

査読論文

# The Possible Application to Japanese Mobile Apps of Success Factors of Gojek, an Indonesian Ride-sharing Company

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## <ABSTRACT>

This paper introduces Gojek, one of the largest startup firms in Indonesia that handles the latest update of its business ecosystem starting from motorcycle taxis transportation with a mobile app. The objectives of this paper are to identify Gojek's success factors in Indonesia, to see what kinds of mobile apps are served by Japanese companies to give services similar to Gojek, and to consider the opportunities and challenges of the possible application of Gojek's strategy in Japan. Though it is difficult for Japanese companies to directly apply all of Gojek's strategy under current situation, we analyzed the success factors in the strategy and categorized and sorted out the parts that can be introduced in the short term and the long term in Japan, which is the contribution of this research.

**Keywords: Japanese Mobile Apps, Ride-sharing, Electric Payment, Super app, Gojek**

## 1. Introduction

### 1.1. Transportation System & Problems Related to the Transportation System in Indonesia

Indonesia is the world's fourth most populous nation in the world with 275,122,131 people living there (United States Census Bureau, 2019). Due to lack of high quality of public transportation, Indonesia still remains as a developing country. Inadequacies in Indonesia can be seen through one of the examples of its public transportation system, which is Ojek, a motorcycle taxi. Ojek is popular modes of transportation in Jakarta because of its ability to weave through traffic and travel into alleys and regions of the city that are inaccessible by large vehicles (Palevsky, 2019). However, there are several fragilities of "Ojek" that bring serious implications to the drivers and the transportation industry. For example, there have

been no official numbers of Ojek drivers in Jakarta. Fares are negotiable between the customers and drivers. No driver registration is required, which leads to not providing helmets and safety for riders and customers (Palevsky, 2019).

### 1.2. Introduction of Gojek as the Leading Online Transportation Company in Indonesia

To overcome these problems related to transportation systems, Nadiem Makarim, the founder, CEO, and a graduate from Harvard Business School, established Gojek in 2010 as the first call center in Indonesia to improve the service of Indonesian motorcycle taxi, Ojek. CEO of Gojek also made an innovation in the form of an app that could be accessed on Android and iOS (Prananda, Yin-Fah, Li-Lim, and Poon, 2020). In 2015, Gojek started the mobile app, Gojek app that can order

pickup by motorcycles, food delivery, ticket bookings, and other services (Gojek, 2022a). As the leading platform, Gojek has been scaling up the business by operating in three Southeast Asian Countries such as Singapore, Vietnam, and Thailand and became the first unicorn start-up company in Indonesia. The app has been downloaded by more than 190 million users across three countries, with two million of driver partners and up to 900,000 merchant partners across SEA (Gojek, 2022a). According to the Gojek's official website (Gojek, 2022b), Gojek has more than twenty services that are divided into five main categories.

For the last 10 years Gojek has created impacts for its driver partners and created far-reaching social impact for the merchant partners. The most important part is that in 2019 Gojek contributed USD 7.1 billion to the Indonesian company and that the total production value created by Gojek's ecosystem is equivalent to 1% of Indonesia's GDP in 2019 (Wongkaren, Walandouw, Primaldhi, Wisana, and Nugroho, 2020). In addition, in 2021 Gojek decided to merge with the biggest marketplace in Indonesia, which is Tokopedia to form GoTo Group that consists of Gojek, GoTo Financial, and Tokopedia (Gojek, 2022a).

## 2. Literature Review

### 2.1. Research about Gojek

Prananda et al. (2020) conducted research about the business strategy, key success factors, and challenges of Gojek using secondary data, such as articles. It mentions that Gojek is using the market penetration strategy of the Ansoff Matrix and the differentiation strategy of the Porter Generic Strategies. The key success factors are consumer protection and prioritizing customers experience for customer satisfaction, which leads to customer

loyalty. Also, using the key ecosystem of Google, such as the Google cloud system, is one of the key success factors of Gojek. There are challenges in expanding the markets as there are competition and regulation in each market and country. Arviollisa, Chan, and Nirmalasari (2021) tested and measured the effect of AI on customer experience with four dimensions of AI based on the survey results of Gojek users, which shows that AI gives a significant effect on customer experience.

Wongkaren, Walandouw, and Primaldhi (2021) mention Gojek ecosystem's contribution to support the national economic recovery during the 2020–2021 pandemic. Gojek ecosystem has accelerated the financial inclusion for GoTo Financial consumers and micro, small, and medium enterprises (MSME) merchants under the pandemic era. Through cashless payments and digital investments, GoTo Financial promotes the financial inclusion of consumers and MSMEs that do not have bank accounts or credit cards. It improves the quality of life and optimism of Indonesian MSMEs.

