DOMINATION OF TRANSPORTATION NETWORK COMPANIES (TNCs) IN INDONESIA: AN INDONESIAN CASE

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ABSTRACT

The online-based transportation companies are firms that connect prospective passengers with drivers via the smartphones' applications. The online-based transportations have emerged as the basic necessity in much of the daily life of people. Since the first emergence of the online-based transportations, those firms have provided much assistance to the society in the metropolitan areas to do their routine activities. Today, in Indonesia there are a few of online-based transportation companies, such as; Uber, Go-Jek and Grab. Though the online-based transportation companies with their innovativeness have altered the playing field of the transportation industry, problems remain noticeable, especially from the perspective of competition with the taxi companies, and the legal issues in various countries. This is due to the disruptive innovation of the online-based transportation companies, which have obviously shattered the prevailing regulations on public transportation. In Indonesia, taxi drivers have performed demonstration and public rallies to push the government to quickly revise the regulations on public transportation. The implementation of the surge pricing of the online-based transportation companies have proven to allow drivers' estimates on passenger demands. The same is true for potential passengers. They can decide as to when they would place orders. This paper seeks to qualitatively elaborate how the online-based transportation companies have grown and become the competing choice of Indonesian residents, by pushing aside the long-domination of taxi companies. This paper also tries to elaborate on how has the online-based transportation companies responded to changes in government regulations. Highlights are also obtained from the American-based online transportation companies, which may be used as considerations for the online-based transportation companies in Indonesia.

Keywords: transportation network companies, ride-sharing, Go-Jek, Uber, Grab, Indonesia, surge pricing, legal status, taxi, information and communication technology

Introduction

The field of transportation is very much exciting to be investigated. Not only due to its intricacy with the rules and regulations of the government, but also concerning the balance of supply and demand between potential passengers and drivers. With the emergence of technology, the use of smartphones becomes an integral part of daily activities. The term "ridesharing", for instance, has definitely surfaced due to the presence of technology, whereby no advance notice is required, but a mere on-time supply and demand between drivers and passengers (Sun & Edara, 2015). Also, the terms "transportation network companies", or TNCs, have certainly appeared to refer to ridesharing companies, or ride-hailing services, for those firms that provide prearranged online transportation services to bridge between drivers, who are using their personal vehicles with passengers (Azevedo & Maciejewski, 2015). Given this circumstances, social and economic importance of TNCs (Azevedo & Maciejewski, 2015) are as follows;

a. Searching costs and time reduction for potential passengers since TNCs are not usually waiting and/or lining-up on the streets, people do not have to face uncertainties for the next available taxis (Organisation for Economic Co-Operation and Development, 2015).

b. TNCs offer better quality than the regular taxi drivers. This is mainly due to the fact that drivers are directly evaluated by passengers, who were just riding with them. Ratings for the drivers will automatically drop if evaluations from passengers are relatively negative.

c. TNCs offer better prices on each of the rides. The estimated prices are transparently informed prior to each journey. Greater transparency is definitely what TNCs have successfully displayed when the regular taxi companies may have failed to do so for years (Golovin, 2014).

d. TNCs incorporate information and communications technology services in the operationalization of the vehicles to control assets (Martin & Shaheen, 2011), and explore human resource talents (Hall & Krueger, 2015).

In Indonesia alone, TNCs have already captured the transportation market since about 3 years. There are several TNCs in Indonesia, which have already been operated, such as Go-Jek, Uber and Grab. All of them have already become customer-favorite choice in helping their daily routine, especially before and after office hour to avoid congested streets, mainly in the cities and their suburban areas.

This paper intends to investigate how the TNCs business model has been built by reviewing some literature on ridesharing topic, and how TNCs establish their domination in Indonesia. This paper seeks to provide some TNCs business issues in Indonesia, which may be different from TNCs in other countries, such as USA, where the TNC business model was firstly introduced.

TNC VS TAXI

TNCs have certainly gained popularity around the world, including in Indonesia. TNCs, such as Uber, Grab and Go-Jek, have already become the commuter-favorite transportation options, besides taxis, trains, buses and other public transportation mode, which have been made available by the government of the Republic of Indonesia.

