



FROM VIRTUAL TO REALITY: AN ECONOMIC ANALYSIS OF THE CLOUD KITCHEN INDUSTRY

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ABSTRACT: Cloud kitchens have grown to a market size of \$63.9B USD in 2022. The COVID-19 pandemic led to a surge in the market for these facilities as they proved to be a cost-effective option for restaurants to continue operating and meet the rising demand for food delivery. Cloud kitchens offer a range of economic benefits, including reduced costs, increased profitability, and decreased barriers to entry for new restaurant businesses. They also provide greater flexibility in food production and menu selections to meet the fluctuating customer demand. With the shift towards takeout and delivery likely to remain prevalent in the food service industry, cloud kitchens are expected to continue being an innovative and efficient way to meet the growing demand for online food ordering and delivery.

Cloud kitchens, also known as ghost kitchens or virtual kitchens, have become increasingly popular among entrepreneurs and consumers, growing to a market size of \$63.9B USD in 2022. These are commercial facilities that cater to pick-up and delivery food orders only, offering kitchen spaces to multiple restaurants without the overhead costs associated with traditional restaurants. During the COVID-19 pandemic, cloud kitchens became an acclaimed option for restaurants to continue operating and meet the rocket demand for food delivery services. Statewide stay-at-home orders led to increased demand for food delivery services, prompting a surge in the market. The standard cloud kitchen business model proved more cost-effective, allowing restaurants to focus on food preparation, quality assurance, and delivery. In a post-pandemic world, cloud kitchens have demonstrated their dominance in the food service industry due to their enticing business model.

The main economic advantage of cloud kitchens is the potential to reduce costs associated with traditional restaurants, thus increasing profitability for food delivery businesses. Costs

that would normally be anticipated, such as rent, utilities, maintenance, servers, and custodians, are all excluded from a cloud kitchen business model. With lower fixed costs, cloud kitchens can be more competitive with pricing and offer lower prices to customers. The average profit margins for traditional restaurants range between 3-6%, whereas a cloud kitchen can offer a wider profit margin with a range of 15-20%.¹

For incoming restaurant owners, they provide decreased impediments of entry for new restaurant businesses, allowing them to start operating a cloud kitchen with a lower initial investment cost. Restaurant startups can cost between \$175,500 to \$750,000² to lay the groundwork and commence operations. A significant fraction of this cost is attributed to the cost of investing in real estate to acquire an attractive space, factored by location, pricing, appearance, and more.³ In comparison, a cloud kitchen startup would launch in about six to eight weeks with an average \$30k initial capital investment – and break even within six months.⁴ It costs about 185% more to open a traditional restaurant than a cloud kitchen-based restaurant.

¹Sharma, Mehul. "Future of Cloud Kitchens in India." *ETHospitalityWorld.com*, 6 May 2022

²Felt, Mary. "How Much Does It Cost to Start a Restaurant Business?" *CloudKitchens*, 10 Aug. 2022

³Larkin, Tom. "8 Factors for Choosing a New Restaurant Location." *FSR Magazine*, 1 Sept. 2017

⁴Felt, Mary. "How Much Does It Cost to Start a Ghost Kitchen: A Complete Guide." *CloudKitchens*, 8 Aug. 2022



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Cloud kitchens can also offer greater flexibility in food production, enabling restaurants to adjust production levels and menu offerings to meet changing customer demand. For example, a cloud kitchen could quickly ramp up production of a particular dish during peak hours or in response to a high volume of orders, without the constraints of seating and staffing capacity. This can help restaurants maximize their efficiency and profitability while reducing food waste. Without the undertaking of maintaining a dining space, cloud kitchens can focus exclusively on the production of food. With food production flexibility comes menu flexibility. Without the need to maintain a physical menu, cloud kitchens can easily adjust their offerings to meet changing

customer preferences, dietary restrictions, or seasonal availability of ingredients. This can help restaurants stay agile and responsive to customer demands, without the need for costly and time-consuming menu redesigns.

Restaurants around the country have picked up on this upward trend, and are investing in the reorientation of their business model to focus on drive-throughs and online ordering systems. The leading global fast food chain, McDonald's, remodeled a location in Texas with "no tables or seats" but instead a "conveyor belt that routes food to drivers who order ahead", fully discarding the option for customers to dine in. Likewise, Chipotle opened a new location in



Ohio that only takes digital orders. Taco Bell is doubling its drive-through from two to four total lanes.⁵

As the food service industry continues to evolve and adapt to changing consumer preferences, cloud kitchens are likely to remain a relevant and important part of the industry, providing innovative and efficient ways to meet

the growing demand for online food ordering and delivery. Despite having left the global pandemic behind, the shift towards takeout and delivery is likely to come with us into the future.

⁵Haddon, Heather. "Americans Are Gobbling up Takeout Food. Restaurants Bet That Won't Change." The Wall Street Journal, Dow Jones & Company, 28 Jan. 2023



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Works Cited

- Brahma, Dibyananda. "Is Cloud Kitchen Profitable to Survive the Post-COVID Restaurant Market?" *Medium, Medium*, 27 Aug. 2020, <https://dibyananda.medium.com/is-cloud-kitchen-profitable-to-survive-the-post-covid-restaurant-market-74e5b2d5a964>.
- Felt, Mary. "How Much Does It Cost to Start a Ghost Kitchen: A Complete Guide." *CloudKitchens*, 8 Aug. 2022, <https://cloudkitchens.com/blog/how-much-does-it-cost-to-start-a-ghost-kitchen-a-complete-guide/>.
- Haddon, Heather. "Americans Are Gobbling up Takeout Food. Restaurants Bet That Won't Change." *The Wall Street Journal*, Dow Jones & Company, 28 Jan. 2023, https://www.wsj.com/articles/americans-are-gobbling-up-takeout-food-restaurants-bet-that-wont-change-11674882022?mod=Searchresults_pos16&page=2.
- IMARC Group. "Cloud Kitchen Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028." *Market Research Company, Market Research Reports and Consulting Services*, 2023, <https://www.imarcgroup.com/cloud-kitchen-market>.
- Larkin, Tom. "8 Factors for Choosing a New Restaurant Location." *FSR Magazine*, 1 Sept. 2017, <https://www.fsrmagazine.com/expert-takes/8-factors-choosing-new-restaurant-location>.
- Mary. "How Much Does It Cost to Start a Restaurant Business?" *CloudKitchens*, 10 Aug. 2022, <https://cloudkitchens.com/blog/how-much-does-it-cost-to-start-restaurant-business/>.
- Sharma, Mehul. "Future of Cloud Kitchens in India." *ETHospitalityWorld.com*, 6 May 2022, <https://hospitality.economicictimes.indiatimes.com/news/speaking-heads/future-of-cloud-kitchens-in-india/91315483>.