



EE489 Seminar in Industrial Economics

Semester 2/2019

The future of the online food delivery service in Thailand

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1. Introduction

Imagine that people are going to buy meals but we have to use 2-3 hours on the road due to bad traffic in Bangkok. We have to waste a lot of time instead of doing something that is more useful. Presently, we are in the rush society. We have to do many things in a day but times are limited. So, we have to choose what we need to do and choose what we should let others do. Therefore the easiest way is to order food from food delivery services.

Nowadays, business transactions or social business activities that occurred through the platform have become internationally known by the emergence of new business models which are called the platform economy. Food delivery services are considered as “platform economy” because they do not own any restaurant but they just build a network by creating intermediaries that can connect producers and consumers together in real time via an internet. Hence, platform businesses originate the “Network Effect”. It's a market with two or three different customer groups who would have to share benefits with each other. The more consumers in the platform, the more motivation for restaurant owners to participate. In return, the more restaurants on the platforms, the more consumers participate. Platform owners can persuade the user by giving promotion to make their platform look more attractive (Hagui, 2014). Network Effects or Network Externality can make large platforms get advantages over small platforms and can dominate the market in the future (Wanwiphang, 2020). This leads to the main question of this paper whether the industry is competitive or not. This paper will also find the competitiveness of current players. Moreover we will discover the nature of this business and also how they make profit.

There are top 4 food delivery companies in Thailand which are Foodpanda, Line Man, Grabfood and GET but all these 4 brands seem to provide similar services. The difference between these 4 brands is both pricing and non-pricing strategies.

According to a few number of food delivery service brands and they provide similar services in Bangkok, this paper would like to discover the market structure and main current players in this industry whether they compete or cooperate with each other by analyzing through market share of each brand and also find more informations about price and promotion from primary and secondary sources. For primary source this paper interview from both driver and restaurant owner about price and promotion while secondary sources this paper focuses on brand website, researches, articles and news.

The next section will be Literature review, Theoretical Framework, Methodology, Result and the last one is the Conclusion.

2. Literature review

Online platforms are being used internationally since it is the revolution of the market place in the modern world nowadays. The reason behind this revolution is that the services provided by the industries are transformed and developed into the new kind of needs that can meet the demand of customers. There are many academic researches which study the structure of the online platform market. This kind of platform usually includes two players; buyer and seller, which is a so-called two-sided market. In this market, the dependence of these agents in this market is mutually exclusive to each other in accordance to the advantages they both receive (Armstrong, 2005). However, the issue about the two-sided market in the textbook is treated as

multi product oligopoly and monopoly because the end users and the service providers both give rise to a strong complementary instead of following the multiproduct literature (Rochet and Tirole, 2003)

Concerning the competition in the two-sided market, this market place is just like other markets where the producer has to lower their price to attract more customers in the competing platform. In terms of the pricing, in a two-sided market, the factors that the firms provided platforms as products usually take into account is more than one-sided market, which extends to the elasticity of one side and the mark-up charged to the other side. From this reason, the company has to be concerned about penetration pricing, which its method is to lower the price when entering the market in the first period of the product life cycle, then raise it afterwards (Rysman, 2009). By that, the two-sided market must consider the way in which pricing plays an important role to create the demand from both sides of the market.

Business platforms always have to compete with their rival in the same marketplace as they have the same user base. In addition, the revolution of online platforms was extended to include more than two players in the platform. Food delivery platforms are one of the good examples as it includes restaurants, deliveries and buyers. According to the multiple number of players in this type of market, the network effect is one of the powerful method in this area as it describes the reason why the company has to increase the number of users in every players' sector and it also gives the incentives to more firms and users to join the platform, which ultimately gives value to the platform significantly (Gawer, Cusumano, 2013).

Many platforms that encompass users rely on the network effects in which they have to implement the business model by concerning network effects since it helps pave the way to

engage with external stakeholders. Also, it is a tool to evaluate the willingness to pay for the products or services in the platform (Herdero e.g, 2012). To be more specific, Gawer claimed that network effect is separated into two ways, which are direct and indirect. Direct network effect occurs when consumers imitate the use of products due to a high number of users or in other words, the higher number of users rises from one person inviting others to join and it exponentially increases. From this reason the rise of customers is occurred eventually. In addition, while indirect effect is when another type of economic agent wants to be complete by finding another type of economic agent like when a buyer is looking for a seller (Gawer, 2009). Thus, in the digital platform market, the importance of network effect is raised as it is the tool for companies to create strategies to connect between buyers and sellers in order to make the companies reliable for both economics agent and the penetration pricing and network effect have bound to each other since the penetration pricing is the first step of increasing the users in network effect. From this reason, the study about network effect and penetration pricing, using the number of both sides of the market and the price strategy of each firm should be studied.

In the food delivery business market, most of the researchers studied about the use of data, the services it provides and the evaluation of how customers alternate their choice of consumption by using the platform (Segura,Correa, 2019). Because of this reason, the research about market structure, price penetration and the network effect that the food delivery platform creates is still missing. Additionally, in Thailand, food delivery platforms are increasingly used among urban people. However, there is no study about the structure, the competition environment and the effect it has on the stakeholders

3.Industry Background

According to Euromonitor International, online food delivery services have become successful since the share of the global online food delivery industry versus foodservice sales worldwide has almost tripled from 2.6% to 6.9% in 2014 and 2019.

The reasons that make the online food delivery services popular are the changes in behaviour of consumers. Nowadays consumers use more smartphones than in the past. Thus, the businesses associated with the internet have a lot more opportunities to grow. The development of new technology is also another reason to facilitate the growth. Moreover, ordering food through smartphones is the easiest and quickest way which makes lives more convenient.

Food delivery services are the platform that is considered as Two-sided markets. Two-sided markets happen when two or more groups of agents interact via intermediaries or platforms, and where one group's benefit from joining a platform depends on the number of agents from the other group who join the same platform (Mark, 2005). All of these different groups want to share benefits together. Two-sided market can generate value by facilitating transactions and decreasing communication cost. Platform must maintain the price into the equilibrium between each side of the agent groups. But sometimes platforms will subsidise the more price sensitive group and charge another group with higher price.

According to IMARC Group, the market of global online food delivery services outstretched at the value of US\$ 96 Billion in 2019 which increased 13% from the previous year (market value in 2018 reached US\$ 84.6 Billion). By 2024 the estimated market will reach US\$ 164.5 Billion displaying a compound annual growth rate of 11.4% during 2019-2024.

Looking at the industry as regions, we can divide into 5 parts which are China, North America, Asia Pacific (excluding China), Europe and Rest of the World. Within this region, China alone is the largest player and revenue accounted for \$34 billion in 2018. The two main players in china are Ele.me and Meituan

The main players in this industry are Just Eat, GrubHub, Delivery Hero, Deliveroo, Takeaway.com, Foodpanda, Ele.me, Meituan Waimai. Moreover, Foodpanda, one of the famous online food delivery brands from Germany, is available in 13 countries including Thailand.

For Thailand there are 4 main companies in the food delivery industry in Thailand which are Foodpanda, Line Man, Grabfood and GET. Foodpanda is the first player in this industry which entered the market in 2012. After that Lineman joined this industry in May, 2016. In February, 2018 Grabfood joined and than followed by Get in December, 2018

According to Kasikorn Research (2019), there is a great increase in the popularity of consumers towards the business of food delivery in Thailand. Kasikorn Thai Research Center found that 63% of the sample used food ordering services through various types of applications. It affects their eating habits by changing to ordering more food through the application, including less eating out. Besides, the expansion of the Food Delivery business and Food Delivery Application also increases the opportunity to generate revenue for players in the restaurant chain such as typical restaurants, including small and medium-sized restaurants that can reach new customers.