Nevertheless, the growing popularity of TNCs has been affecting other public transportation modes, especially taxis. TNCs existence has already been complained by taxi-industry stakeholders and many transportation regulators around the world. However, TNCs have always argued that they cannot be classified as the transportation businesses, so any transportation regulation should not applied to them. For example, Uber, a TNC company based in San Francisco USA, defines itself as the information-sharing-technology company, instead of a transportation company. Uber contends that many transportation regulations around the world must not be forcefully implemented to TNCs since most of transportation regulations do not accommodate the advancement of technology, which is the key value TNCs business. It is no wonder Uber often won the case in US courts since many loopholes in transportation regulation. US legislators commonly focus on background check and insurance issue for TNCs drivers. Indeed, taxi-industry is able to compete with TNCs in terms of customer privacy and safety policies, which Uber and TNCs are lacking of (Taschler, 2015).

How about TNCs in Indonesia? A massive demonstration in Jakarta, the Indonesia's capital, has relatively become out-of-control by the regular taxi drivers. A street protest on March 22, 2016 in Jakarta, as shown in the following figure, has become the important milestone of several demonstrations conducted by Indonesia's taxi companies to have the online-based transportation companies banned. Since then, the online-based transportation companies have been given the permission to keep operating while the Ministry of Transportation is trying to revise the prevailing regulations on how taxi companies, car rental services, and technological-based transportation companies can go together (Freischlad, 2016).

Figure 1: Protest by Taxi Drivers in Jakarta

Source: (BBC News, 2016)

DISRUPTIVE INNOVATION

Economic Development and Restructuration has already opened a business model that disrupts the other existing business model. This is called "Disruptive Innovation" (Isaac, 2014) with several influencing factors to grow the model exponentially, such as; (a) TNCs are classified as the technological-based companies instead of a mere transportation companies, (b) TNCs label their drivers as independent contractors or business partners rather than as employees, and (c) TNCs have already performed the business risk analysis. (Faisal, 2015)

During the arrival of the internet in the 1990s, Clayton Christensen, a Harvard Business School professor, stated that "disruptive innovation" is the kind of products and services that exploits technologies and new business models. These innovations disturb the market by generating new demands and new types of consumers. Eventually such innovations replace products and services from the traditionally-established companies (Christensen & Bower, 1995). Faisal (2015) stated that finding an accommodative way and regulating the disruptive innovation is an important agenda for the government of Indonesia. This is due to the fact that ignoring the presence of the so-called disruptive innovation may translate into potential problems in the future, such as a massive demonstration of the taxi-drivers. Indonesia's regulations are relatively inflexible to adjust for the emergence of disruptive technologies (Faisal, 2015). Unfortunately, disruption theory is in danger of becoming a victim of its own success (Christensen, Raynor, & McDonald, 2015) since the theory has been misinterpreted by people, who intentionally or unintentionally, incorrectly use the term "disruptive innovation" to support the objective. This situation is also worsened since researchers and consultants were inaccurately use "disruptive innovation" to describe a shaken industry whereby the previously successful companies lost the game (Christensen, Raynor, & McDonald, 2015). Looking from this angle, Go-Jek, Uber and Grab are clearly not the

mirroring the disruptive technologies. Those online-based transportation companies have not been in the business to create new markets. Instead, they can exist by studying the loopholes and trends in the society, where organizations provide online services. Uber and other TNCs are clearly transforming the taxi business all around the world (Faisal, 2015). Nevertheless, the question remains, have the TNCs disrupt the traditional taxi companies?

According to the disruptive theory (Isaac, 2014; Christensen & Bower, 1995; Faisal, 2015), the answer is no for the following reasons (Christensen, Raynor, & McDonald, 2015):

a. Disruptive innovations originate in low-end or new-market. Uber and Go-Jek were certainly did not fit into this condition. To safely claim that Uber, for instance, has found a low-end opportunity means that taxi companies may have over-predicted the needs of customers by making the total available taxis too many, too nice, too clean, or too comfortable, perhaps. From another perspective, Uber did not primarily target non-consumers of the taxi companies. To qualify as being disruptive, TNCs need to target the new market by actively engaging people who are currently relying on buses, subways, trains, and other means of public transportations, including people, who regularly drive themselves.

b. Disruptive innovations need to improve their standards first before catching up with mainstream customers. This simply means that the disruption processes are commonly delayed to allow customers to wait until a certain quality level is reached before those customers are willing to accept and adopt the new products and services, including accepting the lower prices offered. However, since the beginning, TNCs' services have not been seen and/or perceived as inferior products and services to the traditional taxi companies. Not only because of the competitive pricing, but also due to the adoption of technology, well-maintained cars, and security monitoring via an online applications.

