How Transportation Network Companies influence the society in Yogyakarta

An empirical research on the consequences of TNCs on public transport and its socio-economic impact on Yogyakarta, Indonesia.

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Preface

Dear reader,

In front of you lies my thesis which I wrote as a part of the bachelor Geography, Planning and Environmental sciences of the Radboud University Nijmegen, the Netherlands. I got the opportunity to do research in Yogyakarta, Indonesia, at the Gadjah Mada University. This was my first time in Asia, and it brought a lot of new experiences.

This was also the first time I had to do a research from beginning to end on my own. It took me a lot of time to get started, but when the beginning was there, it was finished soon after and I am proud of the result. I am very thankful that I took the opportunity to go to Indonesia to write my bachelor thesis. It was great to have my friends/fellow students around me there. Thank you, Anne, Ankie, Ruud, Roelof and Casper!

Furthermore, I want to thank all the people who helped me to finish this thesis, both in The Netherlands and in Indonesia. More specifically I want to thank my supervisor dr. Lothar Smith for the feedback, coaching and input along the way. Also, my respondents and friends in Indonesia; Agus, Afan and Heaven who helped me a lot with providing information about this subject and Yogyakarta in general.

I hope you enjoy reading this thesis.

Gijs van Roestel

Nijmegen, 31-8-2018

Figure 1: A picture after our final meeting at the UGM (bkln.geo.ugm.ac.id)

Summary

Background

An internet presence is no longer merely used as a medium of communication. It has been used in all aspects of human life, economically and socially. Internet technology continues to grow, supported by the development of digital communication tools such as mobile phones [smartphones] which have multimedia functions. This enables people to access all information they want by using a smartphone (Wirawan & Oktivera, 2015). Redfearn (2016), also claims that business activity and consumer participation in the economy have changed drastically with the rise of the Internet and mobile phone applications.

One area that reflects this change is the "sharing economy," which refers to the use of peer-to-peer networks to gain temporary access to products and services on an as-needed basis. For example, a transportation network company, abbreviated as a TNC company. TNC companies are a type of sharing economy company that makes ride-sharing more convenient by connecting drivers with potential passengers. A TNC generates revenue by charging users a fee for its matchmaking service.

TNCs are a type of a sharing economy company that makes ride-sharing more convenient by connecting drivers with potential passengers. Nowadays companies as Über, Grab and Go-Jek are classified as new modes of transportation under the name of a Transportation Network Company. These companies are organizations that pairs passengers via websites and mobile applications with drivers who provide transportation services. These TNCs can compete on the transportation market with conventional taxis. The past years, conventional taxis monopolized the market of the use of private cars as public transport. The government never fails to regulate their service, but taxi operators often have poor initiative in improving the quality of their service. Having a direct competitor for taxis will give alternative and options for commuters (Regidor & Napalang, 2016). In Indonesia, and in the city of Yogyakarta are Über, Grab and Go-Jek active TNCs, with Go-Jek and Grab as the major TNCs which will be considered in this thesis.

Research goal

The aim of this thesis is to give an in-depth insight in what the influences are that TNCs have caused and are causing on the society in the City of Yogyakarta since there appearance. As said, there are a lot of negative and positive influences the TNCs have. From economic opportunities for warung owners, replacement of conventional taxi's, replacement of becaks, violence among drivers from different taxi companies, cheap ride-hailing services and mobility justice. These influences and the advantages and disadvantages will be described from three different viewpoints; the TNC driver's viewpoint, the TNC rider's viewpoint and thirdly the conventional taxi driver's viewpoint.

This thesis will not try to answer questions within the discussion about the informal economy, for example if its right or wrong what is going on, and if the government of Yogyakarta should ban the TNCs or not. In short, the legal consequences of the TNCs will not be answered and described in this thesis. This because of the reason these kinds of questions are too complicated to answer in the limited time frame [one month], despite it also would be also very interesting.

Research method

Based on the research goal, which was *"to give an in-depth insight in what the influences are that TNCs have caused and are causing on the society in the City of Yogyakarta since there appearance."*, and the theoretical framework the following central question came forward.

Central question:
"What are the influences of Transportation Network Companies on the society in Yogyakarta?"

To answer this central question as accurate as possible, three different sub questions are formed. These sub questions will provide this research with data from three different points of view, namely from the TNC driver's point of view, the TNC customers' point of view, and finally the point of view of the conventional taxi drivers.

Sub question 1:
What is the view of TNC drivers on the existence of TNCs?

Sub question 2:
What is the view of customers of the TNCs on the existence of TNCs?

Sub question 3:
What is the view of conventional taxi drivers on the existence of TNCs?

A qualitative research strategy has been chosen because in this way of research it is possible to gain deeper understanding and thorough knowledge of the research subject. It will, in this study, be more useful than a quantitative data collection method and analysis referring to the research questions.

More specific, the research strategy that fits best with the research goal and main question, as cited above, is the case study strategy. This because the ability with a case study to get valid and in-depth insights on the topic. Furthermore, a case study 'involves the study of a case within a real-life, contemporary context or setting' (Yin in Creswell, 2012). In this qualitative research approach the investigator studies a real-life, contemporary bounded system (a case) over time, through detailed, in depth data collection involving multiple sources of information (Creswell, 2012).

Research results

After analyzing the interviews and other data, the following results came forward;

1. The impacts on existing public transport were that TNCs are; competition, replacement, complementation and supplementation to existing public transport. Also a cure for the first mile last mile problem.

2. The social consequences of TNCs are; improvement of social networks, opportunities to build relations with customers, safety issues for TNC drivers, improved mobile justice, time saving for TNC customers and accessible public transport. Also protests, violence and police actions against TNCs and its drivers.

3. The economic consequences of TNCs in Yogyakarta are; an increased income for TNC drivers, being able to work for multiple TNCs, cheaper public transport, cashless transactions, reduction in search costs, a better overview of quality and price and finally less income for conventional taxi drivers.

Conclusion

The influences of Transportation Network Companies on the society in Yogyakarta are the following:

1. TNCs are seen mainly as competition, replacement, a supplement and a complementation to existing public transport.

2. TNCs cause a positive influence on mobile justice, better accessible public transport but also an increase in protests and violence.

3. TNCs cause an increased/less income for TNC drivers and conventional taxi drivers. It also Brings employment into Yogyakarta, cheaper public transport with a better overview of quality and price and finally a reduction in search costs.

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List of abbreviations

UGM	Universitas Gadjah Mada
TNC	Transportation Network Company
TNCs	Transportation Network Companies
FMLM	First Mile Last Mile [referring to the problem]
CPUC	California Public Utilities Commission
PLN	Perusahaan Listrik Negara
BPJS	Badan penyelenggara Jaminan Sosial

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Chapter 1 - Introduction

An internet presence is no longer merely used as a medium of communication. It has been used in all aspects of human life, economically and socially. Internet technology continues to grow, supported by the development of digital communication tools such as mobile phones [smartphones] which have multimedia functions. This enables people to access all information they want by using a smartphone (Wirawan & Oktivera, 2015). Redfearn (2016), also claims that business activity and consumer participation in the economy have changed drastically with the rise of the Internet and mobile phone applications.
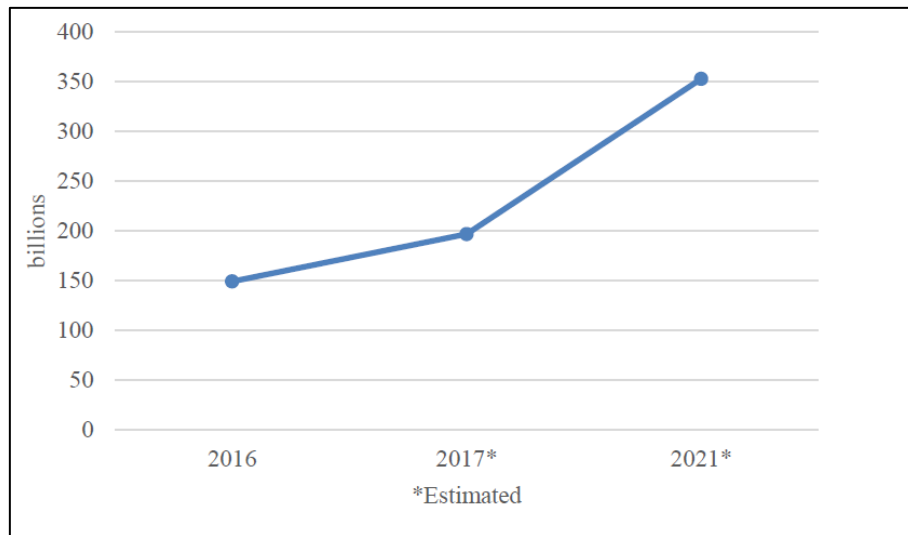
Figure 2: Number of mobile app downloads globally (Statista)

One area that reflects this change is the "sharing economy," which refers to the use of peer-to-peer networks to gain temporary access to products and services on an as-needed basis. For example, a transportation network company, abbreviated as a TNC company. TNC companies are a type of sharing economy company that makes ride-sharing more convenient by connecting drivers with potential passengers. A TNC generates revenue by charging users a fee for its matchmaking service. According to Matzler (in Redfearn, 2016), there are two central ideas behind the sharing economy: reduction of transaction costs and efficient allocation of resources. With lower transaction costs due to communication technology and standardized methods of exchange, owners are more willing to provide their underutilized assets to platform participants (Katz, 2015). Users on both sides of a sharing platform benefit from this transaction *"Owners make money from underused assets… and renters… pay less than they would if they bought the item themselves or turned to a traditional provider such as a hotel or car-hire firm."* (Matzler, 2015). In this regard, the sharing economy represents "*a societal shift to an access model rather than an ownership model.*" (Katz, 2015). Proper regulatory controls of sharing platforms are crucial as these platforms rapidly expand and influence many aspects of daily life. Yet, the legal and regulatory frameworks which purport to govern sharing economy platforms have not kept pace with the changing marketplace (Donovan et. al., 2015). As said, a Transportation network company [TNC], is an example of the sharing economy, namely in the transportation sector. This thesis will focus on this specific transportation-sharing sector.

