The Role of Food Delivery Services by Online Motorcycle Taxi on the Development of Culinary Home-Based Enterprises

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Abstract. The existence of home-based enterprises (HBEs) as the activities that utilize house as a place both to live and to generate income has been challenged by competition among them. The enterprises can take the advantages of technological advances to overcome this issue. One of the technologies that support the development of HBEs is online motorcycle taxi as a part of innovation in the urban infrastructure. The research case study area is around the area of UNDIP Tembalang-Semarang that is known as an education and housing area with many culinary businesses supplying the needs of students and the local community. Hence, this study takes a case of culinary HBEs that benefits from the existence of food delivery services provided by online motorcycle taxi. This study aims to examine the role of food delivery services provided by online motorcycle taxi in the development of culinary HBEs around the education area. This research uses both quantitative and qualitative descriptive method. The roles of this online services are examined from the perspective of culinary HBEs owners, online motorcycle taxi riders, and the consumers. The result is that there are several roles of online motorcycle taxi services namely maximizing business potential, helping business promotion activities, and providing easy access to customers, can be seen from the increasing income offline and online transactions and also the increasing service coverage of the culinary HBEs.

Keywords: home-based enterprises, technology, online delivery service, infrastructure

1. Introduction

One of the activities that support economic of Indonesia is the Micro, Small and Medium Enterprises (MSMEs). The existence of MSMEs plays an important role in resolving various development challenges, including unemployment and poverty alleviation [1]. Almost 90% of all businesses in the world are classified as MSMEs [2]. Only by utilizing the existing living space [3], these business activities are able to run and contribute to household income [4–6]. Even more MSMEs need to be able to innovate and compete in the dynamic of international world. It needs full support from the government, big business efforts and the community to boost the development of MSMEs to be competitive. Household businesses that are mostly classified as home-based enterprises (HBEs) which uses house or plots for income generating [7]. In this digital era, therefore using internet-technology in home-based HBE activities are crucial to survive and compete to others.

The technology is one of crucial infrastructure to be able to compete among the entrepreneurs. The impact of this technological progress has also been felt significantly by various fields including in the business world such as MSMEs [8]. Advances in internet-technology have encouraged HBEs to take part in adjusting to the changing world. This progress provides new opportunities for entrepreneurs to develop their businesses. Internet support creates an easy online buying and selling activities for SMEs to develop their businesses [9]. This support will facilitate the product distribution process and increase effectiveness in the business.
In the developed countries, the research of home based business have been research since years ago [10–12]. However, Indonesia as part developing countries, the study of internet role for home based enterprises just started [13–15].

The development of technology, as part of urban infrastructure, led to the era of online motorcycle taxi to help the growth of HBEs with food delivery services that can serve the consumers. Currently developing online motorcycle taxi or motorcycle with food delivery services in Indonesia are managed by companies such as Gojek and Grab in several major cities in Indonesia, one of them is Semarang. With this service, HBEs no longer must struggle to deliver their products to consumers or buyers. This efficiency and easiness are factors that influence the mushrooming of Go Food or Grab food.

The HBEs are considered to be able to improve the welfare of the local community as HBE actors and to be able to supply their daily needs. In addition, Semarang has also been served by technology in the form of an online motorcycle taxi, which is considered capable of supporting the development of HBEs with food delivery services. By relying on economic growth and technological advancements in urban development, urban planners need to involve HBE activities in the urban development planning [16].

The southern part of Semarang, which is around the UNDIP Tembalang area, has many HBEs. The development of HBEs in UNDIP Tembalang area due to the presence of Diponegoro University. The emergence of HBEs are expected due to the large number of migrant students living in the around UNDIP Tembalang area. The large number of needs to supply daily needs makes surrounding residents have the opportunity to open a variety of new businesses. The business opportunities that have been carried out start from opening a business in the form of a grocery shop, and a food business.

Therefore, this study aims to look at the role of online motorcycle taxi for food delivery services in the development of HBEs. This was done by looking at the distribution and condition of HBEs at the study location, then do a comparison of the conditions of home-based SMEs before and after using online motorcycle taxi for food delivery services. In the future, it is hoped that the results of this study can be used as reference material in making appropriate policies related to the progress of home-based HBEs by City Government. The previous study of the role of online transportation on HBEs development has not been explored, thus this study is trying to analyse the phenomenon and how to respond it is important.