Increasing competition pushed the operators in diverse restaurant chains. It is necessary to adjust the business plan in order to maintain competitiveness and manage existing market share such as increasing channels for ordering food and a variety of food types including the use

of food packaging which is environmentally friendly. Thus, Kasikorn Research Center predicts that the Food delivery business in Thailand will be valued at 33,000 - 35,000 million baht. It has grown continuously by about 14 percent from the previous year and accounts for 8 percent of the value of the restaurant business in Thailand.

.4.Theoretical Framework

- **SCP**

The authors used “SCP paradigm” to analyse the food delivery industry. First element of the SCP paradigm is market structure. The authors use Industry concentration and barrier to entry to analyze the market structure. Industry concentration measures the intensity of competition within the industry. Barriers to entry can be used to find how easy it is for new firms to enter into this market. “Common barriers to entry include special tax benefits to existing firms, patents, strong brand identity or customer loyalty, and high customer switching costs” (investopedia online).

Next element that is affected by market structure is market conduct. Since food delivery products look similar, this paper will use both pricing strategy and non-pricing strategy.

The last element is market performance which is influenced by market structure and conduct. Due to limited information, this paper will use Employment income distribution, the amount of orders received and growth rate as a market performance measure.

- **Pricing strategy**

Pricing strategy is the method that companies use to set the price of their products or services. Most companies use it as a tactic to increase their sales and maximize profit by setting product's price based on product value to customer rather than cost of production (blog.blackcurve, 2016). This paper uses penetration pricing and price discrimination to analyse.

- **Non-pricing strategy**

Non-pricing strategy does not relate to price changes but it refers to promotion, advertising and. It aims to enlarge consumer demand and brand loyalty. For pricing strategy, this paper uses penetration pricing, price discrimination on restaurant side and consumer side while non-pricing strategy includes advertising, promotion and loyalty scheme. This paper uses the quality of each application and advertising to analyse.

- **Penetration pricing**

Penetration is a marketing strategy that producers will set lower prices in the initial stage to gain market share or attract consumers. The more market share they get, the more powerful of their platform. The reason that platforms did penetration pricing in the initial stage is they want “Network Effect”.The network effect is a phenomenon whereby increased numbers of people or participants improve the value of a good or service(Caroline, 2019). For example, the more consumers in the platform, the more motivation for restaurant owners to participate. In return, the more restaurants on the platforms, the more consumers participate. Network effect makes big platforms multiply their power over the small platforms.

- **Price discrimination**

Price discrimination is a selling strategy that charges customers different prices for the same product or service based on what the seller thinks they can get the customer to agree to (investopedia, 2020).

5. Methodology

This research uses SCP-paradigm as the main framework and relies mainly on both primary and secondary data collection of the competitiveness in the online food delivery industry in Thailand. The authors will interpret data in terms of qualitative data collection, chart and graph. The population of the study consists of 4 applications of online food delivery.

5.1) Primary data

- **In-depth interviews**

The authors conduct an interview with the drivers and restaurants that participate in the applications (Grab food, Line Man, Foodpanda, and Get). The objective of this interview is to understand the strategies and business model toward each application. The interview will be divided into 2 main parts which are the drivers part and the restaurants part. In order to analyse the degree of competition among firms, the authors will analyse their pricing and promotion strategies through time. The result will be used further to help analyse the SCP model of the online food delivery industry. Due to COVID-19, the authors have some difficulties interviewing the restaurant's owners. Therefore, we will use secondary data to help analyse further.

5.2) Secondary data

In order to get precise analysis research results the authors will use news, related research, additional information from the brand's website and articles as the secondary data collection. This research will gather available data to illustrate the structure of the online food delivery industry, the nature of the business and some related data of online food delivery platforms. This data will be used to analyse further in the SCP framework to examine their competitiveness, business model, and nature of the online food delivery industry.

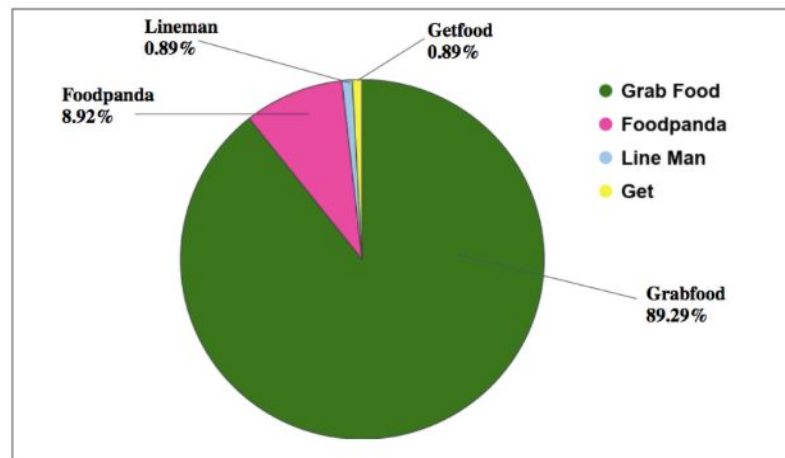
6. Result

6.1) Market Structure

To identify the market structure of the online food delivery industry in Thailand, there are a few dominant firms in this industry which are Foodpanda, Line Man, GrabFood, and GET. For the market share¹, the authors used the number of downloads on Google Play Store (app store for the Android users) as an approximate for online food delivery application market share. Figure 1 will illustrate the market share of each application.

¹ It is noteworthy that the number of users may not completely represent the precise market share since Firstly, the information of the number of downloaded applications includes only the Android users. Secondly, Grab, Line Man and GET also include other platforms on the application. Thirdly, the number of users that download may not be the active users. Fourthly, each person can use more than 1 application.

Figure 1: Number of online food delivery mobile application downloads (Feb, 2020)



Source: Constructed from the author's own compilation using data from Google Play Store

From figure 1, GrabFood has the largest market share at 89.29% while Foodpanda has market share at 8.92%. Line Man and GET have the same number of market share at 0.89%. So Grabfood is the leading firm in this industry with over 50% market share.

For the barrier to entry, this platform business requires high capital at the beginning. Even though most of the online food delivery platforms were startup businesses, it needs a lot of money to invest in technology for more than 1 million dollars. Plus, this online platform business needs a huge amount of money to subsidize consumers by giving a promotion or free delivery at the beginning in order to acquire more users. There is some evidence showing that, for Grab, they need to legally register in the name of Grabtaxi (THAILAND) CO.LTD. Also, they have to pay tax and law-abiding of The Revenue Department. Moreover, Grab held 75% shares by Thai company (Techsauce Team, 2020). From the information above, we can conclude that the market structure can be perceived as an oligopoly market with four dominant firms (Foodpanda, Line Man, Grabfood and GET).