As said, TNCs are a type of a sharing economy company that makes ride-sharing more convenient by connecting drivers with potential passengers. Nowadays companies as Über, Grab and Go-Jek are classified as new modes of transportation under the name of a Transportation Network Company. These companies are organizations that pairs passengers via websites and mobile applications with

drivers who provide transportation services. These TNCs can compete on the transportation market with conventional taxis. The past years, conventional taxis monopolized the market of the use of private cars as public transport. The government never fails to regulate their service, but taxi operators often have poor initiative in improving the quality of their service. Having a direct competitor for taxis will give alternative and options for commuters (Regidor & Napalang, 2016). In Indonesia, and in the city of Yogyakarta are Über, Grab and Go-Jek active TNCs, with Go-Jek and Grab as the major TNCs which will be considered in this thesis.

Grab, formerly known as Mytaksi and Grabtaxi, is a ride-hailing or ride sharing company established in Malaysia and Singapore by Harvard Business School graduates – Anthony Tan and Tan Hooi Ling in 2011. It started considering the inconveniences related to hailing a conventional taxi in Malaysia. An Uber- like application was developed which assigns available cabs nearby to commuters using mapping and location sharing (Regidor & Napalang, 2016).

Go-Jek, founded by Nadiem Makarim, Michaelangelo Moran and Kevin Aluwi in 2010 as a motorcycle ride-hailing phone service, which has evolved into an on-demand mobile platform and a cutting-edge app, providing a wide range of services that includes transportation, logistics, mobile payments, food delivery, and many other on-demand services. This according to their own webpage. Its headquarters are in the capital of Indonesia, Jakarta.

As said, Grab is one of the two major active TNCs in the city of Yogyakarta. Grab started in Yogyakarta in the year 2014 with their first car hailing service in Yogyakarta (Chandra, 2014), and in 2015 their motorcycle service rides could also be found in Yogyakarta and other cities in Indonesia like Jakarta (Tay, 2015). Nowadays grab has also a for food delivery in Yogyakarta and eight more Indonesian cities. With these new services grab provides new economic opportunities for delivery partners (JakartaGlobe, 2018).

Go-Jek, the other major TNC in Yogyakarta, is active in the city since November 16, 2015, according to Tadeus Nugrah, Go-Jeks' operational vice president. They started there with an armada consisting of 200 motorcycle taxi drivers. Nowadays Go-Jek also has an office established in Yogyakarta. The services Go-Jek offers nowadays are very divergent. From the ride hailing-service by motorcycle and by car to food delivery service, massage delivery service, cleaning service and even medicine service and a e-wallet service according to their own website (www.go-jek.com, 2018).

These new services sound like a huge improvement for the society in Yogyakarta, but there are also downsides. For example, on February 17, 2017, there were about 300 conventional taxi drivers who held a rally in North Alun Alun in Yogyakarta, protesting ride-sharing apps (TheJakartaPost, 2017). They demanded that the Yogyakarta administration ban ride-sharing apps in the province. Sutiman, the coordinator of Yogyakarta Metered Taxi Drivers Community (Kopetayo), said that the TNCs offered lower prices and hurt their livelihoods. Their income has dropped 90 percent, according to Sutiman (TheJakartaPost, 2017).

The aim of this thesis is to give an insight in what the influences are that TNCs have caused and are causing on the society in the City of Yogyakarta since there appearance. Things such as possible fields of tension between actors, but also economic opportunities for actors within this research. This thesis will not try to answer questions within the discussion about the informal economy, for example if its right or wrong what is going on, and if the government of Yogyakarta should ban the TNCs or not. This because of the reason these kinds of questions are too complicated to answer in one month of research and fieldwork, despite it also would be also very interesting.

1.1 Relevance

After introducing this research and discussing the context of this thesis, the next part will explore the relevance of this research. A distinction is made between scientific relevance and societal relevance, because it is not only important it will add new insights to science, but it also can be used and/or applied in the current society.

1.1.1 Scientific relevance

The presence of internet has changed a lot in human life, the economy and the society. It also has brought Transportation Network Companies into the society in various countries, including Indonesia. These TNCs are relatively new, and especially in the special region of Yogyakarta [since 2014]. Because of the fact these TNCs are relatively new, there is not a lot of research done yet in this field. It is also interesting and relevant because of the reason cities in Indonesia, and particularly Java, are growing in rapid pace. For example, in Jakarta is the growing number of private vehicles not equal with its road conditions. "*According to data from Metro Jaya [Jakarta police Centre], motor vehicles in Jakarta and surrounding areas rise 12 per cent per year, while the growth of the road has been just 0.01 percent (http://metro.tempo.co). This imbalance encourages a motivation to meet the needs of public transportation that which are fast, safe and efficient*" (Wirawan & Oktivera, 2015). This case study gave an analysis on the implementation of digital marketing towards motorbike transport services in Jakarta. A similar research can be done in Yogyakarta.

Also, in a thesis of a fellow GPE student, Gijs Kloek, from the Radboud University who also went to Yogyakarta in 2016 to do research *"On the 'everyday' relation between globalization and the informal economy in Yogyakarta, Indonesia."*. In his research were some interesting recommendations, for example he mentioned that the Go-Jek application is worth a second look, and if it is as big as it appears to be and what the exact influence on the Indonesian society is. *"Yoke and Ineke told me that the transportation service of GO-JEK [GO-RIDE] harms the becaks and other informal means of transport. What will this mean for the future?"* (Kloek, 2016).

1.1.2 Societal relevance

This research can be useful for policymakers and the administration of Yogyakarta. Because the TNCs are relatively new in Yogyakarta [since 2014], there are a lot of news articles about this subject. Also, the regulation of these new TNCs are a quite vague, they are even sometimes called semi-illegal by inhabitants of Yogyakarta. There are even news articles from 2015 where it is said that Indonesia banned Go-Jek. *"Indonesian media is reporting that the Ministry of Transportation has asked local police to take action against the operators of internet-based transport services as well as prohibit drivers of the service due to their effect on other forms of public transport" (Businessinsider.com.au 2015).* In practice there is no action taken against these services according to inhabitants and own empirical data and observations.

It is clear that the Indonesian government wants to ban the services of TNCs. Also, traditional taxi drivers want a ban on these new TNCs. It is nothing new in the Indonesian media that there are protests the ride-hailing companies. *"As many as 500 conventional taxi drivers from six companies across Surakarta held a rally at the Gladag traffic circle on Tuesday to protest the existence of app-based taxi services in the city. The drivers deem the ride-hailing services a threat to their livelihood"* (Thejakartapost, 2017). There were even violent protests against Go-Jek and Grab drivers in Indonesia in 2016; *"Images of Go-Jek drivers being attacked by protesters were among the more disturbing sights from the day. However, there were also reports in the media of Go-Jek drivers, angered by the attacks on their colleagues, fighting with taxi drivers as well."* (Coconuts.co, 2016). Not only conventional taxi drivers protest, also Grab and Go-Jek drivers rally against low fares in Jakarta.

"The drivers want the government to provide them with legal and social protection because they are part of the national workforce" (Atimes.com, 2018).

In a short time TNCs have caused a lot of different opinions on the arrival of these companies, like the above and a lot more. There are negative but also positive influences on the society and mobility in Yogyakarta, and this thesis will try to give an insight in these influences. The knowledge presented does not only serve the city of Yogyakarta, but also other similar cities with TNC services, but this thesis will not try to generalize.

1.2 Research goal

The aim of this thesis is to give an in-depth insight in what the influences are that TNCs have caused and are causing on the society in the City of Yogyakarta since there appearance. As said, there are a lot of negative and positive influences the TNCs have. From economic opportunities for warung owners, replacement of conventional taxi's, replacement of becaks, violence among drivers from different taxi companies, cheap ride-hailing services and mobility justice. These influences and the advantages and disadvantages will be described from three different viewpoints; the TNC driver's viewpoint, the TNC rider's viewpoint and thirdly the conventional taxi driver's viewpoint.

This thesis will not try to answer questions within the discussion about the informal economy, for example if its right or wrong what is going on, and if the government of Yogyakarta should ban the TNCs or not. In short, the legal consequences of the TNCs will not be answered and described in this thesis. This because of the reason these kinds of questions are too complicated to answer in the limited time frame [one month], despite it also would be also very interesting.

1.2.1 Mapping Yogyakarta

This research took place in the Republic of Indonesia, a transcontinental state located mainly in Southeast Asia, and some territories in Oceania. It's the world's largest island country, with more than thirteen thousand islands (The World Factbook, 2017). On the island Java, world's most populous island, is the capital of Indonesia, namely Jakarta located. Besides Jakarta, there are several more major cities located; Semarang, Bandung, Surabaya and Yogyakarta, were this research took place. Java is divided into three provinces, West-Java, Central-Java and East-Java. Yogyakarta is located in the south of the Central-Java province, showed in figure 3.

The city of Yogyakarta is part of the Special Administrative Region of Yogyakarta. This region is subdivided into four regencies and one city; The Bantul Regency, the Gunung Kidul Regency, The Kulon Progo Regency and the Sleman Regency. The city located in the region is naturally the city of Yogyakarta [see figure 4].