2. Research Method

This research was conducted at 17 home-based culinary HBEs around the UNDIP Tembalang area. The respondents were chosen 17 HBEs out of 279 Micro, Small and Medium culinary enterprises which join to GoFood application in early 2019. From the survey, the HBEs is 17. The total area around UNDIP Tembalang area which was chosen as the research location is 15.11 Km². This area consists of 7 kelurahans in 2 subdistricts in Banyumanik and Tembalang subDistrict.

This study uses quantitative and qualitative descriptive statistical analysis techniques to explain the results of questionnaire, and interviews. The data collection technique used in the questionnaire was total sampling or saturated sampling, which made all home-based culinary HBE owners around the UNDIP Tembalang area, namely as many as 17 businesses as respondents. The data collection technique used in the interview was snowball sampling, which made 10 online motorcycle taxi riders and 10 food service users as respondents who were considered to understand about this case to be interviewed. Snowball sampling is a sampling technique that starts from one respondent to another respond until the researcher feels the required data has been obtained entirely.

3. Result and Discussion

This section contains an analysis process that can be used to see the role of online motorcycle taxi services for home-based HBEs. In analysing the role of online motorcycle taxi services for home-based HBEs, it will be seen from three sides, namely economy based on income value, service coverage based on destination and distance, and labour based on numbers.

A. The Role of Food Delivery Services for Home Based HBEs in Income Generation
In general, HBEs income which increases after cooperates with online motorcycle taxi explains that online motorcycle taxi has a positive role on HBEs. However, if the HBEs income stays or decreases after cooperates with online motorcycle taxi, it means that online motorcycle taxi plays a negative role on HBEs.

### Table 1. The Comparison of Home Based HBEs Income Before and After Collaborate with Online Motorcycle Taxi around UNDIP Tembalang Area

| HBE Respondent | Before (per day) | After (per day) | Increased Income (Percentage) |
|----------------|-----------------|-----------------|-------------------------------|
| 1              | Rp 60.000       | Rp 150.000      | 150                           |
| 2              | Rp 250.000      | Rp 700.000      | 180                           |
| 3              | Rp 250.000      | Rp 1.100.000    | 340                           |
| 4              | Rp 200.000      | Rp 300.000      | 50                            |
| 5              | Rp 100.000      | Rp 200.000      | 100                           |
| 6              | Rp 5.000.000    | Rp 6.500.000    | 30                            |
| 7              | Rp 200.000      | Rp 1.000.000    | 400                           |
| 8              | Rp 50.000       | Rp 100.000      | 100                           |
| 9              | Rp 500.000      | Rp 600.000      | 20                            |
| 10             | Rp 60.000       | Rp 700.000      | 1066                          |
| 11             | Rp 150.000      | Rp 350.000      | 133                           |
| 12             | Rp 2.000.000    | Rp 5.600.000    | 180                           |
| 13             | Rp 100.000      | Rp 300.000      | 200                           |
| 14             | Rp 800.000      | Rp 1.000.000    | 25                            |
| 15             | Rp 200.000      | Rp 400.000      | 100                           |
| 16             | Rp 100.000      | Rp 150.000      | 50                            |
| 17             | Rp 40.000       | Rp 70.000       | 75                            |

Table 1 shows that all home-based HBEs around the UNDIP Tembalang area experienced a change in the form of increased income. The increase in income experienced by HBEs varies from 25% to 1000%. Based on the explanation of the home-based HBEs around the UNDIP area Tembalang, after cooperating with online motorcycle taxi there are several reasons that allow opportunities for increased business income.

These reasons include the easiness of being found and ordered by consumer through the online motorcycle taxi application, the opportunity for free HBE promotion on the online motorcycle taxi application, the presence of HBE food product discounts provided by the motorcycle taxi online to the buyer, as well as the presence of the motorcycle taxi online application that helps home based SMEs in following technological developments. These reasons are in line with as said by Suryadi and Ilyas [17], that online motorcycle taxi helps to maximize the business potential of HBEs, helps HBE promotion activities, and provides easy access to customers. This similarity shows that online motorcycle taxi gives its role to home-based HBEs around the UNDIP Tembalang area.