Prawita and Toyama (2021) made research with secondary data about Gojek's growth strategy and the business model from the viewpoints of the leapfrog strategy, platform strategy, and M&A strategy. Gojek enhanced the convenience of customers and increased the number of customers by offering multiple services, such as the electric payment service, on top of the ride-sharing service through the proliferation of the internet and the mobile phone in Indonesia. It has the first-mover advantage to offer the ride-sharing service platform to build an ecosystem, which led to the network effect of the platform. M&A were strategically done to get new technologies and engineers to keep efficiently improving services and the ecosystem.

Sakaibara (2019) made a research report about an app of Gojek as one to change the society.

Gojek aims not only to offer ride-sharing service but also to offer a super app platform providing multiple services. It has an ability to solve the social issue, such as, low income of drivers, insecurity of service, and inconvenience of motorcycle taxi. In addition, it contributes to the financial inclusion of people who did not have access to the traditional financial service by scaling up of the electric payment service in the app. Gojek has a strength of know-how of big IT companies, the cloud service technology of Google, the electric payment service of Tencent, the e-commerce service of JD.com, the financial service of VISA, and so.

Takei and Kitano (2020) focus the financial service offered through a super app by Gojek and Grab, a Singaporean ride-sharing company, as the companies which were originally not financial institutes. Those companies started as the ride-sharing companies and expanded their services to financial services, such as, the loan service, the insurance service, and the investment service in addition to the electric payment service. They contribute to Southeast Asian society as the supplemental finance by giving access to the financial services to the individuals and the small medium enterprises that did not have enough access.

## 2.2. Research about Ride-sharing Service

Yamashita, Nakanishi, and Asakura (2020) did an empirical analysis on the long-distance peer-to-peer ride-sharing service in Japan using the data provided by the Japanese ride-sharing service Notteco. It says that important factors for successful match making are the departure time and day, the days to depart from registration date, the page views, and the driver's past experience. Ota (2019) made research about the situation of ride-sharing in the world and application in Japan. It

mentions the related regulation of each country and the factors to diffuse the use of ride-sharing globally, which are accuracy of matching between demand and supply, high convenience, and the peer review system. Because of the regulation and unclearness of responsibility from the viewpoint of labor management, the Japanese taxi industry is encouraged to use convenient ride-hailing services as a supplementary means.

## 2.3. Research about Super Apps

Mizuho Information & Research Institute (2021) made research about the rapid development of the digital technology in emerging countries and area, such as, China, Indonesia, Singapore, Africa, and South America. There are leapfrog-type developments by super apps partly because of social issues that there was lack of infrastructures of the bank, transportation, and medical, and partly because of the environment of services' low prices due to the proliferation of the mobile phone. Ishigami and Ryu (2020) investigated the possibility of the build-up of super apps in Japan. It shows that the success factors of super apps in some Asian countries are getting of the large number of users by ride-sharing service and SNS service, and the implementation of the electronic payment service and multiple services by one app smoothly, which leads to a virtuous cycle to establish the big data platform and to keep improving the qualities of services. As an issue for mobile apps services in Japan, they pointed out that there is no app that can complete most of life activities with one application, a supper app, and the need for the service provider of the super app to do services nationwide. In addition, although telecommunications operators and transportation companies have a large customer base and have the potential to develop super apps, they were originally a regu-

lated industry. It was difficult to have the perspective of building a platform that can analyze the company's entire service from the customer's point of view to make mobile apps services, which was mentioned as an issue as well by Ishigami and Ryu (2020).

### 3. Objectives and Methods

The main objectives of this research are to identify Gojek's success factors in Indonesia, to see what kinds of mobile apps are served by Japanese companies to give services similar to Gojek, and to consider the opportunities and challenges of the possible application of Gojek's strategy in Japan. According to Digital Riser Report 2021 (European Center for Digital Competitiveness, 2021), Indonesia has steadily improved its digital competitiveness rank in recent years (+48 rank), while Japan has dropped significantly in its ranking (-190 rank). This report looks at which digital riser countries, having increased their digital competitiveness, have been more successful and elevated relative to others, which countries are lagging behind, and what can be learned from the best practices of leading countries. Although Indonesia is an economically developing country, considering whether there is anything that Japanese companies, whose rank is dropping, can learn from the case of a representative successful IT company in Indonesia, whose digital competitiveness rank is higher than that of Japan is very meaningful. Therefore, we here analyze its applicability to Japan.

To achieve these objectives mentioned above, we implemented PEST analysis, VRIO analysis, and comparative analysis using secondary data, such as information from web sites and press releases of companies, institutions, governments or so. Also, we used App Stores of Apple to search the popular mobile apps for iPhone in Japan by the

number of users' reviews. We analyze from the Japanese companies' perspective that provide mobile apps for them to become more successful by applying even a part of a successful case overseas.