Figure 3: Indonesia with the Special Administrative Region of Yogyakarta marked and circled in red (wikimedia.org)
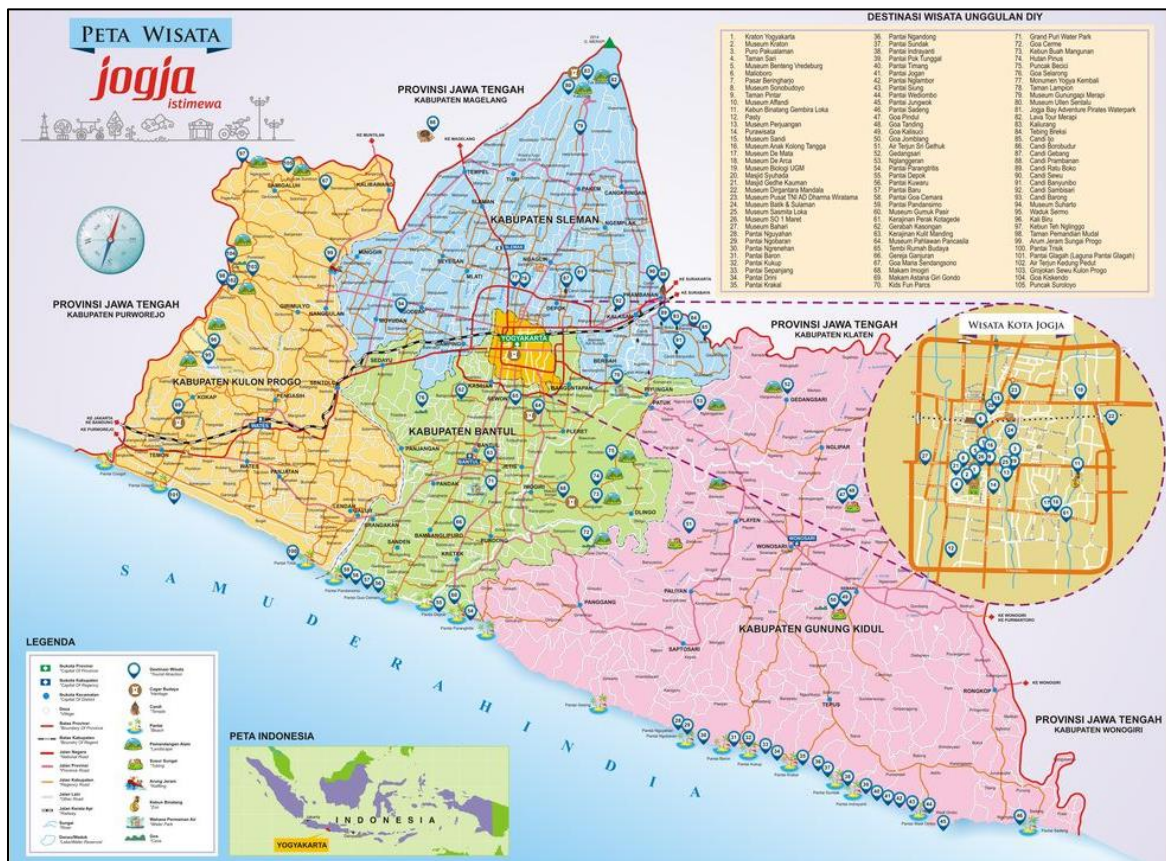

Figure 4: Map of the Special Administrative Region of Yogyakarta (visitingjogja.com)

Chapter 2 - Theory

2.1 Theoretical framework

As mentioned in the introduction of this thesis, an internet presence is no longer merely as a medium of communication. It is used nowadays in all aspects of human life; economically and socially. Internet technology continues to grow, supported by the development of digital communication tools such as mobile phones [smartphones] which have multimedia functions. This enables people to access all information they want by using a smartphone (Wirawan & Oktivera, 2015). Redfearn (2016), also claims that business activity and consumer participation in the economy have changed drastically with the rise of the Internet and mobile phone applications. In this research it is about the mobile phone applications are the Go-Jek and the Grabcar/Grab application which people make use of to use the services of these TNCs. In this chapter the definition of a TNC will be described, its purpose, the impact of TNCs on existing public transport and its social and economic consequences will be described. Finally Go-Jek and Grab will be described and what its services are.

2.1.1 The definition of a TNC

Firstly, it is crucial to have clear what a TNC is and how it can be categorically titled or defined, because there have been a considerable and significant number of debates as to whether a Transportation Network Company is a transportation provider or a mere technological invention.

According to Kessler (2017), there are five essential characteristics that need be implemented as a benchmark for any entity to be distinctly identified as a Transportation Network Company or TNC. These are described in his research *"How Transportation Network Companies Could Replace Public Transportation in the United States"*.

"1. App – naturally, a smartphone application must already be downloaded and an active account readily available for use

2. Rider – a potential customer that chooses to be taken from Point A to Point B.

3. Driver – there must be a motorist with a motor vehicle available upon a moment's notice or reasonable amount of time, that is willing to take a passenger to his/her desired destination.

4. No Fleet – the driver must procure a vehicle at his or her expense – not the TNC.

5. No direct/indirect ownership in a transportation business – Taxi companies, that are now dealing with the competitive reality have begun to create apps for themselves. Customers dealing directly with a taxi firm offering an app option would still not meet the criteria or definition of a TNC. i.e.; it is obviously evident that the taxicabs are already furnishing direct transportation services."

Indispensable is the first condition, since that is what makes a TNC most distinctive. Go-Jek and Grabcar in this case can always offer transportation service directly to any member of the public. "Regarding the fourth and fifth conditions, once an app provider has ownership of a vehicle with the intent of providing transportation to the public, it can no longer be a TNC. Rather, it is unequivocally competing with for-hire enterprises and would need to comply with any and all jurisdictional regulations as it pertains to the cab/for-hire livery industry" (Kessler, 2017). This means the TNC driver who provides transportation service with his vehicle, cannot be a TNC itself.

As described in the introduction, Redfearn (2016), describes in his publication *"Sharing Economy Misclassification: Employees and Independent Contractors in Transportation Network Companies"* a TNC as follows:

"Under California law, a TNC is 'an organization… that provides prearranged transportation services for compensation using an online-enabled application or platform to connect passengers with drivers using a personal vehicle.' Essentially, 'TNCs provide transportation services analogous to common carriers' through the use of a digital platform. TNCs are prototypical sharing economy companies: they use online platforms to reduce transaction costs and efficiently allocate resources." (West, 2015 & Katz, 2015 in Redfearn, 2016).

The European parliament use the following description of a TNC, which comes from the California Public Utilities Commission [CPUC]. The CPUC was called to provide for a regulatory action with respect to Uber, Lyft and Sidecar [TNCs active in the U.S.] in 2012 and defined a TNC as: *"an organization whether a corporation, partnership, sole proprietor, or other form...that provides prearranged transportation services for compensation using an online-enabled application (app) or platform to connect passengers with drivers using their personal vehicles"*

2.1.2 The purpose of TNCs
Secondly, it is important to have clear what the purpose of a TNC is.

As stated in the introduction, Redfearn (2016) claims that "the sharing economy has birthed a now-popular business model in which "an online intermediary [or platform] … acts as a market for [peer-to-peer] services and… facilitates exchanges by lowering transaction costs. (Katz, 2016)" For example, a transportation network company [TNC] is a type of sharing economy company that makes ride-sharing more convenient by connecting drivers with potential passengers. A TNC generates revenue by charging users a fee for its matchmaking service."

According to Matzler (2015) in Redfearn (2016), "There are two central ideas behind the sharing economy: reduction of transaction costs and efficient allocation of resources" This can also be seen as the purpose of a TNC, since a TNC is a sharing economy company. Furthermore, Katz (2016) claims that "with lower transaction costs due to communication technology and standardized methods of exchange, owners are more willing to provide their under-utilized assets to platform participants". In the case of a TNC is the under-utilized asset a car or motorbike. According to Matzler (2015) "Users on both sides of a sharing platform benefit from this transaction – Owners make money from underused assets… and renters… pay less than they would if they bought the item themselves or turned to a traditional provider such as a hotel or car-hire firm". In this regard, the sharing economy represents "a societal shift to an access model rather than an ownership model." (Katz, 2016 in Redfearn, 2016)

2.1.3 The impact of TNCs on existing public transport
Thirdly, the influence of TNCs on public transport and transit will be described. There are very diverse views on what the influences of a TNC are to the existing public transport. Kessler (2017) describes in his research the effects TNCs can have on the existing transit and public transport as follows [the numbers in between the square brackets are researches and papers Kessler is referring to]:

"Without question, many believe TNCs complement transit including the American Public Transportation Association, along with a report by the Transportation Research Board [38, 40, 44, 52, 66, 74, 88].

Some writers are under the impression that TNCs can supplement transit [30, 47, 50].

Various authors view TNCs as competition to transit [28, 40, 46, 52, 53, 71, 76, 85].

There are those that believe TNCs want to replace public transit [32, 37, 39, 43, 52, 58, 63, 80, 83, 88].

Yet, there are authors who believe that TNCs may be a panacea to the first mile/last mile problem [40, 84, 88].

One opinion is how TNCs may substitute rather than complement or replace public transportation [86]."

So simply said, according to Kessler's research (2017) TNCs can;

1. *Complement* existing transport services. TNCs make the existing public transportation better, but not necessary. Some people argue that the combination is best. E.g. between a bus stop and a low-density area not normally served by public transport, the service of a TNC can be useful to complete the users' trip.

Figure 5: The use of a TNC for complement existing Transit (Kessler, 2017)

2. *Supplement* existing transport services. TNCs make the existing public transportation better, but it is a must-have, it is necessary TNC services are available. E.g. in the night hours [00.00 – 04.00 in the night] when public transport is barely available.
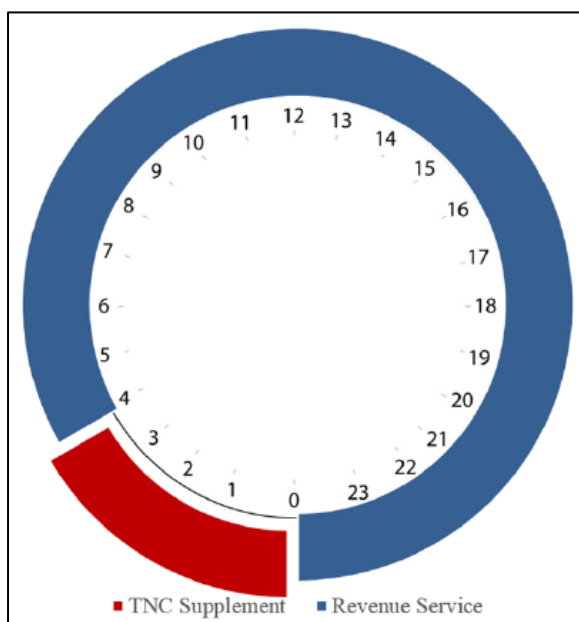

Figure 6: Optimal time for TNC supplantment (Kessler, 2017)

3. Be *competition* to existing transport services. In other words, TNCs are an alternative to the existing public transport; *"In the past year or so, there have been published accounts about how TNCs have devastated the taxi industry. TNCs have overwhelmingly enticed loyal taxi customers with not only airport transportation but local usage as well."* (Kessler, 2017).

4. *Replace* existing transport services. TNCs make existing public transport unnecessary and useless.

5. Be a *panacea* or *cure* for the first mile last mile problem [FMLM]. The FMLM problem refers to the situation to get to a public transport station or stop [first mile], and after they are dropped off at a station or stop [last mile] when travelling with public transport from A to B. TNC services can fill this gap in the FMLM problem.