By looking at the role of motorcycle taxi online from an economic or income perspective, it is necessary to know the proportion between offline and online sales of home-based HBEs. The aim is to
see how many daily transactions are between offline and online sales. Offline sales here are intended as transactions that take place when consumers come directly to HBE without going through an application from an online motorcycle taxi. While online sales are transactions that take place using the online motorcycle taxi application. Thus, the daily average of home-based HBE sales around the UNDIP Tembalang area every day based on offline and online transactions can be seen.

![Figure 1. The Comparison of HBEs Transactions](image)

Based on Figure 1, it is known that 7 out of 17 home-based HBEs make 1-5 online orders each day. As for the online transactions, the most answers were 6 out of 17 HBEs make 11-15 orders a day. Based on these data the average offline sales are lower than the average online sales.

The high level of online sales shows that the formation of collaboration between home-based HBEs with online motorcycle taxi has produced a positive impact. The establishment of cooperation with online motorcycle taxi provides opportunities for home-based HBEs to keep abreast of the times and have the opportunity to develop more. This opportunity is in line with the opinion of Suryadi and Ilyas (2018), that online motorcycle taxi helps to maximize the potential of HBEs, which is shown by the high online transactions from home-based HBEs after collaborating with online motorcycle taxi.

Furthermore, this research found that the income of the HBEs is fluctuating. The highest income of the HBEs reached Rp. 160,000,000 in a month. Quite different, the lowest income ever achieved by the HBEs is Rp. 200,000 in one month. Based on the results of interviews with respondents, their income is influence by the academic calendar of the universities in this area. The campus implements a system of holidays that was long enough for its students to last more than 1 month.

According to the enterprises, the fasting month and June were the months with the lowest sales due to reduced food intensity during the fasting month and for the month of June because most students were focused on learning to prepare for the final exam and some were more economical because they need to prepare for the purchase of a ticket home. However, there were also a few respondents who revealed that in the fasting month and June is their highest selling month as most of their competitors decide to close their business.

In addition, there is another uniqueness in the highest sales month data. A home-based SME actor revealed that his business is actually crowded in the months that there are promos from online motorcycle taxis. This is in line Suryadi and Ilyas said that online motorcycle taxi services help HBE promotion activities [17]. Please note that the promotions provided by these online motorcycle taxis are varied, such as discounts on food prices and can also be in the form of discounts on food services. This promotion indirectly impacts HBEs, because it invites buyers to use online motorcycle taxi services to buy food from HBEs. In this case, both home-based HBEs and online motorcycle taxis will benefit.

**B. The Role of Food Delivery Services in Service Coverage Change of Home-Based HBE Services**

The role of online motorcycle taxi for food delivery services can also be seen based on changes in service coverage. At this stage, home-based HBEs, especially around UNDIP Tembalang area, were asked questions about changing the range of services from their businesses before and after
working with food delivery services from online motorcycle taxi. It is hoped that from this data, it can be seen the extent of the role of food delivery services from online motorcycle taxi in helping home-based HBEs in expanding their range of services.

Based on the findings in the field it is known that the range of home-based HBE services in the UNDIP Tembalang area is not only around the administrative boundaries of the Semarang City area but has also reached the neighbour city in Semarang Regency area as shown in the map image below (Figure 2):

![Map Image](image)

**Figure 2. The Coverage Area of Home-Based HBE Services**

When viewed based on the standard of one of the online motorcycle taxi for food delivery services, namely Gojek, with its Gofood feature, the maximum range of this service is 25 Km. Based on the observation made, it can be known that there are still HBEs that only have service coverage of ± 1.31 Km, ± 2.49 Km and ± 2.67 Km. This phenomenon has not shown an optimal change in the results of collaborating with online food delivery when viewed in terms of service coverage.

On the other hand, in table 2 shows that the reach of home-based HBEs around UNDIP Tembalang area is also very broad, even to the Karangjati and Bandungan areas which are located outside of Semarang City.

