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Building a Sustainable Digital Supply Chain: The Case of Grab

Jiyong Park[1], Sohyung Kim[2]

[1] Department of International Business Management, Surrey International Institution, Dongbei University of Finance and Economics, China
[2] Department of Trade, Kyonggi University, South Korea

shkim2@kgu.ac.kr

Abstract. This study aims to analyze the sustainable digital supply chain of a case study of Grab, the top e-hailing service in Southeast Asia, acclaimed by supplier relationship management and customer relationship management. The sustainable digital supply chain of Grab is assessed by using various analysis methods such as macroeconomic analysis, microeconomic analysis, and supply chain analysis. Additionally, during the COVID-19 pandemic, Grab executed several corporate social responsibility (CSR) activities in communities, including the implementation of economic, social, and environmental supports. The findings show the strategic framework, including trust-building and IT infrastructure integration, to create a sustainable digital supply chain based on the leading company's case. The proposed strategic framework could enhance managerial views of insights into sustainability in this new business domain. Although there are some challenges facing Grab, according to macro-and micro-business environmental analyses, the potential growth of the market shows that Grab is moving in the right direction. Grab has been using digital supply chain and logistics to connect drivers with passengers. Grab established its supply chain strategies based on the right service, right time, right quality, and right price to become a very successful e-hailing app.

Keywords: Digital supply chain, corporate social responsibility, grab e-hailing service, sustainability, COVID-19

1. Introduction

How can we create a safer way to hail a ride? What if we could make life just a little easier with IT technology? Can't we give drivers better working conditions? Why can't we live a life without cash? Is there any secure service that connects local suppliers? The success story of the gigantic mobility app known as Grab began by addressing questions like these. According to Fast Company (Today Online, 2019), Grab was nominated as the world's second-most innovative company in 2019.

During the COVID-19 pandemic, Grab has enjoyed unprecedented rapid growth, not only in Malaysia but also throughout Southeast Asia. Grab is the number-one ranked e-hailing app service in Southeast Asia and provides various services to customers, such as convenient booking services for private cars and taxis, comfort food delivery services from restaurants and grocery stores, door-to-door express services, on-demand hotel booking services, and cashless payment services.

Grab is highlighted by various academics as exemplifying the sharing economy, disruptive innovation, and an open platform for the digital supply chain. Grab strives to become the first everyday super app in Southeast Asia. Since Uber left the Malaysian market in March 2018 and merged with Grab, Grab has maintained its leading position in this sector. In 2019, Grab's net income reached US$2.3 billion, and it employed 6,000 workers. Currently, Grab serves more than 500 cities and metropolitan areas across eight countries (Zakariah, 2019; Guo, 2019).

Fig. 1: Introduction to grab
(Source: Authors' illustration based on Grab homepage, 2021)

Table1: Various services provided by grab (Source: Authors' rearrangement)

Main Services	Food and Shopping, Transport, Delivery
Other Services	Bill Payments, Financing, Attractions, and Hotels, Home Services, Gift Cards, Rewards

The main service provided by Grab is food and transport, and other services include finance and hotel, home services, gift cards, and rewards. Of note, Grab's finance is an empowerment program that provides drivers, merchants, and enterprises with greater access to financial services so they can realize their full potential. Also, Grab provides home services, gift cards, and rewards services.

Grab's CEO, Anthony Tan, said, "Grab has the vision to be a multi-modal service provider that provides seamless mobility services within one app. Due to Grab's service, consumers will have their most important everyday needs fulfilled." (2/Feb/2021, 10 a.m.)

By disrupting innovation by applying for IT, Grab has changed not only customers' lifestyles but also their living patterns. Grab continues to expand rapidly; though its headquarters is located in Singapore, it serves various countries, such as Malaysia, Singapore, Thailand, Indonesia, the Philippines, Myanmar, Vietnam, and Cambodia. Grab's customers can use the same Grab app and interfaces to enhance their trip experiences in several countries.

Academically, Grab is used as a case study of a successful example by which the traditional taxi supply chain has evolved significantly to the digital supply chain. By applying advanced IT and platform technologies, Grab has created disruptive innovation in the traditional business domain and introduced new business models, including the digital supply chain. Similar to Airbnb, which does not own any tangible hotel assets, Grab does not have any car assets—however, by coordinating drivers, passengers, and other market participants, Grab has become a leader of the orchestra in creating unique values for customers in the digital supply chain. Grab's business model involves connecting supply chain participants in one mobile app.

For instance, once a passenger places their order on the Grab app, Grab matches their order with the nearest available driver. This not only shortens the waiting time of passengers but also reduces the demand uncertainty faced by drivers. Therefore, Grab helps meet supply and demand through a state-of-the-art platform business to generate a new type of job in the market. That is the essence of digital supply chain management.