6. *Substitute* instead of complement or replace. This means TNCs will overtake taxi services. According to Wang (2015), the taxi industry must focus on increasing TNC regulation, creating innovative technology, and modifying its service to appeal to customers.

2.1.4 Social and economic consequences of TNCs

Fourthly, it is necessary for this thesis to describe social and economic consequences of TNCs in general, obviously because it is a big part of the main research question. In a briefing of the European Parliament (2015), the following social and economic impacts are described;

- *"**Reduction of search costs:** consumers looking for a transport service were traditionally confronted with search costs for uncertain outcomes; consumers who hail taxis on the street are uncertain about the waiting time until the next taxi. Importantly, TNCs do not directly render services either in the street-hail market or in the taxi rank market. Even in the pre-booked market, TNCs' offer differs from dispatch centres' offer: consumers, rather than calling a dispatcher and waiting, or standing on the street, can demand a car from indoors and watch its progress toward their location. TNCs can also advise drivers on when to enter and exit the market - for example, by encouraging part-time drivers to work a few hours on weekend nights;*

- *A **better overview of quality and prices:** the drivers are rated by consumers and may be removed from the system if their rating falls below a certain threshold. Prices of the rides are estimated beforehand and can be easily compared across several applications, introducing greater transparency – something that taxi regulation attempted for years by requiring taxis to publish their price lists inside and outside of the vehicle;*

- ***TNCs provide ICT services assisting drivers*** *that otherwise would not engage in transport services due to restrictions on entry to the taxi industry. These restrictions limit competition, albeit for possibly justified reasons, and may be considered to lead to "large transfers from consumers to producers, economic distortions and associated deadweight losses". Where taxi licences are tradable, high and rising prices are commonplace - for example in 2007, a Paris taxi licence had a value between EUR 100,000 and EUR 125,000, licences in Sydney and Melbourne were valued A $300,000 (around EUR 189,000) and A $500,000 (around EUR 313,000) respectively while a New York taxi licence had a value as much as US $600,000 (around EUR 535,000). In most of these cities, licence prices were rising substantially. These high licence values reflect the substantial monopoly rents that can be accrued from the exploitation of scarce taxi licences;*

- *by facilitating access to information TNCs services may **allow for better utilisation of assets and skills**; improved utilisation of assets may result in positive outcomes for consumer welfare and efficiency gains in transport services."*

All these impacts described above are predominantly positive for the society, but there is also skepticism;

"…there are also a number of allegations that TNCs derive their competitive advantage from exploiting loopholes in regulatory requirements and lower standards of consumer safety/privacy. Some of these arguments are listed below:

- *TNCs could unfairly compete with taxi drivers by entering their market without following regulations or fare schedules;*
- *TNCs could aspire to become monopolies;*
- *TNCs´ cars or drivers could be unsafe or underinsured;*
- *TNCs could invade customers' privacy;*
- *TNCs could enable discrimination by drivers and passengers;*
- *TNCs could undermine working standards for taxi drivers and offer drivers poor compensating; and*
- *TNCs could present challenges related to taxation."* (European Parliament, 2015).

2.1.5 Go-Jek

Fifthly, the first of the two TNCs active in Yogyakarta, Go-Jek will be described and what its services are etc. As stated in the introduction Go-Jek was founded by Nadiem Makarim, Michaelangelo Moran and Kevin Aluwi in 2010 as a motorcycle ride-hailing phone service, which has evolved into an on-demand mobile platform and a cutting-edge app, providing a wide range of services that includes transportation, logistics, mobile payments, food delivery, and many other on-demand services. This according to their own webpage. Its headquarters are in the capital of Indonesia, Jakarta, but there is also an office established in Yogyakarta.

Go-Jek is active in Yogyakarta since November 16, 2015, according to Tadeus Nugrah, Go-Jek's operational vice president. They started there with an armada consisting of 200 motorcycle taxi drivers. Go-Jek now has more than 1.000.000 fleet [May 2018], according to Venkatesan, a marketing employee at Go-Jek. Nowadays Go-Jek is valued at about roughly $5 billion [February 26, 2018], according to Daga (2018). Also Go-Jek has investors like the companies Google and BlackRock [global investment management corporation], to be competition to deep-pocketed rivals (Daga, 2018). *"Sources said Blackrock and Temasek are investing about $100 million each in Go-Jek's lastest fundraising."* (Daga, 2018).

According to Xiaofeng Wang, senior analyst at consultancy Forrester, are these investments done for the following reason; *"Go-Jek is far beyond a ride-hailing app, it's a digital platform that dominates consumers' daily lives, including transportation, food delivery, logistics, and payment, etc."*

"That's also the key value that its key investors like Google and Tencent see. They know well about the power of the digital ecosystem, and Go-Jek has built it in Indonesia, like google in the U.S. and WeChat in China," (Wang in Daga, 2018)

As stated above, Go-Jek is far beyond a ride-hailing app, and it offers a lot of online services. These services will now be described briefly;

1. GO-CAR; provides ride-hailing service by car.
2. GO-RIDE; provides ride-hailing service by motorcycle. The first online motorcycle taxi service in Indonesia (Cosseboom, 2015).
3. GO-FOOD; An instant food delivery service with more than 125.000 merchants all over Indonesia (Setyowati, 2018).
4. GO-SEND; an on-demand courier service to send items and documents with no limits on distance within one delivery zone.
5. GO-BOX; Like GO-SEND, for moving large items using pickup trucks, single-axle trucks, and single-axle box trucks.
6. GO-AUTO; An auto care for maintenance, including car washing, as well as emergency repair for users' vehicle.
7. GO-MART; Offers app-based grocery shopping at supermarket listed in the Go-Jek app.
8. GO-SHOP; Like GO-MART, it allows customers to purchase goods from shops that are not listed in GO-MART.
9. GO-TIX; an entertainment ticket selling service.
10. GO-MED; a medicine delivery service, partnering with HALODOC on its 'Apotik Antar' feature (Setyanti, 2016).
11. GO-MASSAGE; Makes it possible for customers to request a personal masseuse to come over and give them massage treatment.
12. GO-CLEAN; A professional house cleaning service.
13. GO-GLAM; Personal hair stylist, nail care, waxing and facial service.
14. GO-PULSA; Phone credit top-up service, only can be paid by GO-PAY.
15. GO-PAY; An e-wallet service, Indonesia's fourth biggest.
16. GO-BILLS; A service to pay PLN electricity bills, purchase PLN electricity tokens, and pay BPJS insurance premiums.
17. GO-POINTS; A loyalty program; Users will receive a token for each transaction and can redeem with rewards through the app.
18. GO-PLAY & GO-STUDIO; An announced plan to start an online content business [GO-PLAY] (Tani, 2018), with GO-STUDIO as their production house (Ellis, 2018).

2.1.6 Grab

Sixthly, the second major active TNC in Yogyakarta, Grab, will be described with all its necessary information for this thesis. As described already in the introduction of this thesis, Grab is formerly known as Mytaksi and Grabtaxi. It is a ride-hailing/ridesharing company established in Malaysia and Singapore by Harvard Business School graduates Anthony Tan and Tan Hooj Ling in 2011. It started considering the inconveniences related to hailing a conventional taxi in Malaysia. An Uber- like application was developed which assigns available cabs nearby to commuters using mapping and location sharing (Regidor & Napalang, 2016).

Grab is active in Yogyakarta since 2014 with their first car hailing service in (Chandra, 2014), and in 2015 their motorcycle service rides could also be found in Yogyakarta and other cities in Indonesia like Jakarta (Tay, 2015). Nowadays Grab is worth $6 billion [February 26, 2018], as Southeast Asia's largest ride-hailing firm (Daga, 2018)

Nowadays Grab has also a for food delivery in Yogyakarta and eight more Indonesian cities. With these new services grab provides new economic opportunities for delivery partners (JakartaGlobe, 2018). Because Grab started in Malaysia and is active in eight different Asian Countries [Malaysia, Singapore, Thailand, Vietnam, Philippines, Cambodia, Myanmar and Indonesia] it has a big variety of services to

offer. Because this thesis took place in Indonesia, the eight services available in Indonesia will be described briefly below (Grab, 2018).

1. GrabCar; Your very own chauffeured GrabCar bringing you the freedom to ride with comfort and style.
2. GrabBike; A service that provides you access to find the nearest motorcycle driver for a ride.
3. GrabFood; A food delivery service that works together with local merchants and restaurants.
4. GrabExpress; An app-based express courier service that promises speed, certainty, and most importantly safety.
5. GrabParcel; A courier service with a selectable deliver time to suit your needs at a more economical price.
6. GrabTaxi; A service that provides you access to find the nearest taxi driver safely.
7. GrabHitch; Also known as Hitch Car, GrabHitch is a social ride-sharing initiative launched to match journeys between private car drivers and commuters heading the same way at the same time. Drivers choose to share their rides with passengers and get paid a basic fare that covers their petrol costs, while passengers enjoy a socially interactive ride that is 20-40% cheaper than alternative private transport options (Grab, 2016).
8. GrabRent; A service where you are able to book a GrabCar with a driver for a duration of your choice. When you have the need to travel to multiple locations in the same city for a couple of hours.

Some other services Grab offers in other Asian countries are e.g.; GrabShare, GrabCoach, GrabShuttle, GrabShuttle Plus, GrabFamily, GrabJust, GrabRental, GrabCycle/GrabBike, GrabExpress and GrabPay. These services are mostly all available in Singapore, according to the Grab website (2018).

Noticeable is that the first 5 services Go-Jek and Grab are offering are similar services. The rest of the list of the services do not match each other.