**Table 2. The Comparison of the Range of Home-Based HBE Services Before and After Collaborate with Online Motorcycle Taxi around UNDIP Tembalang Area**

| HBE Respondents | Before Distance (Before) | After | Distance (After) | Deviation |
|-----------------|-------------------------|-------|------------------|-----------|
| Surrounding HBEs| ± 1 Km                  | Simpang Lima | ± 7.28 Km      | ± 6.28 Km |
When viewed based on the distance of its service coverage, this distance measurement uses more or less signs (±) because the distance drawn between the location of the home-based HBEs to the location in Google Earth, in accordance with the location of the area mentioned by the home-based HBEs, where distance measurements are made in a straight line. From the above data, it is also known that home-based HBEs of number 2 cover consumers up to ± 19.47 Km in the Mangkang area. There are also a number of home-based HBEs in the region that have achieved service coverage of ± 18.57 Km and ± 16.24 Km.

This phenomenon shows that home-based HBEs around UNDIP Tembalang area have achieved optimal services in accordance with the ability of food delivery services from online motorcycle taxi. In the end, this phenomenon shows the role of food delivery services involvement in the development of home-based HBEs. According to Suryadi and Ilyas [17], this phenomenon is one of the advantages of partnering with online motorcycle taxis because the HBE business potential can be maximized by expanding the range of services to millions of users of food service applications that are ready to be served by hundreds of thousands of drivers through online motorcycle taxi technology. This finding is in line with the opinion of Stockdale, et al [18] who said that digital marketing strategy is able to increase the competitiveness HBEs in marketing their business products and enhance promotion, because of the interconnectedness between business people and consumers with the internet-based application [19].

C. The Effect of HBE Location on Utilization of Food Delivery Services based on Community Perception

In this section, how people's perceptions are related to the location of HBEs, which in the previous analysis mentioned that most were on the local road, in relation to the utilization of food
services. The influence of this HBE location is reviewed based on the condition of the road, where the condition in question is a damaged condition, potholes, traffic jam, as well as being on a road that is not easily seen as a local road. The community referred to in this analysis is divided into 3 namely HBEs, online motorcycle taxi riders, and online motorcycle taxi service users. The relationship between the answers between the 3 points of view of the respondent will be seen. Hopefully, this analysis can show the influence of food delivery services both from the perspective of HBEs, online motorcycle taxi drivers, and food service users.

![Figure 3. The Effect of HBE Location on Food Delivery Services from HBEs’ Perception](image)

As can be seen in figure 3, in general HBE actors assume that the location that is reviewed based on road conditions no longer has a major effect on success in doing business. This is confirmed by the explanation of one of the HBEs that revealed that:

“Dengan aplikasi ojek online usaha yang berada di perumahan bisa terkenal, karena usaha makanan disekitar pembeli bisa dilihat dari aplikasi”
"With an online motorcycle taxi application, businesses in housing can be well known, because the food business around the consumer can be seen from the (mobile) application”
PU/RW/290619 (HBE’s respondent #x)

This statement, in line with Fahri [20] and Hidayatullah and Waris [21] which stated that a home kitchen culinary business can be done together with online motorcycle taxi because these services play a role in providing information and introduction to culinary products of HBEs to the public. So, the food delivery services help the process of introducing and promoting HBEs products to the public. Furthermore, based on the results of interviews conducted with 10 online motorcycle taxi drivers, there were 3 out of 10 motorists who mentioned that location of the HBEs, particularly the road condition to access the HBEs influence the time to deliver the food. The drivers often get protested when the delivery process could not be carried out quickly due to poor road condition or traffic jam.