## 4. Results

### 4.1. Gojek's Success Factors

Gojek, starting with the ride-sharing service, through the electric payment service, provides a wide range of services with one mobile app of one corporate group seamlessly, which therefore leads to a lot of customers in Indonesia.

In considering whether or not Gojek's strategy can be applied in Japan, we first raise Gojek's success factors from previous research and secondary data. In order to be successful, Gojek has combined its strategies to capitalize on the surrounding market environment and opportunities, as well as enhance its own advantage. Therefore, we conducted PEST analysis on the macro environment surrounding Gojek and VRIO analysis to see Gojek's advantage (Table1).

Table 1. PEST and VRIO analysis

PEST & VRIO	External/ Internal	Contents
Politics	External	No regulation prohibiting ride-sharing services
Economy, Society	External	Poor transportation infrastructure, Poor Ojek service
Economy, Society	External	Many people without access to traditional finance
Technology	External	Stage of the spread of the Internet and mobile phones
Technology	External	Development of Google cloud and map platform and API
Value	Internal	Seamless service within the same app
Value	Internal	Constantly analyzed the users' needs and pursued their convenience
Rareness	Internal	Applied sharing economy early
Imitability	Internal	-
Organization	Internal	Grew with a lot of M&A

Source: Gojek (2022a), Google Cloud (2022), Mergr (2022), Mizuho Information & Research Institute (2021), Prananda et al. (2020)

We show success factors by using the part of the results of PEST and VRIO analysis above.

First, there was no regulation that hindered the growth of ride-sharing services, such as the Road Transportation Act in Japan.

Then, there were issues with the transportation infrastructure also as an external environment. As mentioned above, public transportation was not sufficiently developed, and Ojek, which is a complementary means of transportation, had problems such as inconvenience when finding it and opacity of price, which was a great opportunity to enter the market.

Third, as an external environment, there were a lot of people in Indonesia who did not have access to traditional finance, and there was room for the electric payments to spread.

Furthermore, as the external environment, the Internet and mobile phones were not yet widely used, and there was a space for the spread of mobile phones in Indonesia then. At the time when Gojek started providing services with the mobile app, the rapid spread of mobile phones caused the leapfrogging, which enabled rapid acquisition of users to build up a business ecosystem.

It also enclosed the users who they acquired through ride-sharing service by having them make payments within the same app.

Moreover, Gojek constantly analyzed the users' needs and convenience, and continued to pursue the solutions and the good customer experience.

Lastly, Gojek used the sharing economy to match the needs and to solve the issues of stakeholders, customers, and drivers.

Gojek grew with a lot of M&A, which has an advantage to get resources quickly and a disadvantage with difficulty of management of different merged companies. Also, though Gojek got benefits

to use Google platform and API, others also were able to do.

Then, we see what kinds of mobile apps are served by Japanese companies to give services similar to Gojek serves, especially the transportation service, the food delivery service, and the electric payment service.

#### 4.2. Transportation Service

We first need to think about what kinds of transportation services can be offered from the legal perspective when considering the chance and the challenge in Japan. Ride-sharing mainly means the service that the individual drivers pick up and bring a customer to the destination by their own car. The service by privately-owned automobiles to provide transportation for a fee, a ride-sharing service, is basically prohibited as illegal taxi activities in Japan by the article 4, paragraph 1 of the Road Transportation Act. Companies cannot offer the ride-sharing service but can offer the ride-hailing service.

We picked up by the keyword “taxi” the top 4 taxi-hailing apps for the iPhone in Japan which have more than 1,000 reviews to the apps as of September 29, 2022 (Table 2).

GO by Mobility Technologies is the number-one taxi-hailing app with 36 prefectures available in Japan. Japan Taxi, a subsidiary of Nihon Kotsu, integrated Japan Kotsu HD and DeNA's business related to taxi-hailing apps (“MOV” operated by DeNA and taxi app “Japan Taxi”) in April 2020. The largest shareholders after the integration of Mobility Technologies are Nihon Kotsu and DeNA. NTT docomo and KDDI, Japanese telecommunications operators, are also the investors of the company. Though it serves their own electric payment service, GO Pay, in the app on top of the other payment methods, the users

need to register their credit cards beforehand.

DiDi Mobility Japan started offering a taxi-hailing app, DiDi Rider, in Osaka in September 2018 with 12 taxi operators. SoftBank, Japanese telecommunications operator, established a joint venture with Chinese ride-sharing giant DiDi Chuxing. The know-how of DiDi, which is used by more than 500 million people in China and other parts of the world, is utilized in the Japanese taxi industry in 15 prefectures. DiDi Food Japan, a subsidiary of the ride-sharing app DiDi, started a food delivery service in Japan in 2020. However, because the competition with Uber Eats Japan and Demae-can were fierce, it ended its food delivery service in Japan in May 2022.

