

International Advanced Research Journal in Science, Engineering and Technology

Vol. 8, Issue 8, August 2021

DOI: 10.17148/IARJSET.2021.8892

# Multi-Brand Cloud Kitchens: The Efficient Route

### Twinkle Beniwal<sup>1,</sup> Dr. Vidhu K. Mathur<sup>2</sup>

<sup>1</sup> Research Scholar, ICFAI University, Jaipur

<sup>2</sup>Assistant Professor, ICFAI University, Jaipur

**Abstract:** This study examines that Cloud Kitchens are more efficient than traditional dine-in restaurants as they are customised for delivery only operations and it is also possible for cloud kitchen to run multiple brands at one location which is impossible for a restaurant.

Keywords: Cloud kitchen, Dine-in, Multi-brand, delivery only

#### INTRODUCTION

Cloud kitchens – also known as dark kitchens, virtual kitchens, ghost kitchens, and delivery-only restaurants, have proved to be a significant disruptor in the restaurant industry. According to an intricated report on the Restaurant Industry & Market Evolution, 52% of foodservice operators placed their bets on setting up a Cloud Kitchen or a delivery-only outlet of their brand (Source: "PRIME Report 2020 POSist Restaurant Industry & Market Evolution Report" (2020 India Edition)). As food choices today have become more diverse, many standalone dark kitchen brands have evolved to embrace the concept of multi-brand cloud kitchens. This model caters to evolving customer trends with innovative menus, capturing a broad market, and increasing order frequency in the process. In this article, we will guide you on how to start a multi-brand dark kitchen.



Figure 1 (Source: "https://limetray.com/blog/cloud-kitchen-business-model/")

#### Objective

**1.** To examine the efficiency of multi-Brand cloud kitchens over traditional dine-in restaurants.

#### **Impact of Covid-19**

The restaurant industry provides direct employment to 7.3 million Indians, and it is estimated that an equivalent number is engaged in ancillary activities has been no doubt severely hit. The challenges, in particular of the restaurant sector, are manifold given that the business model is such that the proportion of fixed operating expenses is very high hence translating to a very higher risk. As per reports, over two million (20 lakh) people directly employed in this sector may be rendered jobless, according to the National Restaurant Association of India (NRAI) that represents over 500,000 restaurants across the country. (Source: Sengupta, R. (2020) "Over 20 lakh people may lose jobs in the restaurant industry amidst coronavirus crisis" Retrieved from (<u>https://nrai.org/over-20-lakh-people-may-lose-jobs-in-the-restaurant-industry-amidst-coronavirus-crisis/</u>).



International Advanced Research Journal in Science, Engineering and Technology

Vol. 8, Issue 8, August 2021

DOI: 10.17148/IARJSET.2021.8892

#### **Data Collection**

This research is totally based on Secondary Data. Secondary data included collecting information about various cloud kitchen and restaurants setup cost, the industry standards, etc from the various portals from the internet, journals, magazines etc.

#### **Efficiency of Cloud Kitchens**

The way India eats has changed so much that Indians may not even be aware of the revolution brewing in the restaurant industry. As more and more Indians in cities order in food, restaurants are evolving to shed the appendages that they no longer need. The food delivery market is currently a \$35 Bn market worldwide, and by 2030 it could be worth ten times that much, according to market analysts. Valuations do not equal profit, however, and that's the pea in the princess's bed.

At the moment almost nobody in the FoodTech business has made a profit. Here's some perspective to show far FoodTech startups are from profitability — last year, India's food delivery majors Zomato and Swiggy made a collective loss of over \$550 Mn. In the UK, Amazonbacked Deliveroo's losses widened to \$285 Mn. Over in the US, leading food delivery platform UberEats, is likely losing money, but Uber does not give a breakdown in its financials. (Source: https://inc42.com/features/the-economics-of-foodtechpart-2-cloud-kitchen-math/)

On the other side of the counter, even restaurants don't seem to be happy, and have moaned the increasing reliance on food delivery as a cause of lower margins. The restaurant business has always been a tough

nut to crack. Starting-up costs are high, margins

are thin, and crowds are fickle. With food delivery charges and discounts weighing in on their already sagging bottom lines, restaurateurs had started looking for a new business model.

