The researcher also concludes that the majority of the young adults in Madurai prefer the Swiggy app to order their food. The researcher states that the young adults are willing to utilize the recent technologies to the fullest and they are highly familiar with online food ordering applications. Majority of them are the existing users of these applications and others are also willing to use these applications in future. The young adults, irrespective of their gender are giving more importance to website design and security to select the online food ordering applications.

**Zulkarnain Kedah, Yusof Ismail, A.K.M. Ahasanul Haque & Selim Ahmed** in the research paper titled “**Key Success Factors of Online Food Ordering Services: An Empirical Study**”, explains the determinants of the customer ordering experience, which include website trust, customer satisfaction and loyalty. The determinants are represented by website quality and service quality. This study examines the determinants of the customer ordering experience, which include website trust, customer satisfaction and loyalty. The determinants are represented by website quality and service quality. This study examines the determinants of the customer ordering experience, which include website trust, customer satisfaction and loyalty. The determinants are represented by website quality and service quality.

**Research Methodology:** The research is completely based on Secondary sources of data. Sources include collecting information about various cloud kitchens and its published information in regards their

**Nature of Research: Descriptive Research**

**Case Study of Cloud Kitchen:**

Name of the Cloud Kitchen	About	Revenue
<b>Rebel Foods</b>	<ul style="list-style-type: none"> <li>11 cloud kitchen companies under its umbrella.</li> <li>Provides technological infrastructure for exquisite culinary craftsmanship. Eg: Faasos, Sweeth truth, Behrouz biryani, Oven story, etc.</li> <li>As of July 2021, they operate 320+ cloud kitchens across India.</li> </ul>	Rs 859 crore in FY 21-22
<b>BOX8</b>	<ul style="list-style-type: none"> <li>Serves Irresistible Desi Meals in a convenient, easy-to-carry box.</li> <li>Serve over 22,000+ meals every day across our 100+ Outlets in Mumbai, Pune, Bangalore, &amp; Gurgaon</li> </ul>	Rs 210 crore in FY 21-22
<b>Kitchens@</b>	<ul style="list-style-type: none"> <li>The addition of Swiggy's Access kitchens</li> <li>Four cities across 52 locations</li> <li>700+ kitchens, providing customers with more convenient and efficient food delivery options.</li> </ul>	\$65 million (₹520 Cr) in FY 21-22

inspiration, initial struggle, journey of capturing market and constantly maintaining industry standards etc available on the various portals of the internet, journals, magazines etc.

**Limitations of the study:**

As the study is based on secondary sources available through various research papers, journals, and books. The SWOT analysis helps to understand the market of cloud kitchens is based on the researchers view point and it may vary individual to individual. Also, the factors responsible for growth of cloud kitchens are based on case studies analysis.

**Findings of the study:**

**Future Prospects of Cloud Kitchen Business Module:**

- Integration of technology like AI and IoT.
- Sustainability practices in cloud kitchen operations.
- Global expansion and new market opportunities.
- Collaboration and partnerships in the industry.
- Cloud kitchens offer a high degree of flexibility, allowing food entrepreneurs to experiment with different cuisines and concepts without the constraints of a traditional restaurant setup.

Easy Set Up	Popularity	Customers
Youngster (Less investment and quick start) Women (WFH and expertise) Applicable in Rural and Urban areas	Increase in demand of takeaways due to hectic work schedule Adaptable to changes in the market and industry trends	Builds a database of customer information for personalized marketing efforts. No preservatives Hygiene and quality standards are maintained.

**Conclusion:**

The global cloud kitchen market was on a growth trajectory, with a compound annual growth rate (CAGR) projected to be substantial over the forecast period. The market was driven by factors such as urbanization, busy lifestyles, the convenience of online food ordering, and the COVID-19 pandemic, which accelerated the shift towards digital channels. Numerous startups and established players were entering the cloud kitchen space, contributing to increased competition. Companies specializing in food delivery services, as well as traditional restaurant chains, were exploring or expanding their presence in the cloud kitchen segment. The market featured various business models, including independent cloud kitchen operators, partnerships with existing restaurants, and franchise models. Multi-brand cloud kitchens, where a

single kitchen produced food for multiple brands, gained popularity for optimizing resource utilization.

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