Minnano Taxi, which was funded by Sony and taxi companies, Green Cab, Kokusai Motors, Kotobuki Kotsu, Daiwa Motor Transportation, and Checker Cab, started a taxi-hailing app S. RIDE in April 2019. Minnano Taxi changed its name to S. RIDE in January 2021. It gives the taxi-hailing service in 8 prefectures utilizing Sony's AI technology. Though it also serves their own electric payment service, S.RIDE WALLET, in addition to the other payment methods, the users need to register their credit cards or other payment service data beforehand.

In August 2014, Uber Japan, the Japanese subsidiary of Uber Technology in the United States, launched a service that hailed taxis using a mobile app. It gives the service in 13 prefectures with their payment system, Uber Cash, which can be used by the charge from the credit cards for both a taxi-hailing service and a food delivery service, Uber Eats.

In addition to the top 4 taxi-hailing apps, we hereby introduce an interesting ride-sharing service in Japan, Notteco. As we explained above, the Road Transportation Act prohibits the service

by privately-owned automobiles to provide transportation for a fee, a ride-sharing service, except for specified situations and uses. As one type of ride-sharing, there is carpooling. Carpooling is an activity in which multiple people who go to the same direction ride together in a single private car driven by an individual and split the actual cost of transportation among themselves. Carpooling is not prohibited. Notteco sets the fee for carpooling within the actual cost and gives the ride-sharing service by its web service not a mobile app.

#### 4.3. Food Delivery Service

We picked up by the keyword “delivery” the top 2 food delivery apps for the iPhone in Japan as of September 30, 2022 (Table 3). In September 2016, Uber Technologies, a major U.S. ride-sharing company, launched Uber Eats, a food delivery service for restaurants in Japan. By the app Uber Eats matches restaurants and the individual who registers as a delivery person using a motorcycle or a bicycle. It can be used in more than 150,000 stores in 21 prefectures.

In October 2000, Yumenomachi Sozoiinkai opened a food delivery web site, Demae-can, and in December 2010 launched a mobile app for a food delivery. In November 2019, the company name was changed to Demae-can. The app can be used in more than 95,000 stores in 47 prefectures. The shareholders are LINE, Mirai Fund LLP, and Z Holdings, a family company of SoftBank.

Due to the intense competition to acquire users and delivery people, Foodpanda and DiDi Food stopped their service in Japan in January 2022 and in May 2022 respectively.

#### 4.4. Electric Payment Service

We picked up by the keyword “pay” the top 5 payment apps for the iPhone in Japan as of