#### Enter cloud kitchens.

Faster and cheaper to run than a fast-food joint or quick service restaurant, and with more culinary choices

THE BIGGEST CHALLENGES FOR RESTAURANTS IN 2020



Figure 2 (Source: "PRIME Report 2020 POSist Restaurant Industry & Market Evolution Report" (2020 India Edition))

than a mall food court, cloud kitchens are like Chinese Olympic gymnasts of the food service industry, born and bred with a singular purpose — to win at all costs. The basic premise behind cloud kitchen economics is very simple. Cloud kitchens do not have a physical space for diners to sit and eat. They rely completely on online orders for business and thereby are heavily dependent on food aggregators such as Zomato and Swiggy.



International Advanced Research Journal in Science, Engineering and Technology

Vol. 8, Issue 8, August 2021

DOI: 10.17148/IARJSET.2021.8892

# Profit margin of cloud kitchen VS that of Dine-in restaurant on delivery



Figure 3Source: https://inc42.com/features/the-economics-of-foodtech-part-2-cloud-kitchen-math/))

COST	Particular	INR ₹
Operations	Rent (800 sq. ft)	25,000 - 40,000
	Licenses (FSSAI, Health Trade License, Tax Registration License)	15,000 - 18,000
	Kitchen & Equipment (For 800 sq. ft depending on the type of cuisine)	5,00,000 - 10,00,000
	Staff	40,000 - 70,000
Marketing & Sales	Online Customer Acquisition (Per month, Includes Rs. 4000 for Online ordering, Website and CRM	40,000 - 1,50,000
	Social Media (Per Month)	20,000 - 40,000
	Branding & Packaging (Packing design, containers, supporting material and vendor support)	50,000 - 60,000
	POS & Inventory (Per month)	4,000 - 5,000

#### Cost of Setting-up Cloud Kitchen in India

Table 1(Source: "https://limetray.com/blog/cloud-kitchen-business-model/")



554



## IARJSET ISSN (0) 2393-8 International Advanced Research Journal in Science, Engineering and Technology



#### **Multi Brand Cloud Kitchens**

One of the most significant advantages of starting a multi-brand cloud kitchen is that it makes it possible for a single parent company to offer several different cuisines from the same premises. As there is no front-of-house at all, multi-brand cloud kitchens have evolved to cater to numerous audiences, each functioning under a separate brand.

For example, one cloud kitchen company can operate three brands, each specializing in Indian, Italian, and Chinese cuisines, respectively, from a single unit. To customers, however, it may seem that these are independent brands with independent operations serving distinct cuisines. As it is a delivery-only format, low start-up and marketing costs are often termed as the biggest game-changer.

Faasos, an Indian food-on-demand venture that was set up in 2011, has made impressive in-roads into the F&B market. Now known as Rebel Foods, the company owns famous food brands that include Behrouz Biryani, Oven Story Pizza, Mandarin Oak, all of which operate under a single kitchen infrastructure today.

Kitopi another Cloud Kitchen platform, is the world's leading state-of-the-art, managed cloud kitchen platform with over 1000 employees across UAE, KSA and Kuwait. Kitopi enables restaurants to open delivery only locations by providing the necessary infrastructure and software with minimal capital expenditures and time as well as taking care of the entire customer experience journey: receiving and processing orders, cooking, delivery operations and managing customer feedback.



International Advanced Research Journal in Science, Engineering and Technology

Vol. 8, Issue 8, August 2021

DOI: 10.17148/IARJSET.2021.8892



Figure 4(Source: "https://www.rebelfoods.com/who-we-are")

Founded in January 2018, Kitopi is now spread across 5 countries, with 60+ Kitchens and 200+ brands. (Source: "")



Figure 5 (Source "https://www.kitopi.com/our-story")

Kitopi takes care of all the operations from the sourcing of ingredients and cooking with care to packaging and safe delivery. They also look after the entire customer experience, making sure customers are always happy, they do this their smart kitchen operating system (SKOS) - technology that they've built in house, to ensure speed and efficiency. Some major brands working with them are;



Figure 6 (Source: "https://www.kitopi.com/")



International Advanced Research Journal in Science, Engineering and Technology

Vol. 8, Issue 8, August 2021

#### DOI: 10.17148/IARJSET.2021.8892

#### Advantages of Multi-Brand Cloud Kitchens

With minimum entry barriers and low capital costs, Multi Brand cloud kitchens are more profitable to set up than the traditional restaurant and even standalone cloud kitchens. Multi Brand Cloud Kitchens cater to a wider audience and have the capacity to leverage growth levels from a single kitchen unit. Efficient utilization of resources, adequate inventory levels, and controlled food costs provide better predictability in the business.