6.2) Conduct

6.2.1) General Information

6.2.1.1) Driver's income

Table1: Drivers' incomes

Application	Driver starting income	Commission Deducted by Platforms	Incentive
Foodpanda	● Batch1 gets 55 Baht/time ● Batch2 gets 50 Baht/time ● Batch3 gets 45 Baht/time ● Batch4-6 gets 40 Baht/time	● Batch 1-6 >> 3% of driver fee	Bonus >> can be redeemed to money
Line Man	● 55 Baht+ 7.2 Baht per km	17.5% of driver fee	Collect star >> cannot be redeemed into money but transferred into social security instead
Grabfood	● Step1: Less than 3 kms pay standard price at 40 Baht ● Step2: 3 kms - 7 kms >> 40 baht + 8 baht/km ● Step 3: 7 km++ >> step2+6 baht/km	● Grab Bike level >> 15% of driver fee ● Grab food Hybrid level >> no charge ● Grab food Champion level >> no charge ● Grab food X level >> no charge	Collect diamond >> can be redeemed to money
GET	● Step1:0-3 km >> 38 Baht (partner), 40 Baht (non-partner) ● Step2: 3-6 km >> Step 1+4 baht/km (50 baht for 6 kms) ● 6 km >> 50 baht+10 baht/km	15% of driver fee	Collect score >> can be redeemed to money ● S class: Driver received accident insurance + maintenance fee once a year + special benefit such as tyre claim ● A Class: Driver received accident insurance + maintenance fee once a year ● B class: - ● C Class: -

Source: Constructed from author's own survey and search from website

Starting from the drivers of the Foodpanda application. From table1 they divided the driver into 6 groups from Batch 1 to Batch 6. The fees the drivers receive are fixed and depending on the level in which they are classified. Batch 1 is the highest level and drivers get delivery fee at 55 Baht per job. Drivers in Batch 2, 3 and 4 will receive 50, 45 and 40 Baht per job respectively. Batch 5 is the level for drivers under warning situations which are subject to be dismissed if performance is not improved. The last level, Batch 6, is the level of the new driver user. All drivers have to pay a 3% commission fee to the application.

Drivers cannot deliver outside their specified zones except when there are unexpected problems such as the route is closed. In such cases, they will receive double delivery fees. Because this platform does not provide a credit² account on the application for the driver, when customers pay cash, drivers have to bring all the money to deposit at the banking account that connects with the Foodpanda system. Foodpanda will then deduct all the money that drivers receive from customers everyday and transfer net payment to drivers on the 5th and 20th of each month. Lastly, drivers can collect bonuses as an incentive and redeem them to money further.

For Line Man, the platform does not divide drivers into groups. All drivers have to pay a 17.5% commission fee to the application which is the highest rate when compared to other applications. Line Man's drivers receive 55 Baht as a minimum fee plus 7.2 Baht per kilometer. Lineman is the application that collects the highest rate of delivery fee from customers. Finally they have incentive for drivers to collect stars which cannot be redeemed into money but transferred into social security instead.

² Credit is an account that platform creates on application for all drivers to receive money from both platform and customers. Platform can deduct commission fee and food price that customers paid via this credit account.

For Grab food, they divided the driver into 4 levels which were Grab Bike, Grab food Hybrid, Grab food Champion and Grab food X. GrabBike is the lowest level and drivers have to pay a 15% commission fee to the platform when delivering food. The pros of this level is they can be members of Grab Express, Grab Bike and Grab food at the same time. The next level is Grab food Hybrid which drivers do not have to pay commission fee and also can do Grab Express, Grab Bike and Grab food at the same time as well. The last 2 levels are Grab food Champion and Grab food X which can do only Grab food. They do not have to pay commission fees to the platform.

The delivery fee that drivers receive depends on the driving distance. If it is less than 3 kilometers, drivers will get standard price at 40 Baht while the distance from 3 to 7 kilometers, they will receive standard price at 40 Baht plus 8 Baht per kilometer and at the distance exceeding 7 kilometers they will receive 80 Baht plus 6 Baht per kilometer. The driver can collect diamonds as an incentive and redeem to money. The higher the level of drivers, the more diamonds they can collect.

For GET, all drivers have to pay a 15% commission fee to the platform. The drivers receive 38 Baht when delivering to partner restaurants and 40 Baht for non-partner restaurants if the distance is between 0 to 2 kilometers. From 3 to 6 kilometers, drivers receive no more than 50 Baht. if the distance is more than 6 kilometers, they receive 50 Baht plus 10 Baht per kilometer.

This platform divides drivers into 4 groups which are S class, A class, B class and C class by classifying from highest to lowest level. S class and A class will receive accident insurance and they can claim bike maintenance fee once a year. Class S has more rights to claim than class

A while Class B and C have no such rights. In addition, drivers can collect scores and redeem into money. The higher the level of drivers, the more scores they can collect.

6.2.1.2) Restaurants' commission fee paid to the Applications

Table2: Restaurants' commission fee paid to the Applications

Application	Commission Fee collected from restaurant
Foodpanda	35% ++ of food price
Line Man	● Free (non-partner restaurants) ● 30%++ of food price (partner restaurants)
Grabfood	30% ++ of food price
GET	● Free (non-partner restaurants) ● 30% ++ of food price (partner restaurants)

Source: *Constructed from author's own survey and search from website*

Table 2 shows the income received by each restaurant after deducting commission fees from the applications. Foodpanda charges around 35 percent of food price excluding VAT from restaurants. Line Man and GET food has 2 options for restaurants which are paying nothing to the platform but customers of those restaurants have to bear the full amount of delivery fee while if they choose to pay commission fee at 30 percent of food price excluding VAT, their customers will pay starting rate of delivery fee at 10 baht. In addition, restaurants in Lina Man application will have special privilege to promote their restaurants in Wongnai and Line Man. Grabfood charges commission fee rate at 30 percent of food price excluding VAT.

6.2.1.3) Platforms' income

Table3: Platforms' income

Platform	Fee from Restaurant	Fee from Driver
Foodpanda	35%++ of food price	3% of driver fee
Line Man	● Free ● 30%++ of food price	17.5% of driver fee
Grabfood	30%++ of food price	● Grab Bike level: 3% of driver fee ● Grab Hybrid level: no charge ● Grab Champion level: no charge ● Grab X level: no charge
GET	● Free (non-partner restaurants) ● 30% ++ of food price (partner restaurants)	15% of driver fee

Source: Constructed from author's own survey and search from website

Table 3 shows the main income that the platforms receive from both restaurants and drivers which has already shown and explained in table1 and table2 above. There is evidence showing that each platform charges commission fees at different rates for different restaurants. In addition when each restaurant has promotions on delivery fee, the platform will bear all the burden as the driver will get a normal fee. On the other hand, if the promotions are about food price, both restaurants and platforms have to bear the burden together.

Moreover, recently Grabfood increased their commission fee to restaurants from 30 to 35 percent. It created hot debates in social media blaming Grabfood for exploiting opportunity to gain profit while there are higher demands for food delivery services during the Covid-19 crisis when food stores are ordered to close and only take home orders are allowed. But it argued that it increased its commission fee since February which was the time before the covid widespread

situation. As the issue became more serious, Grabfood decided to cancel the fee increase program and return to charge the previous rate fee of 30%. This is a good lesson for other firms that to implement any plans during a crisis which is sensitive to consumer perception or tend to cause misunderstanding, the plan should be reviewed thoroughly whether it should be changed or adapted or postponed. Otherwise, it may damage the reputation of the firms which in turn affect the firms' income.