Furthermore, during the pandemic, Grab was recognized for its corporate social responsibility (CSR) to society. Previous literature reviews indicate that an integrated IT infrastructure and partnerships with supply chain members can enable organizations to integrate physical, financial, and informational resource flows, thus having a differential impact on different dimensions of organizational performance. Additionally, several exploratory analyses suggest that the digitalization of supply chains will be enforced through trust-building activities among supply chain partners.

Trust-building itself can be considered a primary factor promoting the success of a sustainable supply chain. Integration through IT infrastructures can be considered a primary success factor. In summary, within a sustainable digital supply chain, CSR activities can positively influence trust-building among partners and help organizations achieve an integrated supply chain, both internally and externally (Teng, 2016).

Well-developed conceptual frameworks discussions about the digital supply chain are ongoing. However, in terms of sustainability in the digital supply chain, few research questions have been addressed by research. Thus, these issues remain open questions for academics and have not been highlighted by academics.

Therefore, in this paper, we analyze Grab's business model in depth from the perspective of recent supply chain management and CSR issues. What would happen to the digital supply chain if CSR activities were applied, and how would it differ from traditional supply chain management? Could CSR reinforce trust-building in the entire supply chain? Could CSR strengthen the level of integration across the digital supply chain? These are critical issues for researchers to consider.

Grab has been chosen for this case study by the authors for the following reasons.

First, Grab, which is based in Singapore, established its monopoly position in Southeast Asian countries, whose industrial situations are unique.

Second, Grab is an exceptional business case regarding the digital transformation history in this region.

Third, Grab argues that its super app can guarantee efficiency and effectiveness in regional growth; however, there are many controversial opinions about whether Grab is helpful to local people and whether they are enjoying the benefits of the gigantic super app.

These are critical matters that need to be addressed. In this paper, to achieve the research purpose, we scrutinize Grab's case to explain how a sustainable digital supply chain can be built during the pandemic through CSR activities. The findings give a comprehensive framework that future studies can apply.

2. Grab's digital supply chain analysis

Most of the world's most successful and sustainable organizations exhibit excellence in their supply chains, and some even argue that the competition among organizations is competition among their supply chains. In the modern business world, supply chain analysis gives a clear outlook on the industry's blueprint and capabilities for success. To achieve the goal of this research paper, we conducted a case study using a sustainable digital supply chain analysis.

First, the researchers performed a macroeconomic analysis and microeconomic analysis to overview the e-hailing service industry in which Grab participates. Additionally, based on the digital supply chain analysis, Grab's service is analyzed

by a supply chain expert to explain the digital supply chain and present successful strategic points.

Macro and Micro Environmental Analysis:

First, before starting the thorough analysis of Grab's digital supply chain model, macro-and micro-environmental analyses are conducted to examine Grab's market status. We apply an analysis for political, economic, social, technological, legal, and environmental aspects (also known as a PESTLE analysis) to describe a framework of the macro-environmental factors used in the firm's external and environmental scanning from a strategic management perspective.

PESTLE Analysis (Macro-environmental Analysis)

Political: The e-hailing industry was legalized under the Land Public Transport Act 2010 and Commercial Vehicles Licensing Board Act 1987 (Zico, 2018).

Environmental: Malaysian government's policy such as climate change and carbon dioxide reductions will affect Grab's business operations.

Social: Consumer research shows that 80% of consumers prefer e-hailing services to regular taxi services in several regions. In Malaysia, e-hailing consumers feel safer than traditional taxi services. This is because of the protection functions in the Grab app.

Technological: By applying a mobile app, the riding sharing service, and the e-hailing sector has been attempting to adopt new technologies such as AI, machine learning, blockchain, etc. Additionally, it is expected to be improved by big data analytics.

Legal: Registration with the Land Public Transport Commission is compulsory. To become a Grab driver, one must apply for the Public Service Vehicle license and pass the exam. It will guarantee the quality of Grab's services.

Economic: Malaysia's e-hailing sector earned a revenue of $558 million in 2019. Since then, it has grown at a rate of about 16% annually and is expected to earn $1 billion by 2023.

In a nutshell, Grab has augmented its core business activities through external environmental support. However, Grab is facing dramatic social, environmental, and technological challenges and needs to adjust itself to survive this market in the future (Rouse, 2019; S&P, 2019; Shooter, 2016). Now, we will take a look at its micro-environmental analysis by using Michael Porter's 5 Forces Analysis model.

Fig. 2 tells us that Grab is located in every limited threat from the new entrants to industry rivalry accordingly. Overall, Grab is enjoying stable market growth and a solid business position in Malaysia and other Southeast Asian counties. Both analyses present an overview of the different strategic factors to be taken into consideration, such as service improvement and flexibility increasing. Another relevant issue is the localization and enhancement of customer services. Without Gojek's rapid growth in the same region, Grab, which is eager to become an "everyday super app," faces no

specific threats from this business domain so far (Solanki, 2017; Daryl, 2019; Export, 2019).