Fortune magazine investigated 100 biggest companies from 1900. It concluded that Ford is the only company, which is still in the same business until now. Fifteen companies are still in existence in the market, but their activities have evolved drastically. The rest are out of the picture. Those that have disappeared were leaders in their markets and had three things in common with today's taxi drivers (Bouquet & Renault, 2014);

a. Prisoners of a system when the traditional taxi drivers were complaining about Uber's "illegal" activities due to the non-existence of meters. This is an example of the industry players, where they have become the prisoners of out-dated systems.

b. Stuck in denial with the facts that customers have to experience uncomfortable taxi rides, rude drivers, and lack of transparency, for instance. Those conditions have provided loopholes for the car-sharing services. It appears that taxi companies may have busy to entertainment the lawmakers, and ignored the market demands and solutions for customers.

c. Lack of innovation from the traditional taxi companies is translated as opportunity for changes by the online-based transportation companies. Instead of trying to formulate strategy in terms of competitive prices, convenience, transparency, accurate, and professionalism, the traditional taxi companies may have been simply continuing the business activities as usual. The only obvious "innovation" may have been only on the replacement of cars used.

Taxi companies are not alone. Many other businesses in various industrial sectors are too slow in adapting and adopting the challenges. The prominent historical facts may not able to guarantee the likelihood of outcomes in the future anymore.

TNCs BREAKTHROUGH

TNCs business model relies on the E-business platform. TNCs business model has been already known as the business model, which are funded by multiple investors. This means that TNCs may not be questioned from the legal status, in terms of funding issue, for example, due to its commonly well-established financial platform.

Flexible working hours may have been the major reason for people to register and become the TNCs drivers. Also, the higher potential income appears to be the second reason for people (Hall & Krueger, 2015). Surprisingly, complaints of swipe-card machine problems and drivers' behavioral issues have been significantly reduced since the emergence of TNCs in the market. This is proven that the level of service has been improved (Feeney, 2015). Several benefits of TNCs in Madrid, Spain are as follows (Shmueli, Mazeh, Radaelli, Pentland, & Altshuler, 2014): (a) ridesharing has the potential to reduce traffic congestions as well as assisting in reducing CO_2 emission and fuel consumption, (b) the increasing availability of portable technologies and constant connectivity make the dream of having smart cities clearer than before, (c) mobile technologies supports also successful applications provide traffic-awareness on city navigations, whose data are directly provided by the community, and (d) about 59% reduction on the actual use of mobile phones and social network data to show the traffic conditions in the city of Madrid when people are willing to share their commute ride.

Uber was in operation initially to simply connect app-users and the availability of luxury vehicles (Nguyen, 2014). With the intensive word of mouth (WOM) from Uber customers, and the referral codes, Uber was successful in its business expansion because Uber usually analyzed the cities or regions, where they are going to expand, by studying the availability of drivers, preferred places, or even weather forecast. Car-pooling, or better known as Uber Pool, has become the recent emphasis for Uber, as shown in the following diagram, which allows users to share rides and split the fares with other commuters in the same vehicle. One of the objectives of Uber Pool is certainly to help the local government in dealing with traffic congestions and reducing pollution (Waring, 2016).

Figure 2: Schemes on Uber Pool
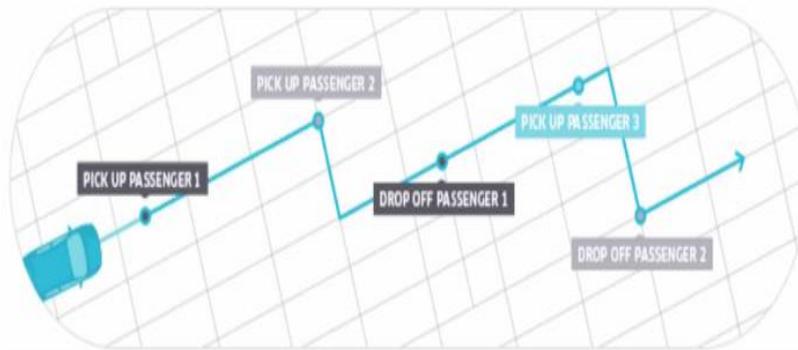
Source: (Swoboda, 2015)

However, the underlying hurdle for car-pooling is no other than matching requests for a car heading into the same direction or close proximity. This has prevented Uber Pool from immediately booming in the countries. Studies performed by Uber in San Francisco found that in order to find someone to go to the same direction at approximately the same time, an average of 6,000 people need to be inquired (Waring, 2016). Of course, this becomes relatively time-consuming and expensive to do. This becomes the issue and the main reason why has the car-pooling scheme may not work well there. In May 2014, Uber launched car-pooling scheme in Jakarta, Indonesia. This allows commuters to share journeys. Though the car-pooling adds travel time, Uber attempted to lure residents in Jakarta to potentially share fares at about 25% cheaper (Strait Times, 2016).