6.2.1.4) General Information for consumer

Table4: General Information for consumer

Platform	Delivery Fee	Payment Chanel	Service time	Strengths	Weaknesses
Foodpanda	● Free delivery for nearby restaurants ● 40 Baht	● Cash ● Credit card ● Debit card ● Paypal	24 Hours	● Available in 37 cities in Thailand such as Bangkok, Chiang-Mai, Phuket ● Provide free delivery for nearby restaurant ● Provide list of more than 35,000 restaurants	● Have limitation in delivery radius ● Minimum purchased order at 50 baht
Line Man	● 10 Baht for participating restaurant ● 55 Baht+ 7.2 Baht per km (non-partner for official restaurants) ● 55 Baht+ 9 Baht per km (for non-partner restaurants)	● Cash ● Rabbit line pay	24 Hours	● Do not chart extra food price ● Provide list of more than 100,000 restaurants ● Including restaurants recommended by “Wongnai”, a famous food website	● High rate of delivery fee ● Charge additional 100 Baht delivery fee at 00.00-06.59 a.m.
Grabfood	● 0-5 km >> 10 Baht ● More than 5 km >> 10 + 10 baht per km	● Cash ● GrabPay wallet by KBank ● Credit card ● Debit card	24 Hours	● Have plenty of drivers to service ● Provide list of more than 20,000 restaurants ● Available in 31 cities in Thailand ● Lots of promotion codes	● Have limitation in delivery radius

GET	● 0-2 km >> 10 Baht but more than 3 km >> 10 + 10 baht per km (for partner restaurants) ● Starts at 30 baht (for non-partner restaurants)	● Cash	24 Hours	● Can make more than one order and send them to different addresses. ● Provide list of more than 20,000 restaurants	● Have less drivers ● Pay by cash only ● Have limitation in delivery radius ● Charge additional delivery fee at 10.00 pm - 4.59 a.m.
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Source: Constructed from author's own survey and search from website

Table 4 displays the comparison of general information among these 4 applications. It provides delivery fee rate for customer, payment channel, service time, strength and weakness. When considering delivery fee, foodpanda is the most worthwhile platform because most of the restaurants in this application provide free delivery services while Line Man has the most expensive delivery fee services.

For payment channels, foodpanda and Grabfood provide 4 channel methods which provide most choices of payment methods. Foodpanda can pay via cash, credit card, debit card and paypal while grabfood can pay via cash, grabPay wallet by KBank, credit card and debit card. Get food can pay by cash only.

All of these 4 applications provide 24-hour services for customers but Lineman and Get charge extra payment for delivery fee when ordering between 00.00 to 06.59 am and 10.00 pm - 4.59 am respectively. Moreover, each application has its own strengths and weaknesses.

The authors cannot summarize which application is the cheapest one because there are many other factors involved such as promotion and delivery fee rate. But consumers can find the cheapest menus by comparing the total fee of the selected menu charged by each application. Table 5 is the example of total fees when ordering the one menu from the same restaurant and location but using different applications.

6.2.1.5) Compare Total fee of each application

Table 5: Compare Total fee of each application

Platform	Price at store (Baht)	Price at application (Baht)	Driver fee (Baht)	Total Food Price (Baht)	Net Restaurant income (Baht)	Platform receive from restaurant (Baht)	Platform receive from driver (Baht)	Net Platform income (Baht)	Driver gross income (Baht)	Driver net income after deduction by platform (Baht)	Delivery distance (km)
Foodpanda	220	225	0	225	146.25	79	1.65	25.65	55	53.35	2
Lineman	220	225	69	294	225	0	12.15	12.15	69.40	57.25	2
Grabfood	220	225	10	235	157.50	67.50	0	37.50	40	40	1.7
Get	220	225	10	235	157.50	67.50	5.70	45.20	38	32.30	0.97

Source: Constructed from author's own survey and search from website.

Assume that all driver are in the highest level

Table 5 indicates the example when a customer orders a Zero Special menu from Ippudo Ramen at 101 The Third Place and delivers to Sukhumvit 68 by using 4 applications. All of the applications charge food prices at 225 baht which are higher than the price when ordering at the restaurant. Foodpanda is the only application that provides free delivery to Ippudo Ramen restaurant while both grabfood and getfood charge 10 Baht. Lineman charges the highest delivery fee at 69 baht. In summary the most expensive total fee that customers have to pay is lineman. On the other hand Foodpanda has the cheapest total fee.

The table also provides the mechanism of how total fee is distributed to platforms, drivers and restaurants from each application. We assume that the drivers from Foodpanda and Grabfood are at the highest level. All of the commission fees received by platforms are tax excluded. Drivers of Foodpanda receive 55 baht for delivery fee but are deducted 3 percent or 1.65 baht by

the platform and get 53.35 baht as net income. Ippudo Ramen restaurant receives 225 baht deducted by 35 percent of food price or 146.25 baht. Foodpanda platform receives 25.65 baht from commission fee 79 baht deducted by amount paid back to drivers at 53.35 baht. The same calculation is applied to the other applications.

In summary, the platform that gets the highest income is GET while lineman receives the lowest income in this case. Drivers from Line Man received the highest income but drivers from GET food get the lowest income in this case. Ippudo Ramen restaurants get the highest food price from Line Man while receiving the lowest food price from Foodpanda because of the high commission fee that they charged.

6.2.2) Pricing Strategies

6.2.2.1) Penetration Pricing

The degree of penetration pricing is very intensive for the new entrants of this industry which are Grabfood and GET. For example, the two newest entrants Grabfood and GET give a free delivery fee to every user at the beginning. For Grabfood, they also offer many special promotions such as buy 1 get 1 free for the promotional menu, food discounts and promotion code compared with GET that also give discounts up to 50% and buy 1 get 1 free for selected restaurants. However, we observed the smaller degree of penetration pricing among incumbent firms which are Foodpanda and Line Man. For Foodpanda, they offer 40 baht within a 4 kilometers space compared to 55 baht and pay an additional 7.2-9 baht per kilometer for using Line Man application. Consequently, it can be obviously seen that the delivery price is aimed to achieve customers' attention at first glance and the price is appointed to change when the promotion is required to launch in order to draw more attention from the customer side from time

to time. To conclude, the new entrant firms conduct penetration pricing more intensively than the incumbent firms in the aspect of pricing (delivery fee), promotion and discount.

6.2.2.2) Network Effect

In the food delivery application market, the network among customers, business partners (restaurants) and the drivers are equally significant. As a result, the network effect is analyzed in this part so as to assess the importance of why the platform economy is related to network effect and penetration pricing. The Delivery platform company can connect their network in two ways to help increase the effect. The first is to increase the number of users so as to attract the restaurant to become their partners. This is called the direct network effect. In this case, price penetration plays its important role as the company used pricing promotion as a tool to draw users. On the other hand, the indirect network effect occurs when the partners want to be the member of the company because of a significant number of users. It is represented by the number of partners each company obtained and the percent charged to the restaurants.

(1) Direct network Effect

To evaluate the direct network effect, the important factor which makes the food delivery platform valuable is the number of users. In this case, it can be visualized by the number of downloaded applications by the users. Thus, each company must create the strategy to increase the number of users and the penetration pricing is used to gain a network among users. The first strategy that the company used to attract the customer from one side is to omit the delivery fee.

(1.1) Penetration pricing and Direct Network effect

The linkage between penetration pricing and network effect occurred when companies compete with each other using pricing strategy. At first, the first movers of this market were

Foodpanda and Lineman. Foodpanda issued delivery prices at 40 baht (fixed price) while Line Man issued delivery prices at 55+7.2 to 9 baht (per kilometer). After that, Grabfood and Get joined the market, they both lowered the delivery fee to 0 in order to draw customers. The number of downloaded Grabfood applications was 100 million while the number of downloaded GET applications was 1 million. The strategy seems to work when looking at the number of downloaded Grabfood applications. It is the most downloaded food delivery application. The number of downloaded GET is approximately equal to Line Man which has entered into this industry for 4 years. However, the penetration pricing is not the only tool to create the network effect.

Table 6: Number of downloaded each application and delivery fee

Application	Number of downloaded applications	Delivery Price (Partner restaurant)	Delivery Price (Non-Partner restaurant)
Grabfood	100,000,000	● 0-5 km. > 10 Baht ● More than 5 km. >10 + 10 (for surplus kilometer)	No non-partner option
Foodpanda	10,000,000	● Free delivery for nearby restaurants ● 40 Baht (fixed price)	No non-partner option
GET	1,000,000	● 0-2 km. > 10 Baht ● More than 3 km. >10 + 10 (for surplus kilometer)	Starts at 30 baht
Line Man	1,000,000	10	● 55 Baht+ 7.2 Baht per km. (Official restaurant) ● 55 Baht + 9 Baht per km.