2.1. Grab's digital supply chain network analysis

Grab is one of the digital transformational examples in which the traditional taxi business supply chain has evolved significantly in the digital supply chain by using state-of-the-art technology such as mobile apps and IT infrastructure. In the traditional taxi service, the supply chain management process is complex and uncertain because taxi companies need to hire drivers and provide cars to initiate the supply chain service. The passenger is required to call the company to be matched with a driver to meet his needs by himself. With the use of the mobile platform between people, Grab innovated the supply chain process and achieved mutual benefits among drivers, passengers, and the Grab app service providers, ultimately attaining quicker responses and lower transaction costs (Grab homepage, 2019).

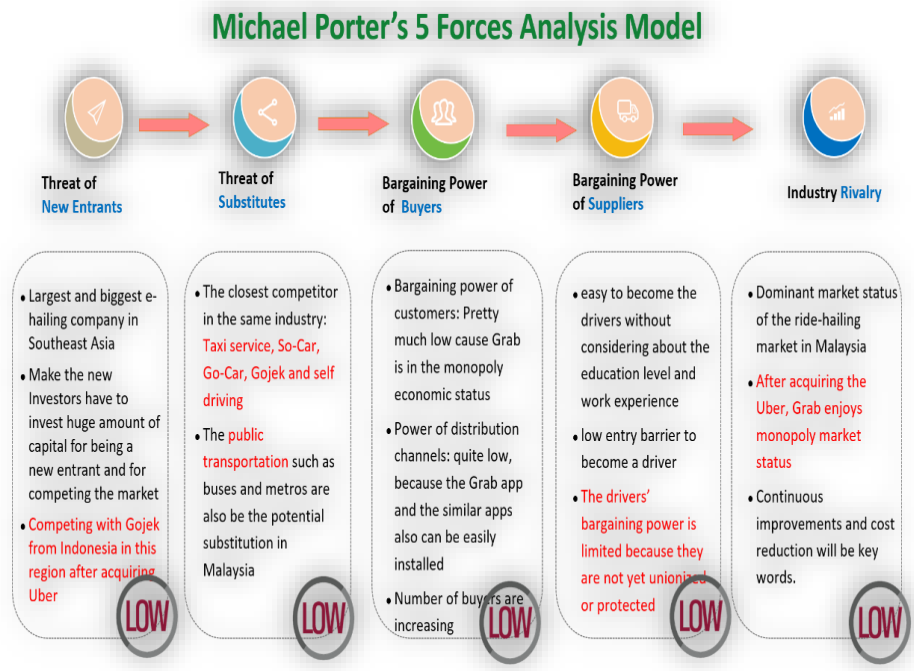

Fig. 2: Micro-environmental analysis to grab (Source: Authors' illustration)

There are only two relational networks in Grab's supply chain structure: the relationship with buyers and the relationship with suppliers through Grab's everyday super app. For instance, regarding transportation services, the suppliers and drivers are the persons who supply the driving service, and buyers and passengers are the persons who demand the e-hailing service. Grab is the informational intermediary

between the two and plays a critical role in linking them as a platform to aggregate the services and create unique values (Grab homepage, 2019).

For another example, the food customers at their place can use Grab apps to call for the GrabFood delivery service. Once the customer places an order, Grab delivers a piece of ordering information and matches it with the nearest available restaurant. This not only shortens customers' waiting times for food delivery but also reduces the demand uncertainty faced by restaurant owners; it also offers the best deal on delivered food (Grab homepage, 2019).

In contrast to traditional taxi services, the price when using Grab can vary based on the demand from passengers. The real-time matching system set up through Grab's super app can provide the right e-hailing and food delivery services at the right time, at the right price, and with the right quality. Drivers' prices can fluctuate by offering various options based on the feedback they receive from customers.

This is a remarkably flexible business strategy in terms of moving to responsive and flexible pricing (Grab homepage, 2019). "What we've built sounds glamorous but if you want to be hardcore and survive in this race, you need to be hyper-paranoid and constantly thinking that the guy on your right is trying to murder you," CEO Anthony Tan said in a 2014 interview with the Financial Times.

Fig. 3 presents a digital supply chain analysis of Grab. According to the figure, a short and close chain can be examined. Grab's digital supply chain makes an intensive supply chain that is different from the long and complicated traditional supply chains. A traditional supply chain consists of suppliers (manufacturers – distributors – customers). Especially, in terms of suppliers, it has first-tier suppliers, second-tier suppliers, third-tier suppliers, and so on.

