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Cloud Kitchen: Strategy for Indonesian Culinary Business (SMEs) Growth During and Post Pandemic Era

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Abstract

This study aims to examine cloud kitchens that are widely applied in the world which can be a strategy for developing the culinary business in Indonesia, especially during and post the COVID-19 pandemic. Cloud kitchens are often referred to as satellite kitchens or ghost kitchens. Cloud kitchen is a restaurant with a concept that only offers delivery services and does not provide on-site dining facilities. The method used in this research is literature review of several documents, regulations, and journals, both print and online media which are reduced to a research data that can be presented scientifically. The result is that the cloud kitchen is one of the promising businesses during a pandemic and can be developed after a pandemic. Several delivery services such as *Gojek* and *GoFood* in collaboration with the Rebel Food company have succeeded in opening several cloud kitchen locations in Indonesia, especially big cities such as Jakarta, Bandung and Surabaya. As a result, the could kitchen can help SMEs in running a business in the culinary field more effectively and efficiently. However, the problems that arise in some areas, especially marginalized and remote areas are still not reachable, this is certainly a challenge with *GoFood* and also the government to expand the location to reach many SMEs in Indonesia. This research is expected to contribute to the development of economics as a strategy for community economic recovery.

Keywords: Cloud Kitchen, SMEs, *GoFood*, Economy, COVID-19.

Introduction

Ghost Kitchen or also known as Cloud Kitchen is a restaurant that offers delivery facilities only. The system is cannot eat on the spot because the restaurant is specially used as a large kitchen area (Chavan, 2020). There are very complete facilities and can be used to cook various types of food from many restaurants. The success of restaurants was a direct result of development of middle-class customers with high discretionary cashflow, changing lifestyle and the availability of restaurants in nearby locality (Choudhary, 2019). The basic concept of this cloud kitchen is a co-working space, a large hall with an attractive design where you work together to do assignments or work with friends (Doshi & Sadana, 2020). From this basic concept, a cloud kitchen can also be interpreted as a collective kitchen which consists of various restaurants in one place. When visitors or consumers come here, they can choose various menus with a faster food delivery process than conventional restaurants. Because this restaurant concept offers direct delivery facilities, not a few of them collaborate with online transportation such as Go-Food and Grab-Food (Setyowati, 2020).

The concept of Cloud Kitchen is slowly starting to attract global culinary entrepreneurs. Developed countries such as America, England, China and Indonesia have started to accept this type of restaurant concept (Resti, 2020). Typically, countries with high levels of food delivery use tend to find it easier to apply the Cloud Kitchen concept. It is also estimated that later in 2026, the cloud kitchen market could reach US $ 2.63 billion (Fajriana, 2020). The concept of cloud kitchens is currently in great demand by world culinary business players and has begun to spread in Indonesia. Generally, a business in the culinary field in the form of a conventional restaurant will require a lot of capital not only for food ingredients, but also the provision of a physical store (Lapegna & Lapegna, 2016). A restaurant with a conventional concept will require a variety of purposes. Examples are waiters, buildings, tables and chairs for on-site dining, equipped with conceptual decorations to attract customers. In addition, the location of the restaurant must also

be strategic so that it is easy to attract customers (Neil, 2020). Actually, the concept of this restaurant is not a new concept but has been implemented 15 years ago (Paul, 2020). A restaurant called Rebel Foods and Sequoia opened a business called Faasos in Indonesia by offering a variety of culinary kebabs (Moyeenudin, Anandan, & Bindu, 2020). At that time, this business only offered delivery services, although not as sophisticated as it is today. As a result, due to increased consumer interest in delivery services, the business of the first cloud kitchen concept continues to grow (Kolhekar, 2020). Until now, Rebel Foods already has 9 brands in which 70% of their customers have never visited a physical store at all (Muslim, 2020). A startup in the cloud computing-based restaurant sector from India, Rebel Foods plans to enter Indonesia in the next 18 months. This startup received an investment of US $ 5 million or around Rp 70 billion from Gojek in early July. In total, Rebel Foods received US $ 125 million in fresh funds from Statue Management, Goldman Sachs, Gojek, and several other investors.