Source: Constructed from author's search from website.

Additionally, concerning the irrelevant downloaded number, another point of view that should be considered is that each company promoted their applications to increase the number of

users. It provided more options for customers to choose since the preferences of restaurants are certainly different. By that, each application provides a wide range of restaurants with the different prices they charge the users. It can be derived from the table above that the strategy they use to draw users is to attract more restaurants to become their partner by initiate the “Non-partner” option for restaurants that want to have delivery options but do not want to be charged its revenue by the application, so the users have to pay higher delivery fee. From this, it helps explain why the lower the price charged in the delivery fee does not always relevant to the number of users. Instead, users have more choices to choose.

(2) Indirect network effect

Theoretically, when the wider network occurs, the company will have bargaining power to attract the other side of the market, which in the case is the restaurant. The bargaining power in this place is to increase the percent which will be charged from the restaurant as each application uses the number of users as a tool to guarantee the revenue that will gain from joining the platform.

Table 7 : The percentage charge to the restaurant and number of partners

Application	Number of downloaded application	% charged the restaurant		Number of partners (Approximately)
		Partner	Non-partner	
Grabfood	100,000,000	30%	-	20,000
Foodpanda	10,000,000	35%	-	35,000
Get	1,000,000	30%	Free	20,000
Line Man	1,000,000	30%	Free	100,000

Source: Constructed from author's search from website.

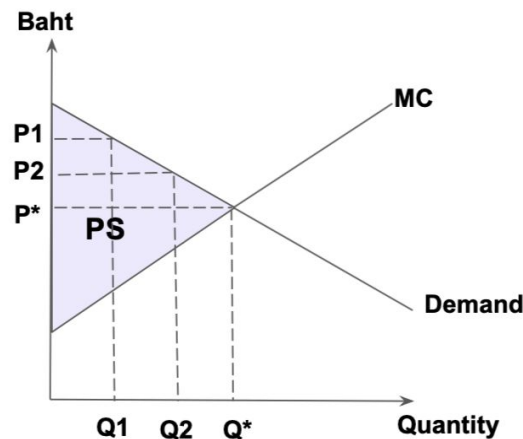
From table 7, it can be derived that the number of downloaded applications should make the company have bargaining power to raise the percent charged. However, the actual information says that every company charged the restaurant by the same percent and when concerning the number of partners, it can be hardly concluded that the number of partners the company owns rely on the percent charged to the restaurants as well. Consequently, the conclusion from the secondary data is that the number of users does not correspond to the percent the company charges the restaurant. Hence, the competitiveness in this sector is high because the given information shows the exact same price charged to the restaurant in which if the theory of network effect is applied, Grab, Food Panda, Get and Line Man should issue the percent charged to the restaurant from high to low respectively and the number of partners be in the same pattern as percent charged as well.

In sum, concerning the direct and indirect network effect, it might not follow the theory of network effect. The reason behind is the degree of competitiveness in the delivery market is as high as the issued price of users and the percent charged to the restaurant in every player is eventually the same. The number of users is not relevant to the increase in price or percentage that the company could receive at all. As a result, the limitation of bargaining power that each company has is fully excluded to use to charge both restaurants and users. From this, the monopoly power from big platforms is not raised if the market allows the players to increase its network and potential to deal with the stakeholders.

6.2.2.3) Price discrimination

- *Price discrimination on restaurant side*

Figure2 : First degree price discrimination



Source: constructed from courses.byui.edu website

First degree price discrimination happens when firms charge prices to customers by using consumer's reservation prices. The firm would like to charge higher prices to customers who have more willingness to pay more than P^* . Firm will sell until the price is at P^* . The blue shaded area in graph 1 represents the producer surplus.

There are evidence showing that platforms charge commission fee to each restaurant in different prices which mean that they are doing first degree price discrimination on restaurants.

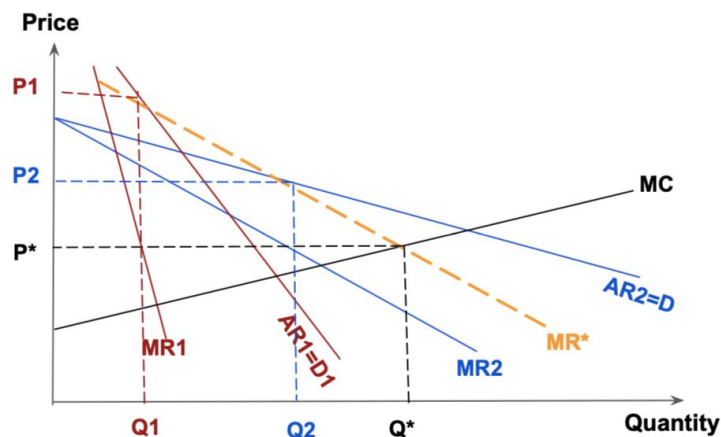
According to our interview from Am-Houngvn restaurant, they pay commission fee at the rate 12 percent for Lineman while the restaurant that we found in pantip website pay 26 percent commission fee. Moreover, there is evidence showing that Foodpanda and Grabfood charge different commission fee rates at different restaurants.

Literally each restaurant has its own reservation prices but the platform cannot know their reservation prices even if they could ask the restaurants because they will not receive an honest

answer. Sometimes it depends on the bargaining power of each restaurant. Platform will charge lower prices to more bargaining power restaurants and vice versa.

- *Price discrimination on consumer side*

Figure3: Third degree price discrimination



Source: constructed from economicsdiscussion.net website

Third degree price discrimination happens when firms divide their customers into 2 or more groups with different demand curves and charge different prices. From the graph the optimal price and quantity is when MR1 is equal to both MR2 and MC. Customers in group1 with demand D1 are charged at P1 while customers in group 2 with more elastic demands D2 are charged the lower price at P2.

In food delivery industry, we found that there are third degree price discrimination by using coupon. In this case customers in group 1 can be the customers who have high willingness to pay. They do not care much about coupon providing. Whether the applications provide coupons or not they will buy anyway. On the other hand, customer group 2 represents the customers who have low willingness to pay. Because they have high elasticity of demand, they

will use the application when there are promotions such as coupons provided. Providing coupons is the way to attract a low type consumer to use the applications. Moreover, platforms can capture more profit when low type consumer users join them.

6.2.2.3) Promotion

Table 8: Promotion strategies by application (2018-2019)

Platform	Main strategies & Initiative programs	Promotions that application follows others
Foodpanda	• Main strategies are providing free delivery services and maintaining discount program on food price • Initiated stepwise promotion (Q2/2018)	Follow Line Man • Implemented event promotion in Q2/19 • Provided coupon for new user in Q3/19
Line Man	• Main strategy is promotion program on delivery fee • Initiated event promotion (Q1/18) • Initiated providing discount coupon on delivery fee (Q1/18) • Initiated providing higher values of coupon on delivery fee for new users (Q1/18) • Started co-promotion with other companies (Q1/18) • Initiated online payment channel through own application (Q2/18)	Follow Grabfood • Implemented event promotion (Q2/19)
Grabfood	• Main strategy is focussing on food price discount • Provided free delivery promotion in all restaurants when launching Grabfood (Q2/18) • Initiated weekly and weekend promotion (Q2/18)	Follow Line Man • Implemented event promotion (Q4/18) • Started providing coupon to discount on food price (Q3/18) • Started online payment channel through own application-Grabpay (Q2/19)

	● Initiated discount promotion on food by categories (Jan 19)	
GET	● Main strategies are focussing on food delivery discount plus free delivery services	Follow Line Man ● Started providing coupon on delivery fee (Q3/19) Follow Grabfood ● Implementing free delivery program in all restaurants when launching Get food ● Implementing discount promotion on food by categories (Feb 19)

Source: Constructed from facebook page of each platform

Table 8 summarized the promotion strategies by application in 2018 and 2019. (please see detail in appendix 1). The information was obtained from the official Facebook of each application. From the table, Foodpanda, which was the first application in the market, did not show any interesting promotion program while Line Man, the second comer, clearly shows that it is the market leader in terms of creating promotion strategies as it initiated a lot of programs that other applications followed later.