2.2 Research model

All the theory about the definition of a Transportation Network Company, its purpose, the impact on existing public transport and its social and economic consequences discussed in the preceding paragraphs will serve to provide the scope for this research. By applying this scope on the relation between Transportation Network Companies and the society in Yogyakarta, in-depth insights will be obtained. This all is reflected and illustrated in the research model below. The theories will lead to the conceptual model, and with the in-depth interviews with TNC driver, conventional taxi drivers and TNC customers in Yogyakarta [the case study of this research] it will form the core of this research. These results will be analyzed, and this will hopefully lead to better understanding of the influences TNCs have on the society in Yogyakarta.
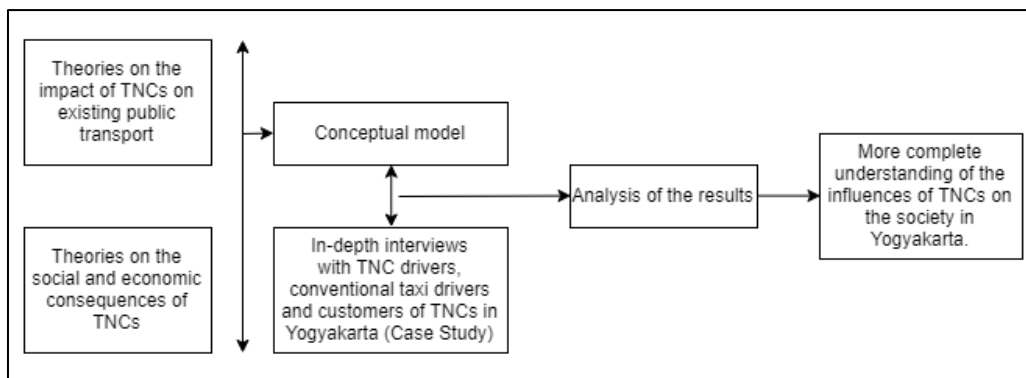

Figure 7: Research model

2.3 Research questions

Based on the research goal, which was *"to give an in-depth insight in what the influences are that TNCs have caused and are causing on the society in the City of Yogyakarta since there appearance."*, and the theoretical framework the following central question came forward.

Central question:
"What are the influences of Transportation Network Companies on the society in Yogyakarta?"

To answer this central question as accurate as possible, three different sub questions are formed. These sub questions will provide this research with data from three different points of view, namely from the TNC driver's point of view, the TNC customers' point of view, and finally the point of view of the conventional taxi drivers.

Sub question 1:
What is the view of TNC drivers on the existence of TNCs?

Sub question 2:
What is the view of customers of the TNCs on the existence of TNCs?

Sub question 3:
What is the view of conventional taxi drivers on the existence of TNCs?

The choice of approaching the subject from these three different points of views is because of the following reasons.

The first reason is that these sources are primary sources or original sources, because all the people from the three groups [TNC drivers, TNC customers, conventional taxi drivers] who will be interviewed have original information about their experiences about TNCs, especially the second group [TNC customers]. It is also important for this research that a bottom-up approach is used, because this will hopefully provide this research with data that is new and refreshing from local people themselves.

The second reason these viewpoints are chosen is that it will give data and information from three different perspectives, possibly both positive and/or negative. This is important because the aim of this research is to give broader understanding of the influences of TNCs in Yogyakarta, both positive and negative.

A third reason is that these groups are relatively easy to approach. This is important because the time for the fieldwork of this research has limitations [1 month]. Also, fieldwork for this thesis can be done fairly easy by using the services of TNCs myself, but also using conventional taxi's to see possible differences. The fieldwork can be possible data and can be seen as part of the second group who will be interviewed, namely the customers of TNCs because I will be one myself during my time in Yogyakarta.

2.4 Conceptual model

The conceptual model of this research will schematically represent how TNCs in the real-world influence the society in Yogyakarta in this case. This conceptual model is based on the theoretical framework and its findings and on the research model. In the research model and the theoretical framework some general ideas about social and economic consequences from TNCs are described. Also, the general impact of TNCs on existing public transport are described. This will form the core of this research. These consequences will be explored from the three different viewpoints, described above. The conceptual model for this thesis is as follows:
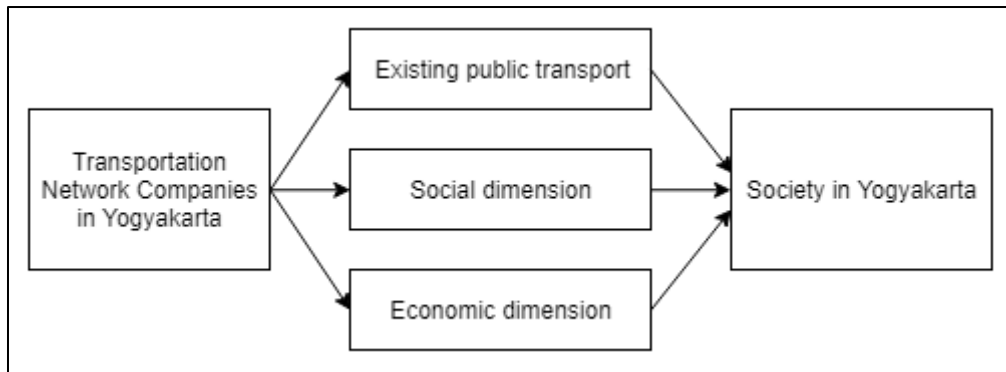
Figure 8: Conceptual model

As described, Transportation Network Companies [TNCs] have an impact on existing public transport, social consequences and economic consequences. These three subjects will be researched in this thesis to finally conclude what the influences are on the society in Yogyakarta. Important is that no legal consequences will be researched, as said in paragraph 1.2; *"In short, the legal consequences of the TNCs will not be answered and described in this thesis. This because of the reason these kinds of questions are too complicated to answer in the limited time frame [one month], despite it also would be also very interesting.*

The influence of TNCs on the existing public transport will be mainly researched based on the six described points in paragraph 2.1.3. These six points were that TNCs could;

1. *Complement* existing transport services
2. *Supplement* existing transport services
3. Be *competition* to existing transport services
4. *Replace* existing transport services
5. Be a *panacea* or *cure* for the first mile last mile problem
6. *Substitute* instead of complement or replace

The social and economic dimension will be researched in general by the following points, described in paragraph 2.1.4. These points will research if in the social and economic dimension in Yogyakarta is/are:

1. *Reduction of search costs*
2. *A better overview of quality and prices*
3. *ICT services assisting drivers by the TNCs*
4. *A better utilisation of assets and skills*

But also negative sides;

5. *Unfair competition with taxi drivers by entering their market without following regulations or fare schedules*
6. *Aspirations of TNCs to become monopolies*
7. *Unsafe or underinsured cars and drivers of TNCs*
8. *Customers' privacy which is invaded by TNCs*
9. *Discrimination by drivers and passengers of TNCs*
10. *Undermined working standards for taxi drivers and offer drivers poor compensating by TNCs*
11. *Challenges related to taxation by TNCs.*

These three described main subjects will be the core of the research and lead to an analysis which will describe the influence on the society in Yogyakarta. New findings which are not described yet above, will certainly be mentioned also in the analysis.

Chapter 3 – Methodology

In this Chapter the methodology of this thesis will be outlined and explained. This is the practical side of the research. With the goal of this research and theories related to the subject in mind, the need is to develop a research strategy which makes sure that it is possible to come to a well substantiated conclusion at the end of this research. Strategy focuses on the collection and processing of material and data, to find a valid answer on the central research question. As reminder the central research question of this bachelor thesis is:

"What are the influences of Transportation Network Companies on the society in Yogyakarta?"

3.1 Research strategy

The methodological insights are mainly based on Creswell (2012) and Verschuren en Doorewaard (2007). In their book *'Het ontwerpen van een onderzoek'* (2007), they discuss five different research strategies; survey, experiment, grounded theory, desk research and the case study. To come to a best fitting research strategy, there are five key questions asked; (1) Does the research aim to give a broad overview of a specific field or an in-depth description of a phenomenon within a certain space- and timeframe; (2) Does the research intends to quantify or qualify and interpret; (3) Does the research need existing data, rather than primary empirical data or a mix of both to answer the research questions (Verschuren & Doorewaard, 2007).

As said in the research goal; *'The aim of this thesis is to give an in-depth insight in what the influences are that TNCs have caused and are causing on the society in the City of Yogyakarta since there appearance.'* It can be said this research wants to give an in-depth description of a phenomenon, the TNCs, in a certain space- and timeframe, namely Yogyakarta since the appearance of the TNCs, 2014, till June 2018. Naturally, this study intends to qualify, and certainly not qualify the subject. Finally, this research needs a mix of both existing data and primary empirical data to answer the central research question and the three sub questions.

A qualitative research strategy has been chosen because in this way of research it is possible to gain deeper understanding and thorough knowledge of the research subject. It will, in this study, be more useful than a quantitative data collection method and analysis referring to the research questions.

More specific, the research strategy that fits best with the research goal and main question, as cited above, is the case study strategy. This because the ability with a case study to get valid and in-depth insights on the topic. Furthermore, a case study 'involves the study of a case within a real-life, contemporary context or setting' (Yin in Creswell, 2012). In this qualitative research approach the investigator studies a real-life, contemporary bounded system (a case) over time, through detailed, in depth data collection involving multiple sources of information (Creswell, 2012).

When using the case study strategy, it is important to have an identification of the case. In this research the case are three groups of people involved with TNCs and its influences. It is important that these groups are accessible to be protentional interviewee. The way I came to the three groups, TNC drivers, TNC customers and conventional taxi drivers was during the time in Yogyakarta. By talking to a lot of locals who spoke English and made use of the services of Go-Jek and Grab, the first group was formed, namely the customers. I realized when I had conversations with them about my research subject, they could provide me with a lot of information and were very open to talk about it. The second group which was worth and important to interview were the employees from the TNC themselves. This group was relatively easy to find, because I just had to order a Grabcar and/or Go-Car via the mobile applications Grab and/or Go-Jek. The only problem with this group that not all of the drivers spoke English. I had the fortune to came in touch with two TNC drivers who spoke English

very well, called Agus and Heaven [see chapter 4]. I asked them if they were interested to be interviewed for research purposes and they agreed. Especially Agus could provide me with a lot of useful information, and even offered me to join him during a day of work. Directly I said yes, but when we made an appointment, he did not show up at the agreed time [see paragraph 3.3].

The last group, taxi drivers, was the most difficult group to interview. Not only because of the reason it was very hard to order a taxi for a non-speaking Indonesian person, but also because of the reason the taxi drivers could not speak English a single word [see paragraph 3.3].

3.2 Research material

The first step to gain data is maybe the most important step; to consult already existing publications, because it is important for a case study to consult a wide variety of qualitative data. Qualitative data such as news articles, scientific publications and more existing documents and literature about the phenomenon TNCs, Go-Jek, Grab, the consequences of TNCs on existing public transport in General, the Yogyakarta region etcetera. [see chapter 2]. These sources gave this case study a strong theoretical base on which the further research is based on, namely the fieldwork, observations and interviews.