Since the pandemic occurred in Indonesia in early March 2020, the government has appealed to physical distancing or to maintain a distance. In line with this policy, in a relatively short time, properties such as shopping centers experienced a significant decrease in visitor traffic by 80%-90% according to the Chairperson of the Indonesian Shopping Center Management Association (Li, Mirosa, & Bremer, 2020). This prompts shopping centers to limit operational time and the number of tenants operating their shops. The concept of a collective kitchen or cloud kitchen actually offers enormous benefits for SMEs. The concept that has started to be developed by delivery service providers, such as GoFood and Grab Kitchen, not only offers opportunities to expand the market but expand the market but also the opportunity to maximize profits (Nitheesh & Kumar, 2018). The concept of a cloud kitchen is similar to a food court, but the difference is that it only serves food delivery. A business or venture run successfully without importance of location, ambience or infrastructure. Moreover, cloud kitchen has an online presence, receive food orders on the online and convey food at the doorstep of customers. From the above statement, this research aims to find out how the strategies implemented, especially the SMEs and the role of government for the development of culinary business expansion using cloud kitchens. Moreover, this study is curiosity to know how does this concept work and future of cloud kitchen in Indonesia food market made researchers study this topic in detail.

Literature Review

The possible influence of COVID-19 on food service, which has been particularly prominent in Indonesia, is one of the most pressing challenges in the food service industry worldwide. The food business faced a number of issues as a result of the COVID-19 epidemic (Paul, 2020). Since, the lack of regular customer orders, dine-in businesses, which account for about two-thirds of the food industry, were badly impacted and experienced considerable financial hardship (Lapegna & Lapegna, 2016). Furthermore, varied degrees of lockdowns and similar restrictions in a number of nations throughout the world have aided the rise of the meal delivery service model. Because cloud kitchens operate solely on a delivery-only basis, restaurateurs may effortlessly maintain their operations while providing excellent service to their clients. A daily food delivery service is one that enables restaurants to deliver food to consumers in their preferred location (Schnettler et al., 2019). Eateries have offered food delivery services since the early twentieth century, but it was not until the early twenty-first century that these services could be called conventional and usual of certain restaurants. Since, the high expense of vehicle upkeep and the additional cost of drivers and staff personnel in the early twenty-first century, delivery services were often restricted to specific types of food (Hwang & Choe, 2019). This would imply that the food would have to be prepared in advance, and that customers would have to make reservations in advance to allow for optimal planning. Another factor to consider was food safety, with only food that could be delivered on time and within the specified timeframe (and was deemed safe for ingestion) being considered for delivery.

After the expansion of online meal delivery services, the concept of cloud kitchens emerged as a natural progression. Cloud kitchens are food service establishments that exclusively provide delivery (usually via the aforementioned app-based meal delivery companies) and occasionally takeaway, and do not have any dining-in facilities (Juliana, Pramezwary, Wowor, Maleachi, & Goeltom, 2020). They are also known as shared kitchens, virtual kitchens, or ghost kitchens because they don't have dine-in options like traditional restaurants. These kitchens are made up of common kitchen space used by culinary staff and are technologically advanced, working with food delivery services like Zomato and Swiggy to deliver orders to consumers' doorsteps (Paul, 2020). This idea is not new, and it existed before the pandemic caught everyone off guard. For the past few years, most FSAs (Food Service Aggregators) have operated cloud kitchens, and various start-ups like as Faasos, Oven Story, and Behrouz Biryani have grown effectively using the same model (Lapegna & Lapegna, 2016).

Customers can search and compare services and select depending on their interests using online food delivery platforms, which provide a standard degree of digital marketing for the meal delivery services they showcase (Muslim, 2020). At the same time, restaurants can strengthen their customer base by doing their own marketing on the side (Roh & Park, 2019), using digital and traditional assets to bring the restaurant to the forefront of the consumer's mind. Given that the cloud kitchen's suggested business model is fully online, it is important considering the internet marketing tactics that can be employed to promote the company to its greatest potential. Cloud kitchens were seen as an expanded

strategy prior to the pandemic, with start-ups like Faasos operating in both brick and store and cloud kitchens (Hwang & Choe, 2019). In the current environment, an increasing number of restaurants are adopting this strategy, as going out and dining in restaurants is an alternative that most consumers choose to avoid. With the epidemic continuing spreading and lockdowns being enforced and lifted on a frequent basis, the food and beverage business is losing revenue that it used to get from regular dine-in customers (Ye & Jones, 2020). Apart from that, owners must pay lakhs on rent, personnel, and power and maintenance costs on a regular basis (Iain Maxwell, 2017).