In the US, Uber has established partnerships with companies to expand its business network. Uber has agreements with Braintree Services and international payment method. Also, Uber has established a partnership with the National Football League (NFL), the well-known American-based football association, to provide transportation services for NFL athletes to go to the training center and match fields across US (Nguyen, 2014). Like US Uber, several Indonesian TNCs also establish partnerships to strengthen the business network. Go-Jek, the Indonesia largest motorcycle online app firm, has already announced its partnership with Line, a Korean-based messaging application firm. This partnership allows Line users to order Go-Jek through Line without having to leave the chatting app (Hermansyah, 2016). Go-Jek has established a partnership also with its rival, Blue Bird, the Indonesia's largest taxi company. Go-Jek and Blue Bird have formed a partnership involving technology, payment, and promotion to help accelerate the digital revolution in Indonesia and empower passengers (Asian Correspondent, 2016). Go-Jek has also collaborated with PT. Allianz Life Indonesia, a German-based insurance firm in Indonesia, to provide comprehensive health insurance for Go-Jek drivers and their core families (Harian Ekonomi Neraca, 2016).

With the tight competition and the attempt to maintain the competitive advantage, companies may always look for the above-average candidates from the marketplaces, including who are currently employed by competitor companies. Go-Jek has incorporated some leniency in terms of recruitment and selection. Hiring internal employees and moving employees from one division to another have been relatively customary. Go-Jek drivers may potentially soon be switched into IT division due to their interests in software development. With around 1,700 employees in approximately 13 cities in Indonesia, and about 250,000 drivers, the policy appears possible and may portray the most attractive option for Go-Jek and the pool of drivers (Fajrina, 2016).

LEGAL STATUS
TNCs have been encountering hurdles from the perspective of regulation in the global transportation market. In the US, for instance, the federal government, state government, taxi companies, customers and even the ex-drivers have filed lawsuit against TNCs, such as Uber and Lyft. Because of the numerous lawsuits, it has become the public secret during the recent years (Sun & Edara, 2015).

Figure 3: Responses on Pooling About Regulations on Uber
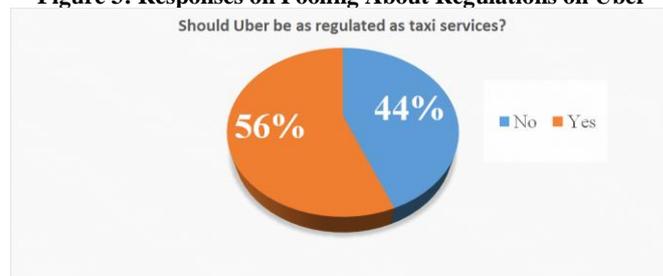
Source: (Ipsos Public Affairs, 2015)

On one side, based on a survey to 1,004 respondents, people responded that all rules and regulations for taxi companies should be applied to TNCs. This ensures the same standards, rules and regulations are followed and implemented by all companies that

provide transportation. Other respondents stated that Uber may not need to follow the regulations for taxi companies since using Uber or others is the customers' choice (Ipsos Public Affairs, 2015). From another perspective, American TNCs, such as Uber and Lyft, have also been confronted by more multiple lawsuits due to the differences in local rules and regulations in every state in the US. In fact, TNCs business model and driver-background check are always be the TNCs lawsuits in state-level courts (Brown, 2016; Huet, 2017). For examples, (a) drivers may be misrepresented since Uber classifies them as independent contractors rather than employees, (b) the lawsuits in the state of California and Massachusetts have sought for employee benefits, (c) background check for drivers were claimed to be illegal due to lack of proper authorizations, and (d) misleading customers on the results of the drivers' background checks, which misled customers into a wrong sense of ride-security.