Secondly, and the data which is most important to consult for this case study will be primary sources, as said in paragraph 2.3. These primary sources are the TNC drivers, TNC customers and conventional taxi drivers. These groups will be interviewed when in Yogyakarta. The interview guide will be based on the theory and documents consulted as described above and in chapter 2. Also, it is important to not have a tunnel vision based on the literature when interviewing. In other words, it is necessary to listen carefully to the interviewee to gain diverse, new and unique information. Furthermore, it is important to ask not only questions which were prepared, but also ask questions when something new and interesting will come up during the interviews and/or conversations.

Thirdly it is also important to consult own observations and own fieldwork which is done in Yogyakarta. As said, this fieldwork can be seen as part of the second group who will be interviewed, namely the customers of TNCs because I will be one myself during the time in Yogyakarta [see paragraph 2.3].

3.2.1 Content analysis and search engines

To begin this research, it was important to have knowledge about existing theories and have the definition of aspects such as what a TNC is and what its purpose is. This can be consulted at the theoretical framework [see paragraph 2.1]. This data was found using search engines on the internet. Especially search engines with scientific data, like google scholar. A lot of scientific publications about TNCs were consulted during the search, but also scientific publications about the consequences of TNCs in general. There were quite a few scientific publications from the past years about TNCs in general, but not about the specific Yogyakarta region. To obtain information about this region empiric information was obtained by executing interviews, observations and other fieldwork. Furthermore, news articles about Indonesia, especially the region Yogyakarta were consulted using search engines. Based on all this theoretical knowledge the interview guide was developed and the also the fieldwork and observation scheme was made based on the consulted data.

3.2.2 Interviews

Next to the content analysis, interviews will be an important data source for this case study. For this research six people in total will be in-dept interviewed. These interviews will be divided in three sub groups, namely TNC drivers, TNC customers and conventional taxi drivers [see paragraph 2.3]. I had the luck to meet two TNC drivers who spoke English well, so no one was needed to translate *'Bahasa*

Indonesia' [Indonesian] to English or possibly Dutch. I got both phone numbers of these TNC drivers because I told them about the research and they were very interested to tell me their view and story on TNCs and being a TNC driver. Also, most of the time the rides we needed were very short, so the time interviewing them was also relatively short. This means both interviews are consisting of multiple shorter interviews/conversations I had with the drivers. As said, we spoke a lot about their view on TNCs and their job as a driver, but also about Yogyakarta as a city, their family, our journey in Yogyakarta and a lot more serious and funny subjects. Although I had an interview guide, the conversations lead their own way most of the times, but altogether I obtained a lot of empirical data [see paragraph 3.3].

To analyze the data of these interviews pen coding will be used. Categories will be made on the most important themes coming forward during the interviews. After coding the interviews and reading through the data and interviews several times it is time to compare the results with the existing theories described in paragraph 2.1. Because there were only six interviews, there was no need to use a program like ATLAS.ti. The program used to save the interviews was Microsoft Word, but also a lot of pen and paper was used. By using open coding, some important and refreshing insights were found comparing the interviews with the existing theories.

3.2.3 Field work & Observations

A third source for this thesis will be my own observations and fieldwork which is done in Yogyakarta. By doing this fieldwork and observations I was able to be a part of this research myself, because I placed myself in the middle of my research. A lot of the times it was also necessary to use services from the existing TNCs in Yogyakarta. For example, during the month in Yogyakarta I used the services of TNCs almost every day a several times. Most of the time to travel from our temporary home address to the Gadjah Mada University [UGM] [see figure 9]. This route had a length of 14.2 kilometers and took around 30 minutes when there was no traffic jam which were there most of the time. Because of this reason it was more useful to go there using our own motorcycle or using the TNC services like GO-RIDE [a service of GO-JEK] or GrabBike [a service of Grab].
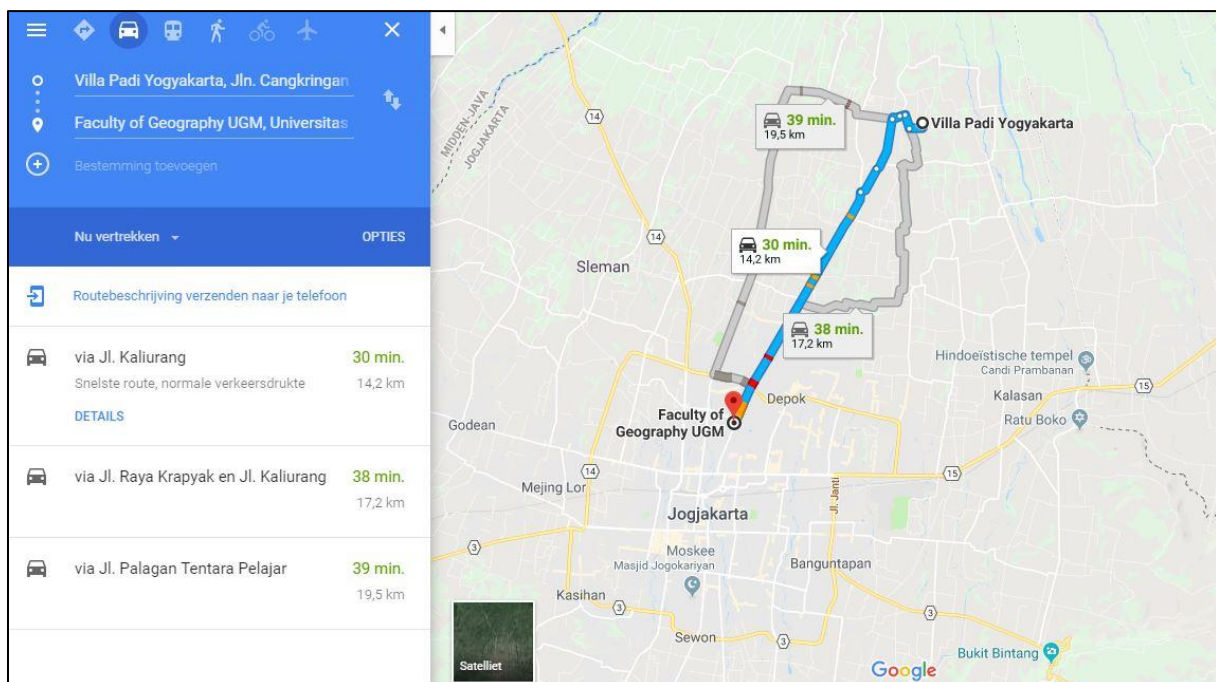

Figure 9: Route from our home address to the Gadjah Mada University

Other services of GO-JEK and Grab I used during the time in Yogyakarta were GrabCar and go-car, also for going to University, but also during trips to places around Yogyakarta and in the city center of Yogyakarta itself. We also used go-food twice, to get food delivered at our home address from warungs [small restaurants] in the region. Observations done in Yogyakarta mainly existed of seeing a lot of GO-JEK and Grab drivers on motorcycles. It was almost impossible to not see them, because the fleet was so big it was almost impossible.

The empirical data retrieved from this fieldwork and observations were very useful to understand the role TNCs have in Yogyakarta, instead of only using data of interviews and scientific publications. To analyze this data, I read through the notes I made during the month in Yogyakarta when using the TNC services and being a TNC customer myself. The data retrieved from this fieldwork and observations were especially used to write chapter 5, the TNC customers viewpoint [see chapter 5].

3.3 Reflection on methodology

During the month in Yogyakarta, the interviews with the TNC drivers and TNC customers went very well. The main reason for this is that the interviewee [Agus, Heaven, Afan and Hendry] were very open, friendly and interested. Also, all of them spoke English very well so there were no difficulties understanding each other. The reason for this was that Agus had worked at the embassy of Indonesia in Singapore. Heaven, Afan and Hendry were all in their 20's and college students, so their English was at a good level.

As said, Agus offered me to join him during his work, but he did not show up at the agreed time because he had other things to do first. I still waited for 1 hour more, but he was still busy. This was typical in the Indonesian culture and lifestyle to me. Also fellow students from Indonesia who I have met confirmed this that when you have an appointment with an Indonesian, you must be very patient. This because they are always late and never on time. I knew this before I made an appointment with Agus, but I did not expect him to be this late. All in all, it disappointed me, because I was really looking forward to join him during his work to interview passengers. This was a huge opportunity to also speak to Indonesians who did not speak English, because Agus could translate from Bahasa Indonesia to English. We still meet each other the same evening to have some drinks, because during the time there we became friends and it was one of our last days in Yogyakarta. Also Afan joined that evening.

The second group, the TNC customers [Afan and Hendry] also spoke English. For this reason, a translator was again not necessary. The interviews with Afan and Hendry were also very informative, especially with Afan because we became good friends and we have meet also more than one time. Afan was living in Yogyakarta since he started his study, so around 3/4 years he was living there. In those years he had made a lot of use of the services of the TNCs he told me. Hendry had lived his whole life in Yogyakarta, so he also made a lot of use of the TNC services. For this reason, they provided me with a lot of information for this research. I was also a TNC customer myself, aware and not aware. I was sometimes not really aware doing fieldwork when I made use of a TNC, because sometimes there just was no other option of transportation [see chapter 5].

The last group, the conventional taxi drivers, was the most difficult group. This had two reasons; the first reason was the language barrier. The times we made use of a taxi, it was late in the evening when no Go-Car or Grabcar was available. In this case a conventional taxi was the only option. The times being in these taxi's, the drivers were all the time around middle age and did not speak a single word English. For this reason, it was impossible to interview them. The only possible thing to do was fieldwork, so take notes of the costs for the travelled distance and time [see chapter 6]. The second reason was it was hard to order a conventional taxi by calling the taxi central. They also did not speak

English, so it was hard to explain where they should pick us up and where they had to drop us off. The times we used a taxi, we asked locals to call the taxi central for us. Despite of this disappointing effort to interview conventional taxi drivers, there is a lot of secondary data to find about this group. Also, it was useful to experience a conventional taxi in Yogyakarta, so a comparison could be made between a TNC taxi and a conventional taxi. The thing that could have been done better was to have a translator with me during the rides in a conventional taxi. In this way the language barrier would not have been a problem.