Although Grabfood had fewer promotion initiations, it increased the frequencies of promotion period by starting weekly and weekend deals to stimulate the market. It also followed some promotion programs which were implemented successfully by Line Man.

GET, the latest player in this market, enjoyed applying the programs from both Line Man and Grabfood to make the market more competitive.

In summary, Promotions implemented by these 4 applications are quite similar to other promotions on consumer goods. As this industry is associated with services, one of the main

strategies that they use is pricing related strategy because price is the factor customers consider most in their decision making process. The competitive advantage of food delivery platforms over other goods or services is that they can create promotions related to almost all special events and festivals. Because most of the top platforms originated from foreign countries, they can use their management experiences to apply and develop their business in Thai market with less time.

6.2.3) Non-pricing Strategies

6.2.3.1) Advertising

In order to promote brand identity, one way of communication is to use an advertising strategy. From the author's observation, Grab hires “BNK48” a famous idol girl group since they want to shift the demand of BNK 48’s fanclub to become Grab users. GET hires “Nont Tanont” a very popular singer and has music videos that communicate GET characters: convenience, fast and caring. Foodpanda also hires “Boy Pakorn” to attract his fanclub and promote brand services. Line Man launched the advertisement to show their services quality. According to Market Think website, this can increase the order by 25%.

In sum, all of the food delivery companies use advertising to promote their services which will generate value for the company and attract more users to use their application. Even though they have different presenters and advertisements, they show the same core values. Therefore, this seems to be highly competitive in brand communication.

6.2.3.2) Quality

The online food delivery platforms not only compete in price but also compete in quality. In order to adjust towards the intense competition in this market. Food delivery platforms are

offering a better quality of services in various aspects. According to the table 10 below, the authors classify the type of service quality into 7 dimensions.

Table 10: Dimensions of service quality

Service quality dimensions	Platform	Foodpanda	Line Man	Grabfood	GET
1. Driver rating (give star to driver)		Yes	Yes	Yes	Yes
2. Estimated delivery time		Yes	Yes	Yes	Yes
3. Rating star of each restaurant		Yes	Yes	Yes	No
4. Variety of food choice		More than 35,000 restaurants	More than 100,000 restaurants	More than 20,000 restaurants	More than 20,000 restaurants
5. Payment Channel		● Cash ● Credit card ● Debit card ● Paypal	● Cash ● Rabbit line pay	● Cash ● Credit card ● Debit card ● GrabPay wallet by KBank	● Cash
6. Service time		24 hours	24 hours	24 hours	24 hours
7. Centralized Kitchen³		Krua by Foodpanda	No	Grab kitchen	No

Source: Constructed from author's search from website.

The driver rating system is a tool for applications to keep high standard of services. For all the users that use Foodpanda, Line Man, Grabfood and GET, they can give driver rating or in other word is to give star to driver. According to Grab's website, it shows that this feature helps application to know the customer satisfaction and maintain high driver quality. Moreover, driver rating is used for rewarding good service providers.

Convenience is one of service quality dimensions. There are many aspects of convenience, delivery time estimation allows users to manage their time. Service time is

³ Centralized Kitchen is many restaurant's kitchens located in a location.

important for this industry since food can be delivered to customers anytime they want. Every application has an estimated time to deliver food and 24 hours services. The restaurant rating star system reduces searching time because customers can see the rating and know their quality. All applications excluding GET have this feature. Moreover, Line Man not only shows a rating star but also shows a review from customers since their application partner with Wongnai. Applications can provide convenience through having many payment channels to customers. We observed that Foodpanda and Grabfood provide the most payment channels for service payment. Customers who use Foodpanda can pay through Cash, Credit card, Debit card and paypal. Line Man has 2 payment channels which are Cash and Rabbit line pay. Grabfood has 4 payment channels which are Cash, Credit card, Debit card and GrabPay wallet by KBank. Lastly, GET can only pay by cash. To have 24 hours service delivery is considered to be one of the qualities. All applications can deliver 24 hours. Centralized kitchen shortens the delivery time. Therefore, Foodpanda and Grab food provide “Krua by Foodpanda” and “Grab Kitchen” respectively. Lineman and GET do not have this service.

Variety of food choice is a key driven for this industry. The more restaurants that applications have, the more attractive for the users to use that application. To be a partner with Wongnai, Line Man application has the most varieties of restaurants and food choices around 100,000 restaurants compared with Foodpanda, Grabfood, and GET around 35,000, 20,000 and 20,000 respectively.

All in all, from the service quality dimensions above, the follower applications which are Line Man and GET trying to catch up with the leader firms which are Foodpanda and Gabfood. In other words, they are trying to deliver a better quality service.

6.3) Performance

On the performance, the authors use a number of downloaded applications for android users and the net profit margin as an indicator. We observed that Grabfood has the highest amount of downloaded users at 100 million users since this application entered into Thailand as a taxi platform and then extended to food delivery service so the number of downloaded this application is overestimated. Foodpanda has 10 million downloaded users because it is the first company that entered into this industry. Therefore, Foodpanda gains first mover advantages. Line Man has 1 million downloaded users. For Line Man, the delivery fee is expensive compared to the others. Moreover, Line Man offers other services such as taxi, parcel and messenger but has less variety than Grab. GET, the latest player in this industry, has the same number of downloaded applications as Line Man which entered into this industry for 4 years.

Table 11 : Net Profit margin of each firm within 2016-2018

Platform	2016	2017	2018
Foodpanda	-69.40%	-18.82%	-53.60%
Line Man	-153.57%	8.19%	-20.41%
Grab	-495.66%	-193.77%	-61.38%

Source: Constructed from data warehouse website

Table 11 shows the net profit margin of each firm within 2016 through 2018. All the platforms were still lost as they had to subsidize to increase market power. The table did not include GET as it joined the industry at year end 2018, thus the report is not yet available. Note that the data from both Lineman and Grab included all services that they provided (food delivery and taxi etc.). Foodpanda was the only one platform that operated in food delivery services only.

Sales of Foodpanda was 258.9 MB⁴ in 2018 with 23.2% growth. It seemed to perform better in 2017 with less loss, but cost of goods sold plus operating expenses roared up to 151.3% of sales from 118.6% in 2017 causing it to register greater loss of 53.6% compared to -18.8% in 2017.

For Line Man, as the Profit and Loss statement available for public is consolidated statements of many businesses with sales record jumped from 137.8⁵ to 817.0 and 2,330.6 MB in 2016, 2017 and 2018 respectively. Although COGS was still high at 77.1% of sales in 2018, it showed a good trend of controlling operating cost to reduce from 172.3% of sales in 2016 to 46.3 and 42.8 in 2017 and 2018 respectively. The total loss in 2018 was 20.4%. If it can reduce their COGS together with good control of operating expenses, Line Man has the opportunity to register profit in the near future.