Staff	One of the most significant advantages of opening a multi-brand Cloud kitchen is that there are no additional expenses for hiring separate kitchen staff. The same team of chefs preparing dishes for the existing brand can easily make food items for different brands. One can easily begin operations with a small team who'd be focused on preparing and delivering the food and hire more staff as the order volumes increase.
Equipment	Refrigerators, ovens, cutting counters, chimneys, are some of the common types of equipment you need while setting up a cloud kitchen business. One can utilize the same types of equipment while opening a new brand depending on the cuisines you are providing.
Cuisines	Not being limited to a physical location means that cloud kitchen brands can create, update, or change the menu to suit the various business needs without impacting customer satisfaction. To launch multiple brands from a single kitchen, operators must emphasize on listing down the menu items based on chef's recommendations and customer trends, decide the price points, design the menu and communicate it to the customers.
Order Management	With the advent of multi-brand cloud kitchens, restaurant POS software has also evolved to integrate orders of several brands from multiple channels such as delivery apps, website/mobile app, social media seamlessly into one platform.
Marketing	Online food aggregator marketplaces are ideal for promoting multi-brand cloud kitchens. Marketing on aggregator-based platforms is data-centric. Each brand can create its own unique identity on these platforms and gain valuable customer insights by tracking visitor activity. As they are popular with the target audience of cloud kitchens, listing your new brand on these platforms becomes critical.

#### Managing Multi-Brand Cloud Kitchens

The cloud kitchens that took the restaurant industry by the storm have developed to the next level to become a more evolved and robust business model with multiple restaurant brands running from a single kitchen. Running multiple brands from one kitchen significantly lowers operational costs and effectively utilizes inventory and manpower. However, despite working under one kitchen, each brand functions in a different manner. The menu, recipe, total sales, frequency and source of orders, inventory consumption, etc. varies for each brand. But to optimize the entire operations and reach out to more customers, restaurateurs need powerful software that automates and centralizes the entire management of the cloud kitchens.

Accepting Multi-Source	For the cloud kitchens that have a presence on multiple food aggregators such as Zomato,	
Orders	Swiggy, etc., and also accept orders via hotline numbers, it can be a tough task to manage the orders separately. A robust restaurant POS system consolidates orders from all the sources into a single dashboard. It is easier to accept and manage orders from multiple sources on a central platform.	
	If one customer places an order for Brand A on an online aggregator platform and other customer places an order for Brand B via telephone, it is accepted on a single integrated platform. Orders from multiple brands can be viewed, accepted, and managed centrally through a single consolidated platform.	
Managing Orders	Multi-Brand Cloud Kitchen Models have gained popularity for providing multiple cuisine preferences to customers from a single kitchen. But managing orders from different brands that are coming from different sources can be a daunting task. Moreover, working on multiple screens for accepting orders of different brands on busy days could lead to errors or mismanagement.	
	The implementation of POS system provides convenience and ease of management to the cloud kitchen operators. With a single interface managing, the orders from different brands don't require multiple hands	