Table 2. Transportation Service

App	No. of reviews	Company	Main investors, Main partners	Preference	Payment	Other services	Source
GO	370K	Mobility Technologies (MoT)	Nihon Kotsu HD, DeNA, Toyota, NTT docomo, KDDI, Aioi Nissay Dowa Insurance, Tokyo Century, Dentsu Group	36	GO Pay, Other companies' electric payment services, Credit cards	GO Business, GO Dine, DRIVE CHART, Tokyo Prime	<a href="https://japantaxi.co.jp/news/pr/2020/02/04/0127">https://japantaxi.co.jp/news/pr/2020/02/04/0127</a> <a href="https://go.mo-t.com/">https://go.mo-t.com/</a> <a href="https://didimobility.co.jp/info/20180927188/">https://didimobility.co.jp/info/20180927188/</a> <a href="https://www.nikkei.com/news/print-article?R_FLG=0&amp;bl=0&amp;ng=DGXMZ033151710210C18A7X13000">https://www.nikkei.com/news/print-article?R_FLG=0&amp;bl=0&amp;ng=DGXMZ033151710210C18A7X13000</a> <a href="https://www.sride.jp/">https://www.sride.jp/</a> <a href="https://www.nikkei.com/article/DGKKZO43746760V10C19A4TJ1000/">https://www.nikkei.com/article/DGKKZO43746760V10C19A4TJ1000/</a> <a href="https://www.uber.com/global/ja/cities/">https://www.uber.com/global/ja/cities/</a> <a href="https://www.uber.com/jp/a/ri/de/">https://www.uber.com/jp/a/ri/de/</a> <a href="https://tech.nikkei.com/tv/pc/article/news/20140806/1139123/">https://tech.nikkei.com/tv/pc/article/news/20140806/1139123/</a> <a href="https://mohteco.jp/">https://mohteco.jp/</a> <a href="https://www.adish.co.jp/news/20220210_adsp/">https://www.adish.co.jp/news/20220210_adsp/</a> <a href="https://www.nikkei.com/article/DGKKZO17791330W7A610C1TJE000/">https://www.nikkei.com/article/DGKKZO17791330W7A610C1TJE000/</a>
DiDi Rider	103K	DiDi Mobility Japan	SoftBank, DiDi Mobility	15	Other companies' electric payment services, Credit cards	(Stopped: DiDi Food Japan)	<a href="https://www.nikkei.com/news/print-article?R_FLG=0&amp;bl=0&amp;ng=DGXMZ033151710210C18A7X13000">https://www.nikkei.com/news/print-article?R_FLG=0&amp;bl=0&amp;ng=DGXMZ033151710210C18A7X13000</a>
S.RIDE	9.3K	S.RIDE	Green Cab, Kokusai Motors, Kotobuki Kotsu, Daiwa Motor Transportation, Checker Cab, Sony, Sony Payment Service	8	S.RIDE WALLET, Other companies' electric payment services, Credit cards, CAB Card	Food Delivery Taxi, THE TOKYO TAXI VISION GROWTH, Canvas, Connection with SAP Concur Expense and MoneyForward	<a href="https://www.sride.jp/">https://www.sride.jp/</a> <a href="https://www.nikkei.com/article/DGKKZO43746760V10C19A4TJ1000/">https://www.nikkei.com/article/DGKKZO43746760V10C19A4TJ1000/</a> <a href="https://www.uber.com/global/ja/cities/">https://www.uber.com/global/ja/cities/</a> <a href="https://www.uber.com/jp/a/ri/de/">https://www.uber.com/jp/a/ri/de/</a> <a href="https://tech.nikkei.com/tv/pc/article/news/20140806/1139123/">https://tech.nikkei.com/tv/pc/article/news/20140806/1139123/</a> <a href="https://mohteco.jp/">https://mohteco.jp/</a> <a href="https://www.adish.co.jp/news/20220210_adsp/">https://www.adish.co.jp/news/20220210_adsp/</a> <a href="https://www.nikkei.com/article/DGKKZO17791330W7A610C1TJE000/">https://www.nikkei.com/article/DGKKZO17791330W7A610C1TJE000/</a>
Uber	5.7K	Uber Japan	Uber Technologies	13	Uber cash, Other companies' electric payment services, Credit cards	Uber Premium, Uber Eats, Uber for Business, Connection with SAP Concur Expense, Expensify, and Zoho Expense	<a href="https://tech.nikkei.com/tv/pc/article/news/20140806/1139123/">https://tech.nikkei.com/tv/pc/article/news/20140806/1139123/</a> <a href="https://mohteco.jp/">https://mohteco.jp/</a> <a href="https://www.adish.co.jp/news/20220210_adsp/">https://www.adish.co.jp/news/20220210_adsp/</a> <a href="https://www.nikkei.com/article/DGKKZO17791330W7A610C1TJE000/">https://www.nikkei.com/article/DGKKZO17791330W7A610C1TJE000/</a>
Notteco	Web service	adishplus	adish	All	Cash only	N/A	<a href="https://www.nikkei.com/article/DGXLASDZ28Z8ZE_Y6A920C1T1E000/">https://www.nikkei.com/article/DGXLASDZ28Z8ZE_Y6A920C1T1E000/</a> <a href="https://www.uber.com/ja-JP/newsroom/uber-eats-150k/">https://www.uber.com/ja-JP/newsroom/uber-eats-150k/</a> <a href="https://www.ubereats.co.jp/">https://www.ubereats.co.jp/</a>

Table 3. Food Delivery Service

App	No. of reviews	Company	Main investors, Main partners	Preference	Payment	Other services	Source
Uber Eats	1.1M	Uber Japan	Uber Technologies	21	Uber cash, Other companies' electric payment services, Credit cards	See Table 3.	<a href="https://www.nikkei.com/article/DGXLASDZ28Z8ZE_Y6A920C1T1E000/">https://www.nikkei.com/article/DGXLASDZ28Z8ZE_Y6A920C1T1E000/</a> <a href="https://www.uber.com/ja-JP/newsroom/uber-eats-150k/">https://www.uber.com/ja-JP/newsroom/uber-eats-150k/</a> <a href="https://www.ubereats.co.jp/">https://www.ubereats.co.jp/</a>