TNC in Indonesia, such as Uber, Go-Jek and Grab, has also been confronted by some legal status issue. According to Indonesian Ministry of Transportation, Uber and Grab Car have violated Regulation No.22/2009 on Road Transport Traffic. The regulation states that unincorporated transportation companies without the necessary permit to transport people, no vehicle testing, not using public transport vehicle ID and the driver does not have the necessary driver's license for public transportations are considered violating the law (Tempo.Co, 2016). The Indonesian government requires all ride-hailing apps to work in partnership with rental car cooperatives or companies, or the registered taxi companies. Grab and Uber have helped set up cooperatives for the drivers, while online-based motorcycle firm, Go-Jek, has set up a company called PT Panorama Mitra Sarana to work with its own car-hailing app Go-Car.

The Ministry of Transportation has also released the regulation number 32/2016 about non-route people transport services. This regulation was in-effect on October 1, 2016. Basically, the regulation stipulated that technology-based firms must work with other transportation companies, which have obtained the necessary licenses from the Ministry of Transportation. In response to this regulation, Grab has decided to partner-up with the licensed transportation provider cooperative called Koperasi Jasa Persatuan Pengusaha Rental Indonesia (PPRI). PPRI has started to submit GrabCar partners' vehicles for testing to obtain roadworthy certification (Vincencia, 2016). Grab and Uber were given the privilege to continue their operation during which time the Ministry of Transportation attempted to modify the prevailing rules for taxi companies, and car rental services (Freischlad, 2016). The notes are as follows;

a. The need for yellow license plates is in questioned since metered taxis and rental cars fall in the same category of "*personal transportation with public transportation*" (Freischlad, 2016).

b. Uber and Grab cannot use the privately-owned vehicles

c. People who are the drivers for any one of the online-based transportation companies must register themselves to a certain rental companies. Then, their vehicles should be evaluated and checked with the rental companies. Once the vehicles are verified, evidence on safety check stickers must be placed on the vehicles' exteriors.

d. Online-based transportation companies cannot recruit drivers directly. The recruitment must be performed via rental car companies. In response to this, Grab immediately announced that it only recruits drivers who have already registered as the official members of rental car cooperatives or companies. This is, of course, Grab's way to comply with the government regulation No. 22/2009 (Primadhyta, 2016).

e. The online-based transportation companies cannot set fares and the drivers' compensation

f. Disclosure of data of the drivers, vehicles, and the name of the rental companies becomes required.

g. Motorcycles-based transportation companies appear to remain unregulated. This means that UberMotor, GrabBike, and Go-Jek are untouched until today.

PRICING STRATEGY FOR THE INDONESIAS TNCs
The pricing schemes incorporated into the business model have become the filtering process for the winner and loser in the ride-sharing businesses. At this time, motorcycles remain as the most favorite mode of transportation in Jakarta. The reason is simple as the motorcycles are having the ability to maneuver themselves. UberMotor sets the pricing scheme as Rp. 1,000 per kilometer. Go-Jek and GrabBike set their minimum prices at Rp. 12,000, and Rp. 10,000, respectively (Yuniar, 2016). The following table shows the pricing schemes for the online and motorcycle-based transportation companies.

Table 1: Comparisons of Fares[1]

Go-Jek		Grab Bike		Uber Motor	
Minimum Fare	Rp. 12,000	Minimum Fare	Rp. 10,000	Base Fare	Rp. 1,000
1-10 Km	Rp. 12,000	Fare/Km	Rp. 1,500	Minimum Fare	Rp. 1,000
10-15 Km	Rp. 15,000	Peak-Hour Fare	Adding Rp. 5,000	Fare/Km	Rp. 1,000
> 15 Km	Adding Rp. 2,000 per Km			Fare/minute	Rp. 100

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[1] The current exchange rate is at Rp. 13,364/US $1, as of Thursday, March 2, 2017 at 11:28 AM, Jakarta time zone (XE.com, 2017)

Let us just assume an individual plans on a short trip of about 10 kilometers in distance during the off-peak hours. With Go-Jek, the total estimated fare is Rp. 12,000. With Grab Bike, the total becomes Rp. 1,500 x 10 kilometers, which equals to Rp. 15,000. Uber Motor fare is Rp. 1,000 base fare + (Rp. 1,000 x 10 kilometers), which equals to Rp. 11,000. From this basic assumption, it is clear that Uber Motor offers the cheapest possible transportation. Even when slight delays are incorporated, say about 10 minutes, for instance, Uber Motor fare increases only by Rp. 100 x 10 minutes, which equals to Rp. 1,000. Though using a different way of calculating the charges, Uber Motor arrives at the same fare as Go-Jek.