Usually, it is a very complicated network system in which it takes a very long time to achieve the appropriate lead time (i.e., the time from which an order is placed to the time the order is delivered to the customer).

Moreover, in its platform, Grab involves only two points between the supplier and buyer and mainly plays a critical role in safely and accurately delivering goods and services through cashless services. Grab involves informational deliveries between two parties, making it possible for business players to use the Grab app to enhance the speed of transactions and reduce the cost of information interactions. Traditionally, it is explained that it also tries to reduce the transactional cost by using new IT.

Most of all, all transactional information will be accumulated in Grab's database, including transactional logs, customers' buying patterns, preferences and history, and so on. Regarding the temporary and short-term interests of the nodes in the supply chain, there is no real way to let all members of the supply chain share all information across the supply chain, coupled with the backwardness of the application of information technology, making it difficult to coordinate the business activities of the upstream and downstream enterprises in the supply chain. This disconnection causes

the business activities to become separate and form a black hole, resulting in high costs, poor coordination, and a lack of collaboration.

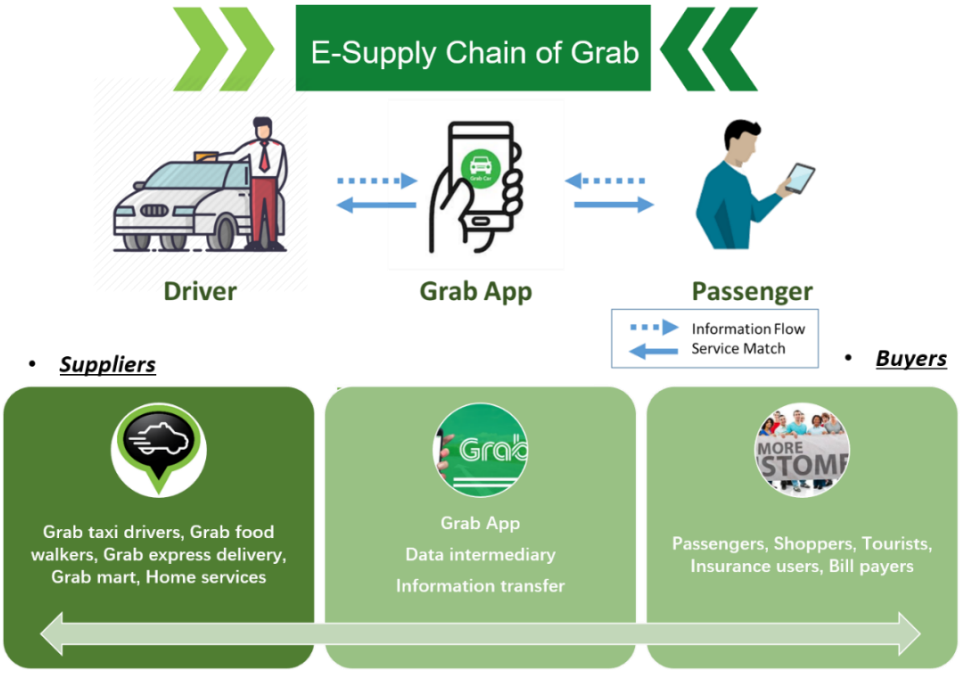

Fig. 3: Schematic example of grab's digital supply chain

(Source: Authors' illustration)

Therefore, there are serious trust-building issues among the participants of the supply chain, including the downstream nodes' mistrust of the upstream nodes and the upstream and downstream nodes' asymmetrical information about trust-building, resulting in serious information distortion. The fragile and vicious circle of trust (feedback) and the lack of trust mechanisms in the entire supply chain encourage the need for integration with suppliers or buyers to rebuild a resilient supply chain. From a supply chain perspective, Grab's supply chain should be expanded along with the new technology adoption, such as virtual reality, augmented reality, drone delivery, blockchain technology, artificial intelligence, and machine learning.

Also, according to the analysis of the digital supply chain, exploring the more valuable suppliers would be the main success factor in this e-hailing service and everyday super app business for Grab. Additionally, customer relationship management with app users is considered a key success factor. However, in terms of being responsive, the integration of the supply chain among suppliers, service providers, and customers is substantial (Grab homepage, 2019).

3. Best Practices of Grab's Digital Supply Chain Management

Grab Monopolizes the Malaysian E-hailing Market: Before 2018, there were two e-hailing service companies in Malaysia: Grab and Uber. Since Grab acquired Uber's Southeast Asia business in 2018, Grab has grown dramatically, and it has eventually attained monopoly market status. After acquiring Uber's business successfully, Grab's local market share surged from 50% to 80%, which is almost a monopoly, resulting in strong barriers facing new entrants to compete with Grab to maintain that number-one market share. The actual fares rose by 20% to 50% on average. During peak times, the price can be even double, which affects those who rely on e-hailing services. The passengers have no choice but to accept the higher prices. Alternatively, Grab has used its market dominance to impose several restrictions on its drivers, thus preventing drivers from promoting or providing advertising services to Grab competitors in the e-hailing and traffic media advertising markets. The monopolistic activities have resulted in rapid revenue growth, with a valuation of more than $10 billion. Grab is now the leader in the Southeast Asian e-hailing market and was named Southeast Asia's most valuable decacorn technology startup in 2021.