“Tetep jadi pertimbangan juga sih, kalo kayak jalanan jelek atau macet gitu kan jadinya lama, kadang juga customernya ngomel juga itu”
"It's still a consideration for us, if it's like a bad road or traffic it's going to take a long time, sometimes the customers also nag that too”
PO/GS/290619 (Online Taxi driver #x)

“Kalo menurut saya sih iya ya mas, karna biasanya sih orang yang pesen itu biasanya, satu letak jarak, yang jualan itu jauh dari tempat tinggalnya. Terus kedua ya, mungkin kalau macet ya males ya mas. Lebih enak pake gojek gitu”
"In my opinion, yes yes, mas, because usually people who order are usually, one location distance, the sales are far from where they live. And secondly, maybe if it's stuck, it's lazy, bro. It's better to use a motorbike”
PO/PA/280619 (Online Taxi driver #y)
Meanwhile, most of the consumers do not think about the road conditions in using these food delivery services. No influence according to motorbike taxi drivers online is interpreted as most consumers do not think about the condition of the road leading to the restaurant business kiosk, because the possibility of consumers also do not understand the exact location of the food stalls they want to buy. This understanding was obtained based on the results of interviews with online motorcycle taxi drivers who revealed:

“Malah kadang customer tu gatau restonya sebelah mana. Dia cuma ngelihat aplikasi, pingin makan apa, nasi goreng. Oiya nasi goreng, ini nasi goreng A itu recommended, tapi dia gak tahu tempatnya dimana gitu. Soalnya kebanyakan siih resto-restonya gofood itu rumah-rumahan. Jadi kadang gaada kiosnya, gaada warungnya. Dia buka dirumah gitu.”

“In fact, sometimes the customers don’t know which restaurant. He only saw the application, what he wanted to eat, fried rice. Oh fried rice, this is A fried rice is recommended, but he doesn’t know where it is like that. The thing is, most of the gofood restaurants are home-based. So sometimes there are no stalls, no stalls or special room or arrangement for selling food. He opened at home.”

Based on this statement it is known that actually both HBEs and consumers of service users, both benefit from the presence of this service. With this service, HBEs get a promotion as mentioned earlier, and consumers get the ease of obtaining food products. To be sure, it is necessary to look at the direct perception of consumers in utilizing these food delivery services.

When viewed from the results of interviews with consumers who use this service, generally users are more concerned about the length of the delivery process if there are bad road conditions. This is shown from the expression of some consumers who state that:

“Kalau macet akan memperlama proses pengiriman”
"If it is jammed, the delivery process will take longer"

“Sangat berpengaruh, karena apabila jalanan rusak atau macet akan membuat layanan ojek menjadi lama sampai”
"Very influential, because if the road is damaged or stuck it will make the online motorcycle taxi service take a long time to arrive"

This statement is in line with the statement of the motorcycle taxi drivers online, that time is a point of concern by consumers or customers. In addition, poor road conditions are actually used as the reason of the consumers in utilizing this service. The existence of an online motorcycle taxi becomes an option for consumers to avoid congestion, travelling in a damage road, and findings the stalls, as stated by these consumers:

“Iya, karena saya malas melewati jalan rusak dan gang-gang sempit”
"Yes, because I’m lazy to go through broken roads and narrow alleys"

“Saat jalan macet atau rusak, saya lebih memilih untuk memesan melalui ojek online dibandingkan datang membeli sendiri”
"When the road is jammed or damaged, I prefer to order through an online motorcycle taxi rather than come buy it by myself"

This statement shows that the presence of food delivery services for consumers provides benefits in terms of helping to obtain the desired food products. Where if consumers want certain food products, but they cannot afford to make their own purchases by coming directly to the stalls, there is a service to deliver the food direct to home. This phenomenon shows the role of food delivery
services make consumers get closer by facilitating access to ordering and delivering products to consumers [17]

4. Conclusion

In conclusion, there is facts in increasing income and service coverage when the culinary HBEs start to use mobile application of online taxi delivery. These lead to several roles of online motorcycle taxi services, namely maximizing the potential of HBE businesses that shown by the higher proportion of home-based HBE online sales when compared to their off-line sales. Then, helping business promotion activities, these finding is found based on information from HBEs who state that the business is crowded when online motorcycle taxi do promotions such as price discounts and so on which make the business crowded by consumers. Third is easy access to customers, because food delivery services provide information about food businesses and are ready to deliver food orders to consumers. So that from these roles it can be seen how food delivery services influence the development of culinary HBEs, particularly by increasing the demand of their products. Thus, the support for online taxi delivery provided through mobile application is worth action, because it will also indirectly develop the HBEs.

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