However, for a bit far destinations, commuters still prefer to ride in private cars, taxis or ride-sharing vehicles. The comparative fares for car ride-sharing services are shown in the following table.

Table 2: Comparative Fares for Car-Ride Sharing Services in Indonesia

	Regular Taxi	GrabCar	UberX
Base Fare	Rp. 7,500	Rp. 2,500	Rp. 3,000
Fee/Km	Rp. 4,000	Rp. 3,500	Rp. 2,001
Minimum Fare	Rp. 40,000	Rp. 10,000	Rp. 3,000
Fare/Minute	-	-	Rp. 300
Cancellation Fare	Rp. 15,000	-	Rp. 30,000

Source: (Nuryadi, 2016)

As shown in the table, Uber has relatively cheaper pricing scheme for its motorcycle and car ride-sharing services. Using the similar example as above, let us just assume an individual plans on a short trip of about 10 kilometers during the off-peak hours. With a regular taxi, the total estimated fare is Rp. 7,500 base fare + (Rp. 4,000 x 10 kilometers), which equals to Rp. 47,500. With Grab Car, the total becomes Rp. 2,500 base fare + (Rp. 3,500 x 10 kilometers), which equals to Rp. 37,500. UberX fare is Rp. 3,000 base fare + (Rp. 2,001 x 10 kilometers), which equals to Rp. 23,000. From this basic assumption, it is clear that UberX offers the cheapest possible means of transportation. Even when slight delays are incorporated, say about 10 minutes, for instance, UberX fare increases only by Rp. 300 x 10 minutes, which equals to Rp. 3,000. It remains cheaper than the competitors. However, Uber may be a little bit behind in terms of service differentiation, as shown in the following table;

Table 3: Services Provided by Go-Jek, Uber and Grab

Go-Jek		Uber		Grab	
Go-Send	Delivery packages	UberX	Low cost ride	Taxi	Ride
Go-Car	Car-Ride	UberBlack	Affordable luxury ride	Car	Ride
Go-Ride	Motorcycle-Ride	UberMotor	Motorcycle ride	Motorcycle	Ride
Go-Mart	Delivery groceries	Carpool	Ride with the splitting fare	GrabFood	Food delivery service
Go-Box	Truck service	Uber Copter	On a trial run, not yet running	Delivery service	Packages delivery service
Go-Massage	Massage service	-	-	-	-
Go-Clean	Cleaning service	-	-	-	-
Go-Glam	Woman skin care service	-	-	-	-
Go-Tix	Ticket booking service	-	-	-	-
Go-Busway	Busway monitoring service	-	-	-	-
Go-Pay	Virtual wallet	-	-	-	-

Uber's objective on the pricing scheme is to potentially increase the number of drivers working with them. This has the potential to reduce rates and improve reliability, particularly during peak hours. From the perspective of theory, Uber appears to have incorporated dynamic pricing or flexible pricing scheme, which otherwise known as surge pricing approach. The surge pricing approach is a dynamic pricing strategy to fluctuate in accordance with time of the day, number of customers and some other circumstances. Hence, surge pricing simply means that the price will change in accordance with any surge situations, particularly in terms of sudden increase in demand and/or decrease in supply of Uber drivers in the marketplaces during certain periods. This pricing scheme becomes obvious in a response to excess demand. Uber pricing scheme will rise accordingly to stabilize the market demand with available supply (Suranovic, 2015). The basic underlying idea is simple. As customers tend to pay higher fares due to high demand for Uber services, more drivers are willing to join Uber. As more drivers are joining Uber, the overall basic fares drop, and less waiting time for potential customers. With the downward slide on the basic fares and less waiting time, more customers are tempted to try Uber. The end result is the reduction in time between customers. This is beneficial for the

drivers (Apostolidis, 2014).