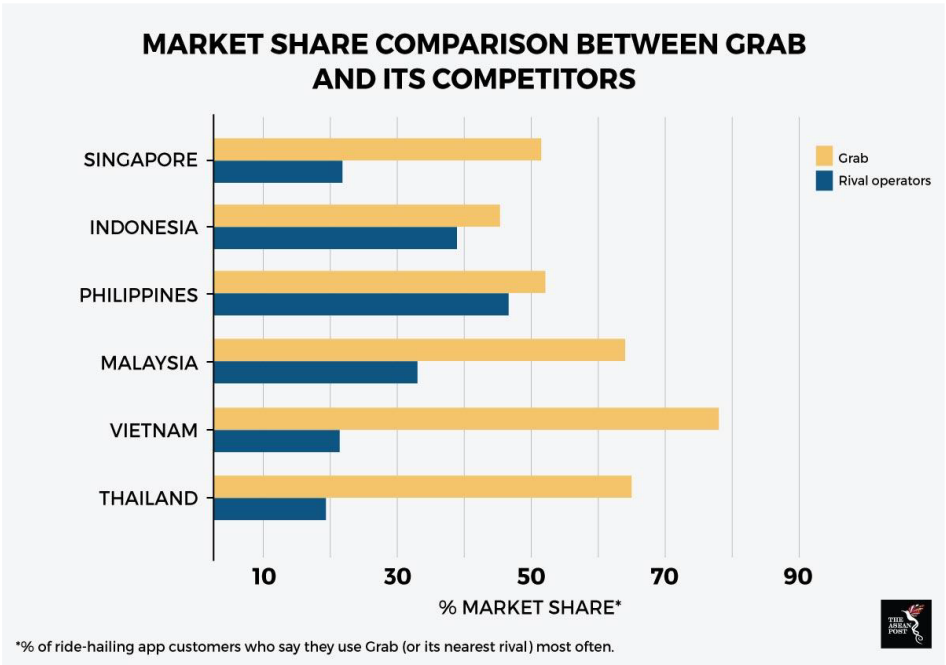

Fig. 4: Market share comparison between grab and its competitors

(Source: Grab & Bloomberg, 2017)

Supplier Relationship Management: Support from the Malaysian government is one of the factors that has helped Grab monopolize the market. Grab was founded in Malaysia before moving its headquarters to Singapore, and it currently operates in eight countries. Grab has been increasing its commitment and making significant

investments as it moves its operations forward in Malaysia. For example, the company invested in anchoring a Regional Centre of Excellence and creating an R&D center in Malaysia in response to the Malaysian government's call for public-private partnerships to help drive Malaysia's Industry 4.0 blueprint and digital economy goals (Zakariah, 2019; Guo, 2019). The Malaysian government was pleased to see the considerable contribution of Grab in its economic development and is continuously supporting its technological development and expansion (Teng, 2016).

There are several suppliers in Grab, including drivers, restaurants, grocery stores, insurance companies, express services, hotels, and so on. The main suppliers of Grab are Grab drivers. There are a few requirements that a Grab driver should fulfill to ensure they are a safe driver. According to the Ministry of Transport in October 2019, all driver-partners must comply with the regulations stated to obtain a smoother transition. Drivers must hold a PSV license or have proof of passing the exam (on which they must score at least 80%). They should also have an e-hailing vehicle permit (EVP) and hold valid e-hailing insurance. All drivers must display e-hailing stickers on the front and rear windshields. They also should have the Puspakom disc, which indicates a car inspection of their vehicle has been done (if their vehicle is more than three years old) (Zakariah, 2019; Guo, 2019).

These regulations came into effect on 1 November 2019. To encourage people to become legal Grab drivers, Grab has given cash reimbursements for training. The requirements mentioned above ensure the quality of the riding service provided by individual Grab drivers. Additionally, Grab provides a driver-partner car rental program to help drivers who cannot afford their vehicle and reduce the costs associated with owning a vehicle (Zakariah, 2019; Guo, 2019). Also, Grab drivers do not have to pay any maintenance fees, as Grab pays them.

Grab also provides some driving accessories, such as driving recorders, to ensure the safety of drivers and passengers. Moreover, drivers who refer new drivers to join the Grab driver-partner car rental program receive an additional reward of up to RM200, which greatly encourages the sustainability of drivers. Grab also helps drivers engage in continuous learning(Zakariah, 2019; Guo, 2019). Grab provides not only basic driver training but also training for necessary skills such as financial planning, business management, vehicle maintenance, and defensive driving skills.