Furthermore, market expansion is aided by increased demand for digital ordering solutions. Individual ghost kitchens are also seeing greater usage of their online ordering options. A customized online ordering solution directs customers to the business and lowers the aggregator's commission, which might be as much as one-fifth of the total cloud kitchen costs (Songwanich, 2017). Technological advancements are also assisting restaurateurs in operating more efficiently and increasing their profit margins. Restaurants, for example, might employ advanced techniques to gather consumer insights to study and change their menu based on popularity, and replace items with better margin goods. Ghost kitchens are preferred by food entrepreneurs and operators that want to test new goods and offer inventive delicacies before presenting them to customers or consumers. Furthermore, ghost kitchens allow businesses to serve clients directly without incurring additional costs or having to worry about growing real-estate prices (Chavan, 2020). Moreover, restaurants that exist just to supply foods to specific customers might operate under multiple brands from the same kitchen, allowing them to make the most of their ingredients and save money on additional raw materials.

Despite the easing of stringent cut down limitations on cafeterias and restaurants, food companies desire to minimize costs and turn to culinary services, as most of these investments are going to waste. Apart from the subscription to FSAs or the usage of an own delivery system, cloud kitchens only require charges for the commercial production unit (Realtor, 2020). Many enterprises see this virtual and home delivery strategy as a way to adapt to decreased dine-in demand as a result of the prolonged COVID-19 fear for the next 7-8 months (Fajriana, 2020). Cloud kitchens are far more cost-effective than traditional kitchens because they eliminate the majority of the extra costs. There is no need for additional seating or costly décor and aesthetics. Front-of-house employees such as servers, bartenders, and hosts incur additional costs. In cloud kitchens, where the restaurant just provides the cooking personnel and the kitchen supplier maintains the cleaning and security staff, the majority of these costs are eliminated (Li et al., 2020). Without making large investments, such restaurants may test new concepts, menu items, and cuisines more quickly.

Research Method

Small and Medium Enterprises (SMEs) in Indonesia are one of the sectors affected by the Covid-19 pandemic. During the Large-Scale Social Restrictions period, many SMEs were forced to close their shops offline. This condition is also what distinguishes the crisis in previous years from the crisis this year. If in 1998 and 2008, the crisis was mostly experienced by the financial and corporate sectors, this time the crisis hit all sectors including SMEs, which support around 60% of Indonesia's GDP.

A survey conducted by logistics company Paxel with the headline "Paxel Buy & Send Insight II" revealed that during the Large-Scale Social Restrictions period 39.99% of SMEs reduced their stock of merchandise and 16.1% reduced employees due to closed offline stores (Kolhekar, 2020). During the COVID-19 pandemic, SMEs must make adjustments in business, so that they can still meet consumer needs without having to violate regulations from the government.

Therefore, it is necessary to have the right strategy to restore and restore the community's economy, especially the SME business. One of them is the development of a cloud kitchen system. The method used in this study is a literature review. Literature review is a systematic, explicit and reproducible method for identifying, evaluating and synthesizing research works and ideas that have been produced by researchers and practitioners (Zuldafial, 2012). The literature review aims to analyze and synthesize existing knowledge related to the topic to be researched to find empty space for research to be carried out (Sinambela, 2014). After conducting a literature review, the researcher did not stop just reading the literature, but also summarized, analyzed and synthesized critically and in-depth from the papers and documents being reviewed.

Results And Discussion

As Indonesia moves to adapt to the new normal situation during COVID-19 pandemic, there are many things that save culinary business owners from being able to survive. One of them is the cloud kitchen concept that offers a variety of advantages that encourage the culinary business to continue to be relevant even in new normal conditions with high standards of hygiene and food processing safety. Starting from this, Grab Kitchen was introduced in Indonesia in 2018 and then through a pilot project in Jakarta and officially launched in April, 2019 and introduced the first cloud kitchen concept in Indonesia.

In the midst of the challenges faced by culinary business people due to the COVID-19 pandemic and the enactment of the large-scale restrictions, restrictions on the operation of restaurants, cafes and restaurants have certainly hit the

income of culinary entrepreneurs. They can no longer rely on guests to come and eat at the location, preparing a take away food concept is also the closest solution.

The government prepares a national economic recovery scheme including it for SME players. An addition, the standard operational procedure for SMEs reactivation towards a new normal order has also begun to be socialized for business sectors that have been and are starting to be reactivated, such as the transportation and culinary sectors. SMEs actors in these two sectors need to have a business adaptation strategy such as providing a variety of food and beverage menu visualizations; offering healthy and ready-to-eat food; offer product bundling packages; provide various promos or special discounts for merchants; as well as presenting a better value proposition.