#### International Advanced Research Journal in Science, Engineering and Technology

Vol. 8, Issue 8, August 2021

#### DOI: 10.17148/IARJSET.2021.8892

Understanding	The restaurant management software automates the entire inventory management of the
Inventory Requirements	cloud kitchen brands. It generates inventory consumption statistics for each brand. The
Requirements	keep track of all the finished and semi-finished items.
	It ensures that the consistency while preparing the dishes is appropriate and the kitchen
	staff follows standardized recipe guidelines in all the kitchens. Based on the brand-wise
	orders received, it keeps a check on the portions of each dish, automatically deducts the
Central Order	Stock required for preparing the disnes, and hence optimizes the overall food costs.
Tracking	order management can be a big challenge if it is not managed centrally. Everything from
	the packaging to delivery time is also highlighted on the central dashboard. Tracking the
	orders centrally results in improved efficiency, better inventory management, and faster
	deliveries. There is a single interface where restaurant operators can see the sales and
	labour data merged together which makes it easier to manage all the moving parts of the
Telephonic Order	A call center panel is an integrated feature of a POS system. The orders that are placed
Acceptance	online via the website call center and the orders that customers place on hotline numbers
	are entered and accepted on a central hub. As soon as the details of the customers are
	added along with their orders, the central call center panel routes the orders to the kitchens
	nearest to the customer's location.
	In case if the system doesn't receive an order directly from the customer, all the order
	details such as the customer's information, location can be entered into the system via the
	call center. The support personnel also have access to a central dashboard where they can
	track live order status and also provide the information to the customers.
Streamlining Menu	Irrespective of the restaurant format, menu management is important for every restaurant.
	restaurateurs keep a close track of updating the menu regularly.
	For example, a cloud kitchen operator is managing 5 delivery-only restaurant brands from
	a single kitchen. Each brand caters to a different cuisine and therefore, there are 5 menus
	that have to be managed at the same time. A robust POS system integrates all the menus of different brands into a single dashboard
<b>Optimizing Preparation</b>	For Delivery-Only restaurants quality and speed are of utmost importance. Speed is a
and Packaging	crucial factor that ensures that your customers receive fresh food quickly. To deliver
	quality and speed, cloud kitchen operators make sure that the entire order-taking
	mechanism is optimized timely.
	Through integrated kitchen display systems and analytical reports, cloud kitchens can
	optimize the overall time taken from accepting the order to finally delivering it to the
	customers. The entire process which is automated and transparent ensures that there is no
	mismanagement in the orders and the customers receive their orders on time.
Total Sales Overview	With POS systems, cloud kitchens can view detailed reports for analysing the sales
	a complete overview of which brand generated the most revenue, and determine the
	delivery partner that directed most of the orders. POS system provides an overall
	calculation of the total order count and also monitors the cancelled orders.
	Analysing data of all the orders also helps in optimizing the time taken to prepare and deliver the dishes. These systems are also effective in maintaining a strong database of
	customers. With each sale, the customer's data is also recorded With this information
	the kitchen owners and operators can understand the purchasing habits of customers and
	convert potential customers into regular customers.

#### Swiggy Access & Zomato Kitchens

In a span of just two years from 2017 to 2019, Swiggy has invested in over a million square feet of real estate space. This is across 14 cities to help restaurant partners expand to more locations- within their city and across through cloud kitchens.



International Advanced Research Journal in Science, Engineering and Technology

### Vol. 8, Issue 8, August 2021

#### DOI: 10.17148/IARJSET.2021.8892

By creating over a thousand partner cloud kitchens, it has become the largest enabler of this model for restaurants not just in India but potentially across the world.

Normally, these facilities are large, warehouse-like buildings that hold multiple "restaurants" under a single roof. For large restaurant operators with multiple chains, looking to fulfil extra demand brought on by delivery or to test out new concepts without incurring too much risk- these are ideal.

Multi-unit chains can also use these spaces to reach customers in areas where they might not have a brick-and-mortar store. Meghna Foods, Keventers, Biryani Blues are already using this opportunity and making the most of it. (Source: https://economictimes.indiatimes.com/small-biz/startups/newsbuzz/swiggy-will-invest-another-rs-75-crore-to-expandits-cloud-kitchens/articleshow/72140503.cms)



Figure 7 A visual of a Swiggy Access Cloud Kitchen Facility (Source: https://multirestaurant.systems/swiggy-accessswiggys-cloud-kitchen-concept-of-cloud-kitchen-in-india/)

Even Zomato is jumping on the multi-brand cloud kitchen infrastructure with its Zomato Kitchen Initiative, which aims to provide kitchen facilities to cloud kitchen brands under its roof. Zomato recently issued its IPO worth Rs 9,375 Crore for the same.



#### CONCLUSION

After reviewing the Secondary data collected via internet, journals and magazines, with the explanation of the basic factors responsible for the higher profitability and efficiency of a multi-Brand cloud kitchen over a traditional dine-in restaurant, and looking at big players such as Rebel Foods at a national level and Kitopi at an international level, it is conclusive that even though a multi brand cloud kitchen has it's fair share of challenges, there is no such challenge which could be overcome with implementations of a robust POS System and proper management of resources by the entrepreneur. The Multi-Brand Cloud Kitchen model is the efficient route and the future of the F&B Industry.

#### REFERENCES

1. Gupta, P. (2020) "Growth of Cloud Kitchens in India" Retrieved from (https://ianslife.in/food-fitness/growth-cloud-kitchens-india ) **© IARJSET** This work is licensed under a Creative Commons Attribution 4.0 International License

International Advanced Research Journal in Science, Engineering and Technology

IARJSET

#### Vol. 8, Issue 8, August 2021

#### DOI: 10.17148/IARJSET.2021.8892

2. Sengupta, R. (2020) "Over 20 lakh people may lose jobs in the restaurant industry amidst coronavirus crisis" Retrieved from (https://nrai.org/over-20-lakh-people-may-lose-jobs-in-the-restaurant-industry-amidst-coronavirus-crisis/)