Of special note, Grab is well-known for its educational support program for drivers' children. These efforts are related to Grab's successful supplier relationship management as the company builds deep trust with its partners, namely, the drivers in the supply chain upstream. Through close relationships with suppliers, Grab can achieve its goal of meeting customers' demands by working as a team in the digital supply chain (Grab homepage, 2019; Hikmah, 2019).

Customer Relationship Management: As Grab is a company that mainly provides e-hailing services, the service that it provides to customers is a very important part of the company's sustainability. Grab assesses their supply chain performance by

evaluating the quality of service provided to establish trustful customer relationships. Because of Grab's non-face-to-face service characteristics, it uses customer feedback to evaluate its services. If a customer has received their riding service, they will receive an email or message to give feedback about their journey and driver. Similarly, after receiving the food delivery, customers are asked about the quality of the service, including the delivery time, taste, price, and so on. By collecting and evaluating the feedback provided by the customer, Grab can determine whether the service achieves the satisfaction of customers.

This is also an important information source for improving Grab's supply chain performance. For example, based on customer complaints about driver quality, Grab can also give warnings to drivers instructing them to provide better service. The driver's rating will also be considered by customers when they select a driver for their next trip.

Fig. 5 and 6 below show a customer's rating of the service of a food order they placed on GrabFood; this review information serves as part of the communication channel on GrabFood service with its supply chain partners. This information sharing will make Grab's digital supply chain work efficiently and transparently. It will also encourage supply chain participants to collaborate and integrate their functions throughout the supply chain (Hoberg, et al, 2015; Hu, 2017, Jabil, 2019).

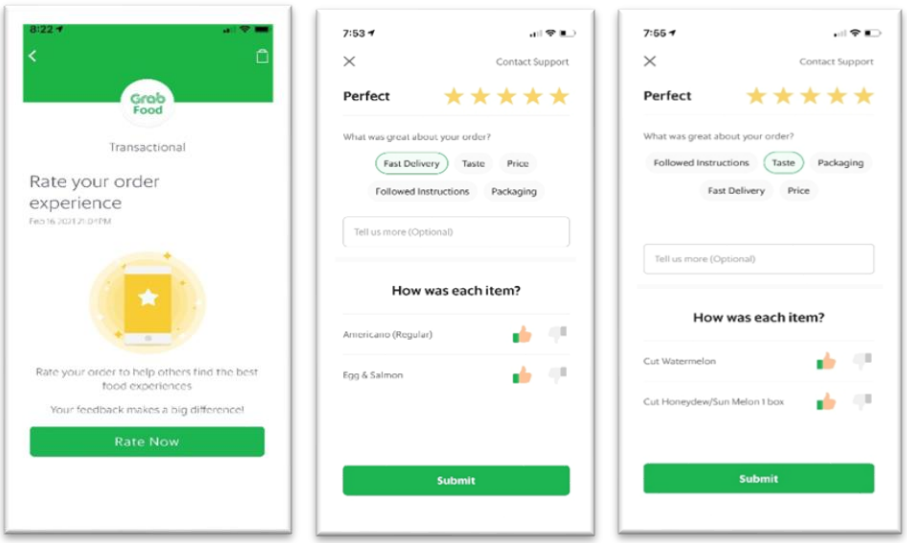

Fig. 5: Customer Evaluation on GrabFood (Source: Grab homepage, 2021)

Information sharing occurs throughout the supply chain via the evaluation program. It starts from the customers' side, though Grab also launched a campaign called "Better 365" (Jabil, 2019; Joseph, 2019; Kenton, 2019).