Based on experience, Uber surge pricing is likely in-effect in 3 different ways; (1) reduction of demand since people do not want to ride at a higher price, (2) creating new supply by introducing additional incentives for drivers to stand-by during certain hours, and (3) moving drivers into areas with relatively steady and higher demands (Suranovic, 2015). Nonetheless, this surge pricing scheme did not appear to successfully lure drivers out on the roads, as expected. Rather, the scheme stimulates the available drivers to go into the higher demand areas. Consequently, this results in longer waiting times in certain areas (Diakopoulos, 2015). To potentially encounter this, from the perspective of behavioral economics, by setting the inflated regular price and offer significant discounts during non-rush hours, may likely equalize demands eventually (Kerr, 2015). Otherwise, behavioral insights can also be potentially used to modify how the information is presented though the same economic outcome remains the same. This ensures that the customers will not experience the change in price as an economic loss (Neal, 2015).

Figure 4: Current Fares

Source: (Neal, 2015)

The illustration shows the surge pricing in effect by directly comparing the current fares and future estimated fares in the next hour, for instance. This pricing scheme expects to see the following possible outcomes;

a. Since the fares stay constant until the next hour, the only trade-off for customers is just merely the actual departure time

b. Since the fares are estimated to be cheaper in the next hour, this provides options for customers whether to leave immediately, or just simply wait 1 more hour to enjoy the fares reduction. As the common reference point used for people is the current fares, the fares reduction appear as discounts.

c. If the future fares increase in the next hour, potential customers may perceive as avoiding unnecessary losses to place an order immediately, rather than waiting.

Figure 5: Future Fares

Source: (Neal, 2015)

ADDITIONAL ISSUES TO BE SOLVED
Online applications are prone to bugs. Though continuous maintenance and improvement have been performed, bugs have been detected in Go-Jek apps (Iin, 2016). In response to this issue, the CEO of Go-Jek, Mr. Nadiem Makarim, has hired Indian programmers (Heriyanto, 2016). In fact, Go-Jek found 7,000 fake Go-Jek transactions. Those drivers have created fake customer accounts in order to do fake transactions. This resulted in additional earnings from Go-Jek. With regards to such fake transactions, Go-Jek has already suspended those drivers (Prihadi, 2015).

Another issue is about the partnerships with the registered car rental companies. The online-based transportation companies really look for some leniency from the rental companies. However, finding drivers has been uneasy. On the contrary, rental companies require drivers to work in shifts. This allows rental companies to constantly provide around the clock services at approximately 95% usage rate on the available fleet. Hence, this translates into more vehicles and drivers for the rental companies (JakartaGlobe, 2016a).

CONCLUSIONS & FUTURE RESEARCH

The emergence of TNCs has certainly changed the rule of the game within the transportation industry. TNCs have shown enthusiasm toward creating job opportunities in many countries. This improves the standards of living for millions of people. Nevertheless, with the continuous expansions, issues encircling TNCs will always occur in every country. The American-based TNCs are a bit more established since every state has initiated immediate responses in modifying rules and regulations. In the US, TNCs have usually won their cases in various courts. TNCs appeared to have successfully convinced the courts on the basis of information technology companies, instead of transportation companies. Hence, all rules and regulations for the taxi companies should not be applied into TNCs.

However, the Indonesian-based TNCs have yet to find the solutions. TNCs stakeholders and the government of Indonesia have met several times to have discussions. Unfortunately, no decision was made following those series of meetings until the demonstration/strike by taxi drivers in March 22, 2016, who protested against the operational activities of the online-based TNCs. Following the demonstration and strike by the taxi drivers, the Ministry of Transportation of the Republic of Indonesia was able to officially announce that TNCs are required to register their cars to car rental or logistic companies, TNCs cannot directly hire their drivers anymore, and TNCs cannot control the pricing strategy without government intervention. This means that the government of Indonesia intends to set TNCs fares, which may likely be similar to, or the same as, the prevailing fares for taxi companies. Concerning the potential intervention from the government on fares, unfortunately, the pricing scheme of TNCs may no longer become attractive for customers and drivers, unless TNCs themselves are willing to provide additional incentives for both the customers and drivers (Hall, Kendrick, & Nosko, 2015).

From the perspective of presence of bugs on the online applications, this provides the perfect opportunity for taxi companies to take actions and quickly catch-up. Hence, taxi companies need to take advantage of this situation to emerge in the marketplaces to regain the popularity once again. There are limitations in this paper, however. Improvements are certainly required for future studies, such as; expanding the scope of coverage into more TNCs, figures on demand and supply in the marketplaces for TNCs, a deeper evaluation into the pricing strategy and impact (Kotler & Armstrong, 2014; Suranovic, 2015), and private/community car-pooling.

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