Table 4. Electric Payment Service

App	No. of reviews	Company	Main investors, Main partners	No. of user	Stores	Other services	Source
PayPay	1.2M	PayPay	SoftBank Group, Yahoo, SoftBank	More than 50M	More than 3.74M	PayPay Atobarai, PayPay Bank, PayPay Shisan-nyo, PayPay Point-nyo, PayPay Hoken	<a href="https://www.nikkei.com/article/DGXLRSF49252_V01C18A000000/">https://www.nikkei.com/article/DGXLRSF49252_V01C18A000000/</a> <a href="https://paypay.ne.jp/">https://paypay.ne.jp/</a> <a href="https://corp.rakuten.co.jp/news/press/2016/1027_01.html">https://corp.rakuten.co.jp/news/press/2016/1027_01.html</a> <a href="https://pay.rakuten.co.jp/">https://pay.rakuten.co.jp/</a> <a href="https://pay.line.me/portal/jp/main">https://pay.line.me/portal/jp/main</a> <a href="https://www.nikkei.com/article/DGXZQ0DZ016L50R00C21A300000/">https://www.nikkei.com/article/DGXZQ0DZ016L50R00C21A300000/</a> <a href="https://tech.nikkei.com/it/atc/news/16/092802818/">https://tech.nikkei.com/it/atc/news/16/092802818/</a> <a href="https://www.z-holdings.co.jp/pr/press-release/2021/0301b/">https://www.z-holdings.co.jp/pr/press-release/2021/0301b/</a> <a href="https://www.docomone.jp/info/news_release/2018/04/24_00.html">https://www.docomone.jp/info/news_release/2018/04/24_00.html</a> <a href="https://services.smt.docomo.ne.jp/keiai_payment/">https://services.smt.docomo.ne.jp/keiai_payment/</a> <a href="https://aupay.wallet.aun.es.jp">https://aupay.wallet.aun.es.jp</a> <a href="https://www.kddi.com/corporate/ir/stock-rating/stock/">https://www.kddi.com/corporate/ir/stock-rating/stock/</a> <a href="https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/">https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/</a>
Rakuten Pay	269K	Rakuten Payment	Rakuten Group, Rakuten Bank	Undisclosed	Undisclosed	Cashing/Atokarabunkatsubarai, Rakuten Ichiba	<a href="https://www.nikkei.com/article/DGXZQ0DZ016L50R00C21A300000/">https://www.nikkei.com/article/DGXZQ0DZ016L50R00C21A300000/</a> <a href="https://tech.nikkei.com/it/atc/news/16/092802818/">https://tech.nikkei.com/it/atc/news/16/092802818/</a> <a href="https://www.z-holdings.co.jp/pr/press-release/2021/0301b/">https://www.z-holdings.co.jp/pr/press-release/2021/0301b/</a> <a href="https://www.docomone.jp/info/news_release/2018/04/24_00.html">https://www.docomone.jp/info/news_release/2018/04/24_00.html</a> <a href="https://services.smt.docomo.ne.jp/keiai_payment/">https://services.smt.docomo.ne.jp/keiai_payment/</a> <a href="https://aupay.wallet.aun.es.jp">https://aupay.wallet.aun.es.jp</a> <a href="https://www.kddi.com/corporate/ir/stock-rating/stock/">https://www.kddi.com/corporate/ir/stock-rating/stock/</a> <a href="https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/">https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/</a>
LINE Pay	54K	LINE Pay	LINE	40M	4M	LINE Pay Soukin, LINE Pay Kouteki Kojin Nisyo Service, LINE Pay Gaika Ryogae	<a href="https://www.nikkei.com/article/DGXZQ0DZ016L50R00C21A300000/">https://www.nikkei.com/article/DGXZQ0DZ016L50R00C21A300000/</a> <a href="https://tech.nikkei.com/it/atc/news/16/092802818/">https://tech.nikkei.com/it/atc/news/16/092802818/</a> <a href="https://www.z-holdings.co.jp/pr/press-release/2021/0301b/">https://www.z-holdings.co.jp/pr/press-release/2021/0301b/</a> <a href="https://www.docomone.jp/info/news_release/2018/04/24_00.html">https://www.docomone.jp/info/news_release/2018/04/24_00.html</a> <a href="https://services.smt.docomo.ne.jp/keiai_payment/">https://services.smt.docomo.ne.jp/keiai_payment/</a> <a href="https://aupay.wallet.aun.es.jp">https://aupay.wallet.aun.es.jp</a> <a href="https://www.kddi.com/corporate/ir/stock-rating/stock/">https://www.kddi.com/corporate/ir/stock-rating/stock/</a> <a href="https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/">https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/</a>
d-barai	327K	NTT Docomo	NTT	More than 43.7M	4.1M	d-barai Soukin, Mobile Order, Seikyusyo-barai	<a href="https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/">https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/</a> <a href="https://tech.nikkei.com/it/atc/news/16/092802818/">https://tech.nikkei.com/it/atc/news/16/092802818/</a> <a href="https://www.z-holdings.co.jp/pr/press-release/2021/0301b/">https://www.z-holdings.co.jp/pr/press-release/2021/0301b/</a> <a href="https://www.docomone.jp/info/news_release/2018/04/24_00.html">https://www.docomone.jp/info/news_release/2018/04/24_00.html</a> <a href="https://services.smt.docomo.ne.jp/keiai_payment/">https://services.smt.docomo.ne.jp/keiai_payment/</a> <a href="https://aupay.wallet.aun.es.jp">https://aupay.wallet.aun.es.jp</a> <a href="https://www.kddi.com/corporate/ir/stock-rating/stock/">https://www.kddi.com/corporate/ir/stock-rating/stock/</a> <a href="https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/">https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/</a>
au PAY	1.1M	KDDI	The Master Trust Bank of Japan, Kyocera, Toyota	About 27.5M	More than 4.5M	au PAY Seikyusyo-barai, Soukin, au PAY market. menu	<a href="https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/">https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/</a> <a href="https://tech.nikkei.com/it/atc/news/16/092802818/">https://tech.nikkei.com/it/atc/news/16/092802818/</a> <a href="https://www.z-holdings.co.jp/pr/press-release/2021/0301b/">https://www.z-holdings.co.jp/pr/press-release/2021/0301b/</a> <a href="https://www.docomone.jp/info/news_release/2018/04/24_00.html">https://www.docomone.jp/info/news_release/2018/04/24_00.html</a> <a href="https://services.smt.docomo.ne.jp/keiai_payment/">https://services.smt.docomo.ne.jp/keiai_payment/</a> <a href="https://aupay.wallet.aun.es.jp">https://aupay.wallet.aun.es.jp</a> <a href="https://www.kddi.com/corporate/ir/stock-rating/stock/">https://www.kddi.com/corporate/ir/stock-rating/stock/</a> <a href="https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/">https://www.nikkei.com/article/DGXLRSF506871_U9400C100000/</a>