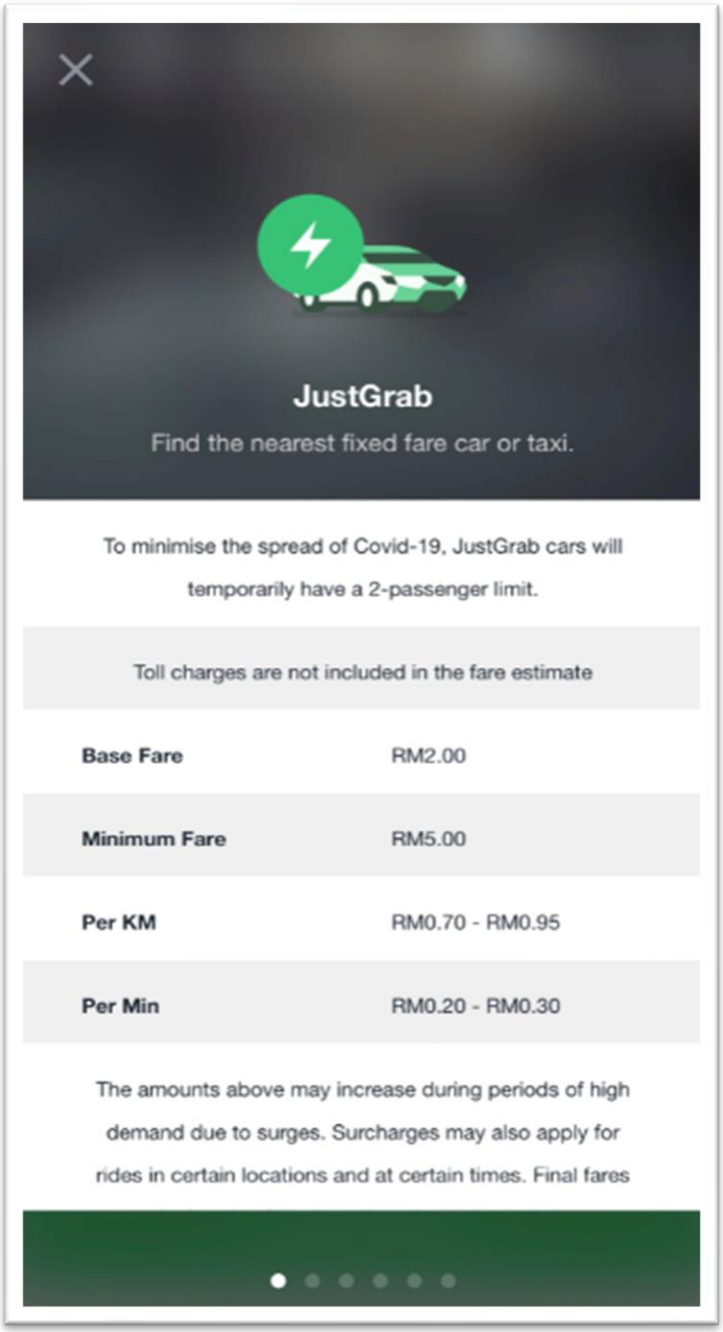

Fig. 6: Pricing on JustGrab (Source: Grab homepage, 2021)

This campaign was intended to enhance the welfare of its driver-partners. For instance, after completing the service, drivers were required to rate their trip. This invaluable feedback is applied to ensure Grab's continuous improvement.

Grab's Service operation: The early operations of Grab were mostly based on quickly imitating opponents and eliminating subsidies. Later, operations began to take advantage of localization and the development of its unique characteristics. The previous Grab operation was not a system, as all its operating strategies copied Uber's, and then increased prices marketed them. Sometimes, when Uber made a poster, the next week, the same typographic design would be posted on Grab's website. Uber switched from taxis to the private car market in April 2015; consequently, GrabTaxi began recruiting private car drivers in September that year (Hu, 2017).

However, the company's business has also developed diversified operations that are different from Uber's. It is not only possible to reserve special cars, but Grab also provides express delivery services for food, parcels, and groceries. To unify the management of many services, Grab launched a mobile payment service called GrabPay in 2016 to make payments more convenient and encourage users to spend in physical stores in exchange for points. In the middle and late stages, Grab gradually exploited competitive advantages, selectively invested resources, and no longer blindly followed the strategies of its competitors. With the localized product experience closer to Asian cities and the geographical advantage of its headquarters, it concentrated its resources and established operations that are more in line with local users' habits and behaviors.

Grab cooperates with multiple local platform merchants to develop a customer point system that allows customers to use Grab points to purchase equivalent vouchers that they can use on Grab's partners' platforms. At the same time, taxi and private car services were combined to launch JustGrab, a low-cost product that takes advantage of many taxis. Since Singapore's vehicles are relatively expensive to buy and maintain, GrabHitch, its downwind service, also aligns with the locals' desire to save money and their need for convenience and high security. It can be said that all strategies are relatively successful (Lai, 2018; Rouse, 2019; S&P, 2019).

Flexible Price Policy: Most Grab users started to argue with the prices or fares charged by Grab. People realized that the fares sometimes reached unreasonable levels due to the company's monopoly market status. The fares will always be charged based on fluctuations in supply and demand. According to a Grab Social Impact Report 2018-2019, pricing has always been one of their biggest challenges. This is because it is hard to balance the opposing expectations of passengers and drivers. Passengers always want to have the lowest fares, fastest allocation, and shortest pickup time, while drivers want to maximize their profits. Thus, Grab needs to find the right price point that benefits both sides. Fig. 6 shows an example of the fares charged by JustGrab. JustGrab displays the base fare, the fare per kilometer, the fare per minute, and the minimum fare; the toll charges are not included (Shooger, 2016). However, the below figure shows that these fares are flexible according to the supply and demand at a specific duration or location.