Chapter 4 – The TNC drivers' viewpoint

In this chapter the viewpoint of the TNC employees, the TNC drivers will be described and analyzed. Two TNC drivers were interviewed for writing this chapter, going by the names of Agus Sutanto and Heaven [what he called himself]. Also, a variety of scientific publications are consulted for writing this chapter. As a reminder, the sub question for this chapter is;

What is the view of TNC drivers on the existence of TNCs?

The outcome of the interviews with these TNC drivers and the scientific publications will be divided and analyzed into three dimensions; the impact on existing public transport, social consequences and economic consequences.

This chapter will start with the two interview reports with the two TNC drivers, as described above.

4.1 Interviews with TNC drivers

4.1.1 Interview with Agus Sutanto

The first interview done in Yogyakarta with a TNC driver was with a man called Agus Sutanto. He was born and raised in Yogyakarta and has lived almost his whole life in the city, expect for a time when he was working at the embassy of Indonesia in Singapore. This is one of the possible reasons he spoke the English language so well. He was around 40 years old and was a proud dad of 4 children which he also showed pictures of. When we first met him, we needed a very short ride. Afterwards we asked his phone number, because he spoke English so well, so we could message him on WhatsApp to get a taxi ride more often. This is how we met him. He gave us a ride approximately 10 times, so I had a lot of time to talk with him and question him. Therefore, this interview contains information from more than 1 time, because a lot of the taxi rides were quite short. Agus was working around 4 years now for both Go-Jek and Grabcar and was working there fulltime. He was really well-known with Yogyakarta and knew a lot of places for us to go to, like restaurants, coffeehouses and sightseeing's, but also places where people were selling liquor and beer the illegal way, because it was not permitted anymore to sell hard drinks.

When I said Agus what this research was about, he was very interested. As I said, Agus was living almost his whole life in Yogyakarta so he could make a comparison over time. This means he knew how the taxi business was in the past before the mobile applications of the TNC like Go-Jek and GrabCar and how the times have changed. He told me that in the present-day, Go-Jek and GrabCar drivers are taking the jobs away from the conventional taxi drives. The reasons he gave were that Go-Jek and GrabCar were simply way cheaper than conventional taxi's. He said it is how the market works and I could not disagree with him. Also, he said that Go-jeks and GrabCars were easier to order, because it was working with a mobile application instead of calling a conventional taxi company. He knew because he gets a lot of tourists in his taxi, and they almost only use Go-Jek and/or GrabCar. When I asked him if a lot of drivers like him spoke English so well, he agreed. He told me that a lot of Go-Jek and GrabCar drivers were students, or at least young people who are speaking English well a lot of the times. Compared to conventional taxi drivers, who were a lot of the times older and did not master English at all.

We also talked about if Agus had some bad experiences as a Go-Jek/GrabCar driver. He told me that one time when he picked up passengers who ordered his GrabCar, a conventional taxi saw this and chased him and his customers. The conventional taxi was driving really close behind him and was honking and signaling with his headlights. He also filmed it at the time and had it on his mobile phone. He showed it to me and told me his passengers were really scared at the time. Agus himself was also nervous in that situation and it was a negative experience for him for sure. He told me that the conventional taxi driver saw him as unfair competition who was taking away all the customers.

Despite he experienced this, he was not quitting his job, because he liked it too much. This also was the only bad experience he had during the 4 years as a Go-Jek/GrabCar driver he told me.

Agus also described the service he provided as semi-illegal. He used the term semi-illegal because in the constitution of Indonesia, there was not a law against transport services like Go-Jek and Grabcar. But there was a lot of going on in the news about these services to permit or forbid them. Agus thought they would allow the services in Indonesia, because a lot of people were making use of it and it was fairer, because of the relative low price for the service so more people can use the transport service.

The last day, the 3rd of April, Agus offered me to join him during his work so that I could do some short interviews with people he was picking up. Obviously, I said yes, but unfortunately, he was late and had no time anymore. Later that evening he picked us up to have a few drinks, and we visited him and his wife at their warung, were we had a nice dinner.

4.1.2 Interview with 'Heaven'

The second interview with a TNC driver was with a man who called himself 'Heaven'. He was 21 years of age and was also born and raised in Yogyakarta and studied there. Next to his job as a Go-Jek driver he was also a tour guide in Yogyakarta according to himself. He really liked his job because he likes it to meet new people, especially tourists. He could speak English well and I had some funny and serious conversations with him the times he drove us around the city of Yogyakarta. I also asked his phone number to get a ride more often. The information in this interview report is also from more than one conversation with Heaven.

When I spoke with Heaven about the difference between a Go-Jek and a conventional taxi, the first thing he mentioned was that Go-Jek drivers are most of the time a lot younger than conventional taxi drivers. This because, according to Heaven, older people cannot cope with new technologies like a Go-Jek and Grab application on a smartphone. He also thought one of the main reasons Go-Jek was more popular than conventional transport services because it is also a lot easier to use an application to order a taxi, instead of calling a conventional taxi to pick you up. Heaven himself also used the service of Go-Jek when he needed a ride to go somewhere.

The costs were also a huge thing according to Heaven. The drive we had from our house to the city center, which was around 14 kilometers, had a price of 21.000 IDR, where a taxi would ask a standard price + additional costs, which would sum up to around 500.000 IDR. This would be a major price difference, so it would be much more attractive to order a Go-Jek.

Furthermore, Heaven told me that he liked the way the application of Go-Jek/Grab worked for the drivers themselves. He could just turn on the application and turn his availability on, so that he could get messages from people who needed a ride. In this way he could decide when he wanted to work and when not, so he was not stuck to a schedule when he had to work and when not. He was using his own new car he told us, which he also liked a lot. It was an investment for him to buy his own car and use it to earn some money with it. He also knew some peers who were also a Grab/Go-Jek driver.

When Heaven and I were talking about bad experiences, he told me that he had no major bad experiences in the time he was working as a Go-Jek driver, which was around 1 year. He only had some negative encounters with some customers who were not friendly, but not aggressive or something similar. He just could not have a nice conversation with them he told me. Also, another bad experience was that the location determination of the Grab application was not always working that well, so it was hard to pick up a customer based on the location. It was working with the Go-Jek application way better. He told me that the reason for the difference was that Go-Jek was founded and developed in Jakarta, so it was a product of Indonesia.

4.2 The impact on existing public transport

4.2.1 Competition

TNCs are *competition* to existing transport services. In other words, TNCs are an alternative to the existing public transport; *"In the past year or so, there have been published accounts about how TNCs have devastated the taxi industry. TNCs have overwhelmingly enticed loyal taxi customers with not only airport transportation but local usage as well."* (Kessler, 2017). According to TNC driver Agus this is what is happening in Yogyakarta;

"…One time when he picked up passengers who ordered his GrabCar, a conventional taxi saw this and chased him and his customers. The conventional taxi was driving really close behind him and was honking and signaling with his headlights... …He told me that the conventional taxi driver saw him as unfair competition who was taking away all the customers."

4.2.2 Replacement

Next to being competition, TNCs can replace existing transport services, the make existing public transport unnecessary and useless. This was also the view of Agus;

"…This means he knew how the taxi business was in the past before the mobile applications of the TNC like Go-Jek and GrabCar and how the times have changed. He told me that in the present-day, Go-Jek and GrabCar drivers are taking the jobs away from the conventional taxi drives. The reasons he gave were that Go-Jek and GrabCar were simply way cheaper than conventional taxi's. He said it is how the market works…"

Another reason for this replacement is the following, according to Agus;

"Also, he said that Go-jerk's and GrabCars were easier to order, because it was working with a mobile application instead of calling a conventional taxi company. He knew because he gets a lot of tourists in his taxi, and they almost only use Go-Jek and/or GrabCar."

Heaven gave also this reason for the replacement of the existing public transport;

"Go-Jek drivers are most of the time a lot younger than conventional taxi drivers. This because, according to Heaven, older people cannot cope with new technologies like a Go-Jek and Grab application on a smartphone."

Another reason is the mastering of the English language, so it attracts tourists;

"He told me that a lot of Go-Jek and GrabCar drivers were students, or at least young people who are speaking English well a lot of the times. Compared to conventional taxi drivers, who were a lot of the times older and did not master English at all."

4.3 Social consequences

4.3.1 Networking

This means a network of a TNC driver could increase by being a TNC driver; *'Mainly, this would be contingent on the passenger's personality. A driver may strike up a conversation which leads to either increased business from building loyalty and trust to being introduced to new people facilitating other unknown opportunities and "learning about different cultures"* (Uber driver Invite Code, 2017). A good example is the following quote from the interview with Agus:

"Afterwards we asked his phone number, because he spoke English so well, so we could message him on WhatsApp to get a taxi ride more often."

This also emerged in the interview done with Heaven;

"I had some funny and serious conversations with him the times he drove us around the city of Yogyakarta. I also asked his phone number to get a ride more often."

4.3.2 Customer relations
Next to increasing the TNC drivers' network, the appearance of TNC could also create customer relations, both positive and negative. In my experience this was also the case with both TNC drivers, especially with Agus [both positive relations];

"Later that evening he picked us up to have a few drinks, and we visited him and his wife at their warung, were we had a nice dinner."

For Heaven this was also applicable;

"He really liked his job because he likes it to meet new people, especially tourists."

These examples are generally positive, but the relation with a customer could also be negative, in Heavens case;

"He only had some negative encounters with some customers who were not friendly, but not aggressive or something similar. He just could not have a nice conversation with them he told me"

The solution to this negative encounter is that drivers and passengers could rate each other, so Heaven could give the customers a bad rating, so he does not have to pick them up anymore.

4.3.3 Safety issues
The safety could be a possible negative consequence of being a TNC driver, because you never know who will be in your car. *There is a risk of being robbed, beaten, or worse, as a result of the lack of passenger unfamiliarity* (Kessler, 2017). Fortunately, in the case of the two interviewees this was not the case.

Another safety issue, which was not in the consulted scientific publications was the following one;

"He told me that one time when he picked up passengers who ordered his GrabCar, a conventional taxi saw this and chased him and his customers. The conventional taxi was driving really close behind him and was honking and signaling with his headlights… …he also filmed it at the time and had it on his mobile phone. He showed it to me and told me his passengers were really scared at the time. Agus himself was also nervous in that situation and it was a negative experience for him for sure."