October 7, 2022 (Table 4).

In October 2018, PayPay, a joint venture between SoftBank and Yahoo Japan, launched PayPay, a mobile payment service using barcodes and QR codes at physical stores. PayPay can choose between two types of payment, payment with electronic money charged from a bank account or a credit card in advance and payment with a credit card. It has more than 50 million users and can be used at more than 3.7 million stores.

Rakuten started, Rakuten Pay, a mobile payment service using barcodes and QR codes for stores in October 2016. With Rakuten Pay, users can use two types of payment, payment by electronic money, Rakuten Cash, charged from a bank account or a credit card in advance, and payment by a credit card.

In December 2014, LINE started accepting applications for affiliated stores of the mobile remittance and payment service, LINE Pay, on the free call and free email mobile app LINE. In March 2021, Z Holdings and LINE finished their business integration and in July 2022 the QR code was unified between LINE Pay and PayPay. From August 2021, LINE Pay can be used at PayPay affiliated stores. It has 40 million users and can be used at 4 million stores.

NTT docomo launched a mobile payment service, d-barai, which allows users to pay for purchases made at physical stores using barcodes and QR codes displayed on their mobiles in April 2018. There are credit card payment, payment by electronic money, d Point, charged from a bank account or a credit card in advance, and the telephone bill total payment that are paid together with the monthly mobile phone bill. More than 43.7 million users are able to use the app at 4.1 million stores.

In April 2019, au PAY, a mobile payment service using barcodes and QR codes within the au WALLET app was introduced by KDDI. Customers can use the app by credit card payment, payment by electronic money, au Pay, charged from a bank account or a credit card in advance, and the telephone bill total payment that are paid together with the monthly mobile phone bill. There are about 27.5 million users, who can use the app at more than 4.5 million stores.

There is an important factor to think how we can penetrate the market by the electric payment app, which is the penetration rate of people with an account at a formal financial institution in the market. We can see that the rates of Japan are 96% in 2011 and 98% in 2022, while Indonesian's are 20% and 52% respectively (Demirgüç-Kunt and Klapper, 2012, Demirgüç-Kunt, Klapper, Singer, and Ansar, 2022). It means that there are still a lot of target users to access the new financial service in Indonesia. However, companies in Japan need to compete the existing financial services to get new customers.

## 5. Discussion

Table 5 shows the Japanese mobile apps corresponding to each Gojek mobile app to compare them, and Table 6 shows the Japanese company groups corresponding to each Gojek mobile app to compare them.