This strategy is an implementation of innovations that the culinary sector needs to continue with reference to the needs of the community and changes in consumption patterns that have migrated to online platforms. In this time of crisis, the use of data and information related to SMEs on digital platforms really supports us in helping them accurately and quickly. Moreover, nowadays it is very easy for SMEs to have food delivery service platforms, such as Go Food. The concept of a collective kitchen or cloud kitchen actually offers enormous benefits for SMEs. The concept that has started to be developed by delivery service providers, such as Go Food and Grab Kitchen not only offers opportunities to expand the market but expand the market but also the opportunity to maximize profit (Realtor, 2020). The concept of a cloud kitchen is similar to a food court, but the difference is that it only serves food delivery. Through cloud kitchens, SMEs remain the owners of the business but receive technology assistance and kitchen facilities from delivery service providers (Ye & Jones, 2020). SMEs that are just starting a business can save on operational costs because the cost components of purchasing equipment and renting a place can reach 70%-80% of their total investment costs (Li et al., 2020). By joining a cloud kitchen, SMEs are less risky, because they are free from the burden of paying rent or building renovations, the burden of providing a dining room for those who want to eat food on the spot, can serve consumers faster and the kitchen infrastructure is ready.

Afterwards, a cloud kitchen will not be able to function efficiently unless it has adequate cooking equipment. In fact, poorly maintained kitchen equipment can result in workplace accidents and food illness. Preventive maintenance and reactive maintenance are the two types of maintenance. The fundamental goal of preventative maintenance is to extend the equipment's service life by doing routine maintenance (Kolhekar, 2020). Apart from cleaning the equipment according to the correct process, it must also be checked on a regular basis to discover damage and faults as soon as feasible. Reactive maintenance, in contrast to preventive maintenance, is a type of maintenance that only repairs or replaces equipment after it is entirely broken (Moyeenudin et al., 2020). It looks to save time and money on a daily basis, but closer examination reveals that this form of maintenance actually costs more money in the long term.

Based on data from the Creative Economy Agency, the number of culinary businesses in Indonesia in 2018 reached 5.55 million units or 67.66 percent of the total 8.20 million creative economy businesses (Tribuntechno, 2020). The average growth rate for creative economy enterprises in the past 7 years was 9.82 percent. On the other hand, around 60 percent of culinary businesses in Indonesia have been affected by the COVID-19 pandemic (Resti, 2020), which must prepare for the new normal. Citing the results of Nielsen's research in 2019 before the pandemic, 95 percent of the 1,000 Indonesian consumers surveyed ordered ready-to-eat food and of that 58 percent ordered food using food delivery application services (Sulistyowati, 2020). The same survey shows that Indonesian consumers are interested in using food delivery applications because of the convenience factor it offers.

There are several benefits obtained by SME when implementing cloud kitchen, including for culinary SMEs, solutions to develop business through cloud kitchens can be an option. The reason is, cloud kitchens are able to minimize operational costs compared to opening independent branches, and can get closer to consumers in certain areas. This business model has existed in the culinary business world for a long time and is effective in helping businesses develop their business by reducing various operating costs. The concept of cloud kitchens has been widely promoted by the world's leading food delivery service players and has proven successful in bringing SMEs forward with a larger business scale.

Cloud kitchens allow culinary businesses to expand their sales area without having to physically open a restaurant. That way, operational costs can be further reduced. Moreover, currently consumer behavior has begun to shift due to the COVID-19 pandemic. Culinary business actors who join cloud kitchens on average only need to prepare employees and raw materials to serve their food menus. They no longer need to think about all kinds of infrastructure and systematic sales, and can focus more on running their culinary business. Cloud kitchen can be an option for people who are just starting to open their culinary business. We can introduce products to a wider range of consumers, and learn how consumers respond without having to spend too much money.

Data released by the Ministry of Cooperatives and Small and Medium Enterprises, said that SMEs connected through digital systems are still relatively small, namely only 13 percent or around 8 million SME owners. Meanwhile 87 percent of SMEs still rely on offline. Some of the strategies that can be done are as follows:

    a) Exposure through various sales platforms and social media, Culinary SMEs are advised to register with various sales platforms in the fields of e-commerce, delivery services, or social media. The objective is to increase brand awareness and exposure as much as possible.

b) Optimizing the profile in the delivery service application, this step is guaranteed to increase exposure on the main page of each delivery service application. We recommend that you use discounts for 3-5 best seller menus with high photo quality.

c) Increase restaurant ratings on the delivery service application, to further increase conversion, restaurants are recommended to have a rating above 4.5 stars in order to build consumer confidence in the quality of food and beverages available.

d) Initiative to optimize kitchen productivity and efficiency, this step is also a good opportunity for culinary business entrepreneurs who want to try new ideas or concepts with low risk.

e) Customer retention or customer feedback. Finally, restaurants must ensure that the quality of their products leaves a good impression when consumers try their food and drinks. This includes taste, portion, and quality compared to the price point. Remember, food preparation for delivery is different from dine-in, cooking and packaging durations must be adjusted for delivery services.