For Grab food they entered the market in Feb, 2018. So, the data in 2016 and 2017 were the performances from other businesses and irrelevant for analysis, We can notice that it's sales jumped up when food delivery sales were included in 2018 but might or might not be the main factor as we do not know the share of each business in its group. Sales were 1,105.8 MB⁶ with 95.4% growth and loss of 63.8% in 2018. It also showed good trends in reducing total COGS and operating expenses. According to this trend, we think that when the report for 2019 is available, we could assure whether it is a real leader as we saw or not.

⁴ See more information in appendix 3

⁵ See more information in appendix 4

⁶ See more information in appendix 5

7) Conclusion

All in all, this paper tries to find the degree of competitiveness among players in this industry and how likely it is for this industry to stay highly competitive. Moreover the authors would like to find the market structure of this industry and the nature of this business and also how they make profit. This research used the SCP paradigm as the main framework and focused mainly on both primary and secondary datas.

The market structure of the online food delivery service in Thailand can be perceived as competitive oligopoly since there are 4 dominant firms in this industry. This industry requires high capital at the beginning to invest in technology and subsidize consumers in order to draw more users. Additionally, this business needs some law and regulation.

Food delivery industry is a platform that is considered as a two-sided market, it gains profit from both drivers and restaurant owners by charging commission fees. All platforms are still using funds to subsidize their businesses to capture market share and have not gained profit yet. Pricing strategies and promotions are used to minimize prices and extend customer bases. However, as the profit margin is very slim, they have to increase sales as much as possible and minimize their COGS and operating expenses to maximize their profits.

The degree of competitiveness in this industry is high. Lineman seems to be the most competitive application in the market now. With more than 100,000 restaurant bases from both chains and street food, a leader in online promotion which manages total cost effectively, it should be the first to be secured and successful in the market. Grabfood is a key rival to Line Man. It added the weekly and weekend deals to increase frequencies of promotions to be serviced by its 100,000 drivers. Its downloaded numbers are at the top of the industry at 100

million though we can not identify the share of the food delivery part. Foodpanda did not show very promising performance, despite a strong brand from Europe, and may be toppled by GET which is now promoting aggressively by using best practices adopted from Line Man and Grabfood.

At this moment, we can conclude that the food delivery industry is highly competitive but now the platforms try to capture the market share as much as they can. So, in the future they hope to see few players left in the industry so that they can manage the prices and make profit.

The result of this research shows that the food delivery application market is the two-sided market as Rochet and Tirole said. Moreover, Rysman said that the penetration pricing will be adapted into use by lowering the price in the first period of market cycle. GET and Grabfood as they entered the market later, used this strategy to attract the attention from the buyers' side. In this case, pricing plays a significant role as it should be since pricing strategy is the key success factor towards this competitive market. However, some of the results about pricing are consistent with the literature review as aforementioned, there are some parts that the market turns out to be different. As Foodpanda and Line man entered the market first, they, instead, issued a high delivery fee without concerning the number of attracted users. In this case, it is different from the assumption about the network effect as lower the price would draw customers. Concerning the network effect, Gawer and Cusumano mentioned that network effect is the powerful method in this area, but the result shows that the network effect does not become effective when there are too many promotions used in the market.

To conclude, this market is considered as competitive one and the benefit of being competitive is that society will gain since consumers will face lower price of delivery fee while

restaurants will pay lower commission fee. Additionally, platforms will have to compete with each other by improving their service quality and reducing price. Therefore, the government should maintain a competitive environment in this industry by providing tax exemption, less strict on the law and regulation and provide some funds to invest in this business since this business requires a high cost of fund at the beginning.

Appendix

Appendix 1: Promotion in 2018

Platform	January-March	April-June	July-September	October-December
Foodpanda	● Free delivery services from selected restaurants ● Promotion on selected restaurants	● Free delivery services from selected restaurants ● Promotion on selected restaurants	● Free delivery services from selected restaurants ● Promotion on selected restaurants	● Free delivery services from selected restaurants ● Promotion on selected restaurants
Line Man	● Discount rates from delivery fee (use code) are 25,30,75,100,150 Baht on different months ● Lineman X Dtac Discount 30 Baht for each order ● Promotion for new user: Discount 100 Baht from delivery fee (use code) in Jan, Mar ● Promotion on selected restaurant ● Valentine Promotion ● Chinese New Year Promotion	● Discount rates from delivery fee (use code) are 25,55,75,100,120 Baht on different months ● Lineman X Dtac Discount 30 Baht for each order ● Promotion for new user: Discount 100 Baht from delivery fee (use code) in April ● Promotion on selected restaurant ● Pay fee through Rabbit Line Pay get discount 75 Baht for delivery fee (use code)	● Discount rates from delivery fee (use code) are 25,55,100 Baht on different months ● Lineman X Dtac Discount 30 Baht for each order ● Promotion for new user: Discount 100 Baht from delivery fee (use code) in Sep ● Promotion on selected restaurant ● Pay fee through Rabbit Line Pay get discount 75 Baht for delivery fee (use code) ● World Cup 2018 Promotion ● Mother's Day promotion Discount	● Discount rates from delivery fee (use code) are 35, 50,55,70,75,80, 85,100,120 Baht on different months ● Lineman X Dtac Discount 30 Baht for each order ● Payment through "Shopback" get cash back up to 130 Baht for delivery fee (use code) ● Promotion on selected restaurants ● Father's Day Promotion
Grabfood		● Weekly Deal ● Free delivery services ● Flash Deal ● Promotion on selected restaurants	● Weekly Deal ● Free delivery services ● Flash Deal ● Shock Price free delivery services within 6 km (use code) ● Discount up to 80% (not more than 50 Baht) ● Minimum Purchase order 150 Baht get 50 Baht discount (use code)	● Weekly Deal ● Weekend Deal ● Flash Voucher ● 11.11 Deal ● 12.12 Deal ● Black Friday Promotion ● Flash Voucher only from Line @grabfoodthailand ● Father's day promotion ● Christmas Promotion

			● Minimum Purchase order 120 Baht get 40 Baht discount (use code) ● Promotion discount 20 Baht (use code) ● Happy Hours Promotion	
GET				● Free delivery services within 8 km

Appendix 2: Promotion in 2019

Platform	January-March	April-June	July-September	October-December
Foodpanda	● Promotion on selected restaurants ● Free delivery services on selected restaurants	● Promotion on selected restaurants ● Free delivery services on selected restaurants ● Stepwise discount -Purchase order 150-199 Baht get 50 Baht discount (use code) -Purchase order 200-299 Baht get 75 Baht discount (use code) -Purchase order 300-399 Baht get 150 Baht discount (use code) -Purchased order 400 Baht or more get 200 Baht discount (use code) ● Songkran Festival Promotion	● Promotion on selected restaurants ● Discount 80 Baht for every restaurants (use code) ● Minimum Purchase order 150 Baht get 77 Baht discount (use code) ● Street Food discount 30% on selected restaurants ● Promotion for new user :Minimum purchase order 100 Baht get 55 Baht discount (use code) ● Lucky Price Promotion ● Discount 40% (use code)	● Promotion on selected restaurants ● Free delivery services on selected restaurants ● October Promotion discount 20% (use code) ● Minimum purchase order 150 Baht get 100 Baht discount (use code) ● It's match Promotion buy1 get1 free ● Christmas Promotion buy1 get1 free
Line Man	● Promotion on selected restaurants ● Discount 100 Baht for delivery fee (use code) ● Payment through “Shopback” get cash back up to 40 Baht for delivery fee (use code) ● Discount 40,50,75 Baht from delivery fee (use code) in different months within first quarter	● Promotion on selected restaurants ● Discount 100 Baht for delivery fee (use code) ● Payment through “Shopback” get cash back up to 40 Baht for delivery fee (use code) ● Discount 30,75,80 Baht from delivery fee (use code) in different months within second quarter	● Promotion on selected restaurants ● Discount 100 Baht for delivery fee (use code) ● Payment through “Shopback” get cash back up to 40 Baht for delivery fee (use code) ● 7 wonders promotion ● Discount 50 Baht for delivery fee (use code)	● Promotion on selected restaurants ● Delivery fee only 10 Baht within 6 km ● Delivery fee starting from 10 Baht ● Buy1 get1 free Promotion ● Discount 75 Baht from delivery fee (use code)