Table 5. Japanese Mobile Apps

Category	Gojek App	Japanese Mobile Apps
Transportation	goride	-
	gocar	Notteco (only Android)
	gobluebird	GO, DiDi Rider, S. RIDE, Uber
Delivery & Shopping	gofood	Uber Eats, Demae-can
	gomart,	Rakuten Ichiba, Amazon, Yahoo!
	goshop	Shopping/PayPay Mall
Logistics & Move	gosend	Kuronekoyamato, Japan Post, Seino Transportation
	gobox	-
Payment	gopay	PayPay/Line Pay, Rakuten Pay, d-barai, au PAY



Table 6. Japanese Company Groups

Gojek App	NTT docomo	KDDI	SoftBank	Rakuten	Other Giants
goride	-	-	-	-	-
gocar	-	-	-	-	-
gobluebird	○	○	○		Uber, Sony, Toyota
gofood			○		Uber
gomart, goshop			○	○	Amazon
gosend					Yamato, JP, Sagawa
gobox					
gopay	○	○	○	○	-

As a result of comparing, while Gojek provides multiple services for customers' everyday activities by one mobile app seamlessly as a single corporate group, there is no single corporate group in Japan that provides the same range of services by "mobile apps," indicating that their competition is fierce.

Based on the analysis of chapter 4 and the comparison results in this chapter, how much can Gojek's success factors be utilized in Japan? As the legal system, society, and culture are different, it is difficult to apply all of Gojek's strategies directly to Japan as they are. Then, out of the factors we would like to sort out the things that Japanese companies can apply in the short term, the things that will become more applicable through long-term consideration and measures under certain conditions, and the need to pay more general attention.

First, we show the things below that Japanese companies are able to apply in the short term by picking up internal factors, which in addition are not influenced by Japanese unique environment: (a) Continuous improvement of the service quality considering the customers' needs, convenience, and experience, (b) Seamless operation by one ID through one mobile app, (c) Establishment of a platform as a business ecosystem including customers' everyday activities.

Grant (2010) says that external environments have the volatility and unpredictability and that "Strategic Fit," strategic consistency with the company's external environment and with its internal environment is important as long-term planning. A company alone cannot control the volatility of the future external environment nor predict that. A company needs to think about what kinds of measures under what kinds of condition should be taken. Then, we explain the things below that will become more applicable through long-term consideration and measures under certain conditions, which are (a) The regulation prohibiting the ride-sharing in a short time, (b) The speed of diffusion of mobile phone, (c) The penetration rate of people with an account at a formal financial institution diffusion rate of financial services.

As for (a), since regulation is determined by the government, it is difficult for a single company to control it in the short term. However, it would be possible to influence through long-term lobbying for the regulation to be aligned with your company's strategy. For example, Japan Association of Corporate Executives and Japan Association of New Economy have asked to enact a bill for the ride-sharing (Japan Association of Corporate Executives, 2020, Japan Association of New Economy, 2020).

Related to (b) and (c), the latest penetration rate of people with an account at a formal financial institution in Japan is as high as 98% in 2021 (Demirgüç-Kunt, Klapper, Singer, and Ansar, 2022), and 96.1% of households in Japan owned mobile devices in 2019 (Ministry of Internal Affairs and Communications, 2019). Though all of the account holders and devices holders would not necessarily use the account and the devices, it could show the possibility that high percent of users have already accessed the service, which means the rapid spread

of services through the current technology is not so easy. According to Ministry of Internal Affairs and Communications (2022), the global metaverse market size is about 4 trillion yen in 2021, and it is expected to expand to about 79 trillion yen by 2030. Also, there is the prospect and the different condition that a new digital economic zone will be built on a decentralized network based on blockchain, which is called web 3.0. What we can learn from the Gojek's success is to provide services to the people who still do not access to the service by new technology, which causes the leapfrogging leading to the rapid acquisition of users to build up a business ecosystem. Therefore, Japanese companies could focus on the new services by new technology such as web 3.0, not only to cling to the current service by the current technology.

Lastly, we add the need to pay more general attention when applying the part of Gojek's strategy. Gojek has created monopoly in multiple markets and has its synergies and economies of scale, while Japanese leading companies create oligopoly in markets. In order to survive the fierce competition, they must be more aware of the needs of customers, which tends to make more innovation. From the company's perspective, monopolizing the market is a great economic advantage. However, from the customer's perspective, the more the monopoly progresses, the more likely it is that healthy competition will be suppressed, and that the improvement and innovation of services decrease. This trend is more pronounced than when there was no IT platform as Prime Minister of Japan and His Cabinet (2020) mentions this issue, digital dominance, by the market monopoly and more oligopoly by a mega platform. Therefore, it is important for the companies to put the first priority on continuous consideration of the customers' needs, convenience, and experience while expanding by using IT

platform.

It is difficult to apply all of Gojek's strategies directly to Japan as they are. However, Japanese companies can get tips on what to do from this research. We analyzed the success factors in the strategy and categorized and sorted out the parts that can be introduced in the short term and the long term in Japan where the legal system, society, and culture are different, which we believe is the theoretical and practical contribution of this research.

There are limits to this study. Secondary data from academic journals, studies, and publications about Gojek and others are used in this research. Further research could be conducted to collect additional information and to show additional views.

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