3. PRIME Report (2020) POSist "Restaurant Industry & Market Evolution Report" (2020 India Edition)

4. Choudhary, N. (2019) "Strategic Analysis of Cloud Kitchen – A Case Study" Retrieved from Management Today: An International Journal of Management Studies Vol.9, No.3, July-September 2019

5. Kondalamahanty, A. (2019) "The Economics of FoodTech Part 2: The Math Behind Cloud Kitchens in India" Retrieved from (https://inc42.com/features/the-economics-of-foodtech-part-2-cloud-kitchen-math/)

6. Redseer (2020) "Cloud Kitchens – The Secret Sauce to Survive in the Post-Covid Restaurant Market?" Retrieved from (https://redseer.com/product/cloud-kitchens-the-secret-sauce-to-survive-in-the-post-covid-restaurant-market/)

7. Cheema, K. (2019) "With Food Delivery Startups Backing Cloud Kitchens, Do Restaurants Stand a Chance?" Retrieved from (https://inc42.com/features/with-food-delivery-apps-backing-cloud-kitchens-do-restaurants-stand-a-chance/)

8. Colpaart, A. (2019) "Everything You Need to Know about Cloud Kitchens (aka. Ghost Kitchens) in 2020" Retrieved from (https://www.thefoodcorridor.com/2019/12/05/everything-you-need-to-know-aboutcloud-kitchens-aka-ghost-kitchens-in-2020/)

9. Parekh, J. (2019) "Customer convenience: How cloud kitchens are disrupting traditional restaurants" Retrieved from (https://medium.com/arthavc/customer-conveniencehow-cloud-kitchens-are-disrupting-traditional-restaurants 16c6f68e6d09)

10. Sachitanand, R. (2019) "Why are food aggregators leveraging the delivery-only model?" Retrieved from startups/newsbuzz/why-are-food-aggregators-leveraging-the-delivery-only-model/ articleshow/69178702.cms?from=mdr)

11. Mishra, S. (2019) "Opening a Cloud Kitchen? All the Pros and Cons you should know" Retrieved from (https://medium.com/@voicesinmyhead/opening-a-cloud-kitchenall-the-pros-and-cons-you-should-know-244397edba32)

12. Juneja, P. (2018) "Cloud Kitchen: The Newest Innovation in the Restaurant Business" Retrieved from(https://www.managementstudyguide.com/cloud-kitchen.htm)

13. Brahma, D. (2020) "ARE CLOUD KITCHENS THE DEFINITIVE FUTURE?" Retrieved from (https://www.mukundafoods.com/portfolio-item/blog-are-cloud-kitchensthe-definitive-future/)

14. Lapaas (2019) "Cloud Kitchen Business Model (Faasos) | Start your own Cloud Kitchen" A Case Study, Retrieved from (https://lapaas.com/cloud-kitchen-business-modelfaasos/)

15. The Restaurant Times (2018) "Cloud Kitchen Business Model Decoded – How to Run a Successful Cloud Kitchen Business" Retrieved from (https://www.posist.com/restaurant-times/cloud-kitchen/setup/cloud-kitchen-delivery-kitchen.htmlv )

16. Pillai, P. (2020) "Can cloud kitchens rescue restaurants?" Retrieved from (https://indianexpress.com/article/lifestyle/food-wine/can-cloud-kitchens-rescue-restaurants-6542588/)

17. Dickerson, D. (2019) "The Rise of the Cloud Kitchen" Retrieved from (https://www.cognizant.com/futureofwork/article/the-rise-of-thecloud-kitchen)

18. Singh, S. (2019) "Cloud Kitchens and Profitability in the Online Food Delivery Platform" Retrieved from (http://www.fnbnews.com/Top-News/cloud-kitchens-and-profitability-in-the-online-food-delivery-platform-53456 )

19. Dharshika S; Nagaraj G Cholli. "Green Cloud Computing: Redefining the future of Cloud Computing". International Research Journal on Advanced Science Hub, 3, Special Issue 7S, 2021, 12-19.

20. Karthikraj H; Savitha V; Pavithra M; Mohammed Fayyaz K M; Sangeetha K. "Doctor Appointment System Using Cloud". International Research Journal on Advanced Science Hub, 3, Special Issue ICARD-2021 3S, 2021, 13-17. doi: 10.47392/irjash.2021.053

21. Mohd Akbar; Irshad Ahmad; Thirupathi Regula. "Study and improved data storage in cloud computing using cryptography". International Research Journal on Advanced Science Hub, 3, Special Issue ICOST 2S, 2021, 94-99. doi: 10.47392/irjash.2021.046