	●Buy1 get1 free Promotion	●Delivery services only 29 Baht ●Lineman X Dtac Discount 60 Baht for each order ●3rd Anniversary Promotion discount up to 90% ● Street Food Promotion	●Delivery fee only 29 Baht ●Delivery fee start from 29 Baht only Monday-Friday ●Delivery fee only 10 Baht within 6 km ●Flash Sale 8.8 ●Discount 150 Baht from delivery fee (use code)	●Lineman X Samsung Galaxy discount 50 Baht for Bubbles milk tea ●Wow Promotion ●100,000 restaurants celebration discount up to 40% ●12.12 Promotion Buy1 get1 free ●Christmas Sale discount up to 50%
Grabfood	●Weekly Deal ●Weekend Deal ●Chicken festival ●Chinese New Year Promotion ●Papaya salad discount up to 50% on selected restaurants ●Northeast food and bubble milk tea Promotion ●Japanese food Promotion ●Discount 80 Baht (use code)	●Weekly Deal ●Weekend Deal ●Discount 80 Baht (use code) ●Party Promotion ●Mega sale X 3 Festival ●All day all night set Promotion ●Street Food month discount up to 50% ●Pay total fee via GrabPay gets 100 Baht discount when purchasing minimum order 200 Baht (use code)	●Weekly Deal ●Weekend Deal ●Flash deal on every Thursday ●6th Anniversary Promotion discount up to 60% ●8.8 Mega Sale	●Weekly Deal ●Weekend Deal ●Meat Festival Promotion ●Special Promotion ●Asian week shocking price ●11.11 Mega sale ●Celebration Week discount up to 50%
GET	●Promotion on selected restaurants ●Take Get bike free of charge to Taco Bell at Mercury Ville ●Japanese food discount up to 25% ●Free delivery services within 8 km	●Promotion on selected restaurants ●Special promotion for Set Menu at department store ●Happy Hour Delivery services start from 5 Baht ●5 hits menu get Free delivery services within 5 km ●Flash Deal discount up to 50% + Free delivery services ●Delivery services for 3 Baht only 3 hours ●Crazy Sale discount up to 50% + Free delivery services	●Promotion on selected restaurants ●Free delivery services within 8 km ●Happy Hour Delivery services start from 5 Baht ●Mid-Year Mystery Sale ●Get Food Battle discount up to 60% ●Deal of the week discount up to 50% + Free delivery services ●Food Price Discount up to 40% ●Delivery services starting from 1 Baht ● Provided discount coupon via Shopee	●Deal of the week buy1 get1 free + Free delivery services when using coupon ●Best Deal of the Year discount up to 50% ●Weekend Special ●Get's gifting discount up to 50%

Appendix3: Profit and Loss Statement of Foodpanda from 2016 to 2018

Unit: Baht	2016			2017			2018		
	baht	%change	%sales	baht	%change	%sales	baht	%change	%sales
Sales	121,541,721.39	12.91	89.98	206,033,578.34	69.51	98.01	240,724,644.64	16.83	92.96
Total Sales	135,083,182.83	11.22	100.00	210,210,534.21	55.61	100.00	258,950,064.48	23.18	100.00
Cost of Goods Sold (COGS)	N/A	-100	N/A	110,462,356.37	N/A	52.55	160,264,459.05	45.08	61.89
Gross Profit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Operating Expenses	N/A	-100	N/A	133,868,211.77	N/A	63.68	231,430,583.63	72.87	89.37
Total Expenses	227,977,117.95	3.85	168.77	249,289,302.52	9.34	118.59	391,695,042.68	57.12	151.26
Interest Expenses	361,231.53	-40.06	0.27	488,386.49	35.2	0.23	6,050,412.30	1,138.85	2.34
Earning Before Interest and Taxes	-93,255,166.65	-5.49	-69.04	-39,567,154.80	-57.57	-18.82	-138,795,390.50	250.78	-53.60
Taxes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net Profit(Loss)	-93,255,166.65	-5.49	-69.04	-39,567,154.80	-57.57	-18.82	-138,795,390.50	250.78	-53.60

Source: Constructed from data warehouse website

Appendix4: Profit and Loss Statement of Line Man from 2016 to 2018

Unit: Baht	2016			2017			2018		
	baht	%change	%sales	baht	%change	%sales	baht	%change	%sales
Sales	137,743,113.00	4,420.53	99.96	817,050,934.00	493.17	85.94	2,330,560,088.00	185.24	99.97
Total Sales	137,798,715.00	4,421.62	100.00	950,733,720.00	589.94	100.00	2,331,202,679.00	145.2	100.00
Cost of Goods Sold (COGS)	107,816,831.00	45.49	78.24	418,007,645.00	287.7	43.97	1,795,331,376.00	329.49	77.01
Gross Profit	29,926,282.00	N/A	21.72	399,043,289.00	1,233.42	41.97	535,871,303.00	34.28	22.99
Operating Expenses	237,398,140.00	267.93	172.28	440,540,726.00	85.57	46.34	998,200,633.00	126.58	42.82
Total Expenses	345,214,971.00	112.53	250.52	868,736,981.00	151.65	91.38	2,802,594,260.00	222.6	120.22
Interest Expenses	4,194,505.00	84.53	3.04	4,136,956.00	-1.37	0.44	4,487,487.00	8.47	0.19
Earning Before Interest and Taxes	-211,610,761.00	30.9	-153.57	77,859,783.00	-136.79	8.19	-475,879,068.00	-711.2	-20.41
Taxes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net Profit(Loss)	-211,610,761.00	30.9	-153.57	77,859,783.00	-136.79	8.19	-475,879,068.00	-711.2	-20.41

Source: Constructed from data warehouse website

Appendix5: Profit and Loss Statement of Grab from 2016 to 2018

Unit: Baht	2016			2017			2018		
	baht	%change	%sales	baht	%change	%sales	baht	%change	%sales
Sales	103,608,720.00	103.03	99.50	361,682,228.00	249.08	71.13	1,105,751,824.00	205.72	95.39
Total Sales	104,131,569.00	103.29	100.00	508,510,201.00	388.33	100.00	1,159,233,358.00	127.96	100.00
Cost of Goods Sold (COGS)	235,024,237.00	-9.83	225.70	705,196,077.00	200.05	138.68	810,014,946.00	14.86	69.88
Gross Profit	-131,415,517.00	N/A	-126.20	N/A	-100	N/A	N/A	N/A	N/A
Operating Expenses	360,779,212.00	35.16	346.46	783,691,105.00	117.22	154.12	1,055,065,702.00	34.62	91.01
Total Expenses	620,271,535.00	11.22	595.66	1,493,844,350.00	140.83	293.77	1,870,794,662.00	25.23	161.38
Interest Expenses	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Earning Before Interest and Taxes	-516,139,966.00	1.91	-495.66	-985,334,149.00	90.9	-193.77	-711,561,304.00	-27.78	-61.38
Taxes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net Profit(Loss)	-516,139,966.00	1.91	-495.66	-985,334,149.00	90.9	-193.77	-711,561,304.00	-27.78	-61.38

Source: Constructed from data warehouse website