In addition, there must be pay attention to implement the cloud kitchen such as, building a strong and attractive personal branding as a characteristic that differentiates the business from other competitors; maximize use of social media to introduce and promote business; ensure that the business's culinary products are always of high quality (delicious, hygienic, and healthy) even though the manufacturing process is not directly witnessed by customers; uphold creativity in presenting new products according to culinary trends that are currently being liked; provide attractive promotions regularly to get new customers and retain old customers. Moreover, there are also main things that are become a challenge and need attention, namely, first, choosing a kitchen location if it is not right, it can result in expensive logistics lines (Fajriana, 2020). Second, it must be able to make products that are interesting and unique, not just delicious in taste. Third, the challenge of maintaining the temperature of the food; with the delivery system, it is not possible for consumers to get the same taste as after cooking, making menus is very important in this case; must be able to make food that can be warmed by consumers without destroying the texture and quality of taste. Fourth, be sensitive to digital marketing (Neil, 2020). Fifth, being able to pay attention to online reviews on a regular basis. Sixth, care to build digital infrastructure such as websites and others.

SME owners can reduce the burden of rental costs and renovation of infrastructure buildings because Go Food and Grab Kitchen cloud kitchens provide kitchens, complete infrastructure and basic utilities (drainage, power lines and gas pipes) that are ready to use, so that they can reduce the expense when compared to rental and construction costs or commercial renovation. Culinary SMEs also do not need to pay rent in advance every year like when renting in commercial areas in general. By focusing on delivery services, customer service time will be more optimal and faster. From ordering through applications, the pick-up process by drivers at cloud-kitchen locations that is more efficient than shopping centers or ordinary outlets, to food delivery, consumers can get quality and fast food. Through this excellent service, it is easier for SMEs to grow customer loyalty. Culinary SMEs can take advantage of cloud kitchens to expand to other regions and get closer to their consumers. Because, this method is efficient and has the least risk. A more strategic location for cloud kitchens will help reduce food delivery costs that must be borne by consumers, making this option more preferable and ultimately helping to increase consumer demand for SME culinary.

However, the conditions are cloud kitchens in Indonesia require even wider expansion to every region, not only big cities, so that later cloud kitchens like this can be utilized by all SMEs in Indonesia, so that they can help the country's economy caused by the COVID-19 pandemic. An addition, customers can only connect with cloud kitchens via their website or delivery app because they operate totally online. A delivery-only restaurant has no way of knowing what its customers think because it does not have a dine-in option. Furthermore, by delegating delivery services to a third-party source, dark kitchens typically relinquish control over the client experience, which could contribute to repeat business. When running a delivery-only restaurant in a competitive market, SMEs can afford to overlook minor details that can make or break the business.

Conclusion

The spread of the COVID-19 virus has forced all businesses to minimize operational activities, even some have to completely close. Even though the government has now implemented a new normal policy in several areas, conducting online transactions and implementing a delivery and takeaway system is still the safest choice for the F&B business. With the high customer demand for food delivery to the house, cloud kitchen systems, which were not widely known before, are on the rise. Cloud kitchen or virtual kitchen is basically a shared kitchen concept that can combine several brands in one place or kitchen. If we look from the point of view of the delivery service manager, this concept will be effective in improving the user experience because users can order the food they want from the nearest shared kitchen. Meanwhile, in terms of the food business, this concept makes it easier for them to be present in more places than opening new branches which cost a lot of money, especially since this concept is effectively carried out by MSMEs during a pandemic. Since it does not require a service area or front of house, this cloud kitchen business model fully emphasizes its attention to building kitchen infrastructure, delivery systems, and quality food and packaging hygiene. These four main business pillars are the advantages of cloud kitchens in the midst of a health crisis like this.

In the conditions of the COVID-19 pandemic, the impact received by the food and beverage business is very large. Many jobs are hampered and do not operate normally, most restaurants no longer provide dine-in services, so they only serve with delivery or delivery services, therefore, cloud kitchen businesses that only serve delivery orders can operate during the COVID-19 pandemic, making the cloud kitchen concept quite suitable for the current pandemic situation in Indonesia.

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