New Technology Adoption: As an advanced car-hailing service, Grab has implemented a few new technologies in its app. Firstly, Grab has implemented Google Maps to perform mapping and geolocation functions (Solanki, 2017). Thus, it is important because it can identify a device's location and provide driving directions. It provides a dual-sided benefit by making it easier for passengers to detect their drivers' positions and for drivers can detect the exact position of their passengers. Furthermore, a passenger can always refer to the maps during the journey to ensure that they are moving towards their destination. Google Maps can also be used to track the journey and improve the security of both the passenger and driver while also helping to resolve any disputes that could emerge.

Secondly, Grab uses push notifications and SMS. Grab has launched GrabChat, which is the first instant messaging platform of its kind in Southeast Asia. Its purpose is to improve the passenger's experience by enabling the passenger to be picked up more quickly. It is used to send a couple of notifications when certain actions have occurred. For example, the passenger will receive a notification or SMS once the driver accepts a ride request or when the driver is about to arrive. The passenger will also receive a notification if the ride has been canceled for any reason. The system is designed with specific short, convenient messages that drivers and passengers can select. Not only that, but it can also protect the safety of drivers, as they are not required to type the message manually while driving. Furthermore, by observing the maps, the passenger can predict the arrival time of their driver. According to Tech & Product (2016), co-founder Tan Hooi Ling, GrabChat includes no incurring mobile charges, meaning the drivers will experience little uncertainty and can directly deal with foreigners within the app without requiring international calling communication with a foreign mobile number.

4. Discussion

Pandemic Outbreak and CSR Activities: During the COVID-19 pandemic, Grab has been dedicated to relief initiatives, contributing US$40 million across Southeast Asia. Within two months of the outbreak, Grab launched the 100-supporting program to cushion the negative economic impact faced by various communities. Grab has done many charity projects to empower people with disabilities. Grab believes that everyone should have a chance to make money, even those with disabilities. For many people with disabilities in Southeast Asia, it is challenging to find opportunities to make money. Today, more than 700 disabled people, including those with deafness, cerebral palsy, and dyskinesia, have access to income opportunities as drivers or delivery partners across the Grab platform.

In 2018, Grab conducted a program called Break The Silence in Malaysia to invite deaf people to the Grab platform to serve as drivers, agents, merchants, and delivery partners. Grab works with the Malaysia Federation of the Deaf to involve the deaf community in identifying the problems they may encounter on the platform

so that Grab can improve it by, for example, including special alerts. This program was very successful, as Grab has more than 400 deaf driver-partners, and Grab plans to expand this program to other countries in Southeast Asia (The Official Board, 2016).

Integration Through Information Sharing: Grab has also implemented the social and environmental supply chain to maximize its supply chain surplus. Grab offers people with disabilities a chance to work so they can live better. By becoming drivers or delivery partners, they can generate income through the Grab platform, allowing them to create better futures for themselves and their families. In 2018, Grab partnered with the Malaysian Federation of the Deaf to include built-in special alerts and an in-car signage system to help passengers and their deaf driver-partners communicate non-verbally (The Official Board, 2016).

Grab also launched GrabAssist in Singapore, Thailand, and Indonesia, which gives passengers with disabilities the freedom to go anywhere. GrabAssist drivers are given special training to learn how to handle boutique services, like moving wheelchairs, basic sign language and sensitivity training. Nowadays, traffic congestion is one of the biggest problems in the world. Thus, Grab aims to reduce traffic congestion by using Big Data and AI to provide a critical link with public transportation and promote the concept of ride-sharing. Those concepts will not only reduce traffic congestion but will also reduce gas emissions, thus mitigating the greenhouse effect (Kim, 2018; Hong, Ryu, 2019; Hu, et al, 2021).

5. Conclusion

According to this macro- and micro-business environmental analysis, although there are some challenges facing Grab, the potential growth of the market shows that the company is moving in the right direction. Grab has been using the digital supply chain and logistics to connect drivers and passengers. Grab established its supply chain strategies based on the right service, the right time, the right quality, and the right price to become a very successful e-hailing app. To build trust between drivers and passengers, Grab has made efforts in its supply chain management, improved its recognition, and increased its market share while operating in many countries.

Grab also focuses on the sustainability of its business partners and community members to make a valuable contribution to society. These practices help Grab achieve its mission, making it an excellent business case. Ultimately, we can learn the following from the Grab case. First, trust-building is considered the main driver of sustainability in this business ecosystem by applying an IT infrastructure across the supply chain. Second, unprecedented circumstances like the COVID-19 pandemic verify the degree of sustainability of the digital supply chain by showing the rigidity of the relationships throughout the supply chain. These findings are expected to be empirically tested.

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