However, in newspapers it can be read that there are even violent protests against Go-Jek and Grab drivers in Indonesia in 2016; *"Images of Go-Jek drivers being attacked by protesters were among the more disturbing sights from the day. However, there were also reports in the media of Go-Jek drivers, angered by the attacks on their colleagues, fighting with taxi drivers as well."* (Coconuts.co, 2016). Not only conventional taxi drivers protest, also Grab and Go-Jek drivers rally against low fares in Jakarta. *"The drivers want the government to provide them with legal and social protection because they are part of the national workforce"* (Atimes.com, 2018).

4.3.4 Mobility justice
Heaven, also a user of the services of Go-Jek, thought the appearance of TNCs in Yogyakarta were making the public transportation fairer;

"it was fairer, because of the relative low price for the service so more people can use the transport service."

Also can be concluded Agus was more or less thinking the same;

"The reasons he gave were that Go-Jek and GrabCar were simply way cheaper than conventional taxi's. He said it is how the market works"

"Agus also described the service he provided as semi-illegal. He used the term semi-illegal because in the constitution of Indonesia, there was not a law against transport services like Go-Jek and grabcar. But there was a lot of going on in the news about these services to permit or forbid them. Agus thought they would allow the services in Indonesia, because a lot of people were making use of it and it was fairer, because of the relative low price for the service so more people can use the transport service."

4.4 Economic consequences

4.4.1 Increased Income

Economic consequences from the viewpoint of TNC drivers are diverse. The first one is obvious, it is a source of income for the employees of the TNCs. Their income increases with the existence of Go-Jek and Grab. The drivers can decide by themselves when they want to work, by turning on their application and turn their availability on;

"…Heaven told me that he liked the way the application of Go-Jek/Grab worked for the drivers themselves. He could just turn on the application and turn his availability on, so that he could get messages from people who needed a ride. In this way he could decide when he wanted to work and when not, so he was not stuck to a schedule when he had to work and when not."

So their income depended on whenever they want to work and how much customers they would get each day, which was different each day. Also they can make an income using their own car:

"He was using his own new car he told us, which he also liked a lot. It was an investment for him to buy his own car and use it to earn some money with it."

Also, the drivers could choose which of the customers who needed a ride they would pick up. If it was not profitable enough, they would not do it. Obviously, they would pick up the nearest customers most of the time instead of customers who are far away. So there income also depends on the length of the ride their customers needed. This is also described in the scientific publication *'How Transportation Network Companies could replace public transport in the United States'* (Kessler, 2017).

4.4.2 Multiple employers

Also the TNC drivers can work for more than one TNC, like Agus did. This way they have more chance to have customers which will result in a higher income.

"Agus was working around 4 years now for both Go-Jek and Grabcar and was working there fulltime."

This way he was available for both Go-Jek users and Grab users so he was available on the two platforms at the same time.

4.4.3 Multiple opportunities

Although the TNC drivers who were interviewed for this research only transported people, they also could be transporting food, items and documents, groceries, medicines etcetera [see paragraph 2.1.5 and 2.1.6]. This would mean also more income and a better economic situation. So you can conclude with the appearance of TNCs there is more work available [for TNC drivers].

Chapter 5 – The TNC customers viewpoint

In this chapter the viewpoint of the TNC customers, the TNC riders will be described and analyzed.

Two TNC customers were interviewed for writing this chapter, going by the names of Afan Setiawan Hertanto and Hendry Anipar. Also, a variety of scientific publications are consulted for writing this chapter. The fieldwork and observations done by myself will also be consulted for writing this Chapter. As a reminder, the sub question for this chapter is;

What is the view of customers of the TNCs on the existence of TNCs?

The outcome of the interviews with these TNC customers and the scientific publications will be also divided and analyzed into three dimensions; the impact on existing public transport, social consequences and economic consequences.

This chapter will start with the two interview reports with the two TNC customers, as described above.

5.1 Interviews with the TNC customers

5.1.1 Interview with Afan Setiawan Hertanto

The first interview with a TNC customer is with a student called Afan Setiawan Hertanto. Afan is a student at the Mercu Buana University in Yogyakarta and was living in Yogyakarta since he started studying [since 2013]. He was 23 years old so had the same age as me. We met him when we, as a group, went into the city. We went to the Janur café in the more touristic area of Yogyakarta, in the south of Yogyakarta. Afan was working there as bar staff/waiter. It was not busy at all at the time, so he joined us at playing pool. He was very open and interested during the conversation when we started talking. He told us he met a lot of tourist from the Netherlands and was asking where we were from. We told him that we were from Nijmegen and were in Yogyakarta to do research about different subjects. I told him where my research was about, and he liked the subject, and started telling things about the TNCs and public transport in Yogyakarta spontaneously. I asked then if I could use this information for this research, and he obviously approved this. Afan also told us the next day was his birthday [at midnight], so we sang a birthday song for him and went out for some drinks later that night. To keep in touch, we swapped phone numbers and our Facebook profile, so we could meet other times those weeks. My fellow students from Nijmegen and Afan met more often those weeks. We had dinner together, went out together and played pool more often. Therefore, all the information described below is a report from all the data collected the times we met him.

When I asked Afan what he thought of the appearance of Go-Jek and Grab compared with the conventional taxi's and other public transport, he said that he only used Go-Jek and his own motorcycle, which he bought for only €80,- [≈1.375.000 IDR]. He never ordered a conventional taxi. He told me that the GO-RIDE, the ride-hailing service by motorcycle, was the best way to go from A to B in Yogyakarta. This because of the frequent traffic jams. When you are on a motorcycle, you could just pass the cars left and right. I said to Afan that I also did the same thing when riding an own motorcycle, so it was familiar. He also said there were always a lot of GO-RIDES available [motorcycles], even when it was in the middle of the night. When I asked him what he thought what would happen to conventional taxi's in the future, he said that he thought they would still exist, but way less than nowadays. He did not believe the TNCs would let the conventional taxis disappear. This because of the idea that existed conventional taxis are more reliable than TNC services, but he did not agree himself. Afan said you could also rely on TNC services, maybe even more. This because they are much faster than conventional taxis, because they are always in your area because there were a lot in Yogyakarta.

He liked the TNCs also because they were simply much cheaper than conventional public transport methods, which I could confirm myself. Also, you have the option to pay by credit card to use a service of Go-Jek, but for Grab Afan was not sure. This means you just could pair your credit card with your Go-Jek account and be able to have a ride whenever you wanted, without having cash on you.

When I asked about possible negative sides of TNCs in Yogyakarta he told me about the semi-illegal status of Go-Jek, Grab and Über in Yogyakarta, but even though the debate about the services being legal/illegal, they still existed. He thought it was a fair way to use public transport. One negative side he told me was that when you were in an area far from the city center of Yogyakarta, you had the chance that no TNC rides were available, so you would still need a conventional method to get somewhere.

5.1.2 Interview with Hendry Anipar

The second interviewee about being a TNC customer was Hendry Anipar. I met him in the center of Yogyakarta, when I was resting on a bench on my own. He asked me if he could sit aside me and we began a conversation. He asked me where I was from and what I was doing in Yogyakarta. I told him where I was from and that I was in Yogyakarta doing research about the influence of Go-Jek and Grab. He was also a student himself and he was always very interested in the stories people had from other countries. Hendry himself just began to learn German, because he wanted to study abroad in Germany, so we had some small German conversations. He also told me that he travelled a lot, especially in Indonesia. He went from West-Java to East-Java by motorcycle and used it as much as possible. He described himself as a 'free spirit' because he said he always saw things different than most of the people. He also was a photographer and he showed me a lot of pictures of his journey. He asked if he could join us later that evening for dinner, so of couse I said yes. The time we had left I used to interview him, which he of course agreed to.

I started by telling him what my research subject was, so what the influences are of Transportation Network Companies on the society in Yogyakarta. I said him that Go-Jek and Grab were the active Transportation Network Companies in Yogyakarta. I asked him what his thoughts were on the difference between TNCs and conventional public transport, and what he thought would happen with the conventional transport services. He said that the existence of TNCs were a good thing, viewed from his perspective as a customer. The services of Go-Jek [also Grab] were fast, reliable and cheaper than conventional transport methods. He also mentioned that sometimes you do not have a choice between a TNC service or a conventional taxi. He once had to go from his home to the city center, but as usual, there was a huge traffic jam. Normally he would take his own motorcycle, but it had a flat tire. He was in a hurry, so he had the option between a conventional taxi or a Go-Ride, the motorcycle ride hailing service. For him it was not even a decision to make, because he never thought of the conventional taxi, because it would take way to long in the busy traffic in Yogyakarta. Also, you could order a GO-RIDE with literally 3 clicks on your mobile phone he said. The first for the pickup location, the second one for your drop off location. The last click was to order the GO-RIDE. He did also not believe conventional taxis would disappear, because still a lot of people made use of them, according to Hendry.

Later in the conversation I asked him what the appearance meant for the users of the services viewed socially. He said it was fairer with the appearance of TNCs, because it meant competition for conventional taxis, so the one with the lowest price would have more customers. In this case the TNCs had lower costs. Hendry thought this was nothing strange, but it was a good development for the society in Yogyakarta. This because not everybody in Yogyakarta has a lot of money, so with the appearance of TNCs they had the chance to make use of transportation without paying high prices. Also he mentioned that almost everybody could apply at Go-Jek to be a motorcycle driver. He did not

know the precise requirements, but it was an economic opportunity for people without jobs, or jobs which were paying not that good.

5.2 The impact on existing public transport

5.2.1 Complement

The complementation of TNCs on existing transport services means TNCs can make existing public transport better, but not necessary. A combination can be the best. E.g. between a bus stop and a low-density area not normally served by public transport, the service of a TNC can be useful to complete the users' trip. Afan believed this;

"What would happen to conventional taxi's in the future, he said that he thought they would still exist, but way less than nowadays. He did not believe the TNCs would let the conventional taxis disappear. This because of the idea that existed conventional taxis are more reliable than TNC services, but he did not agree himself. Afan said you could also rely on TNC services, maybe even more."

The last sentence is very interesting, because here Afan argues that TNC services are maybe more reliable than conventional public transport services, so the TNCs could also replace existing public transport [see paragraph 5.2.2 below]

Also Hendry thought the existence of TNCs were a good case, seen out of his perspective. He did not believe they would replace the existing public transport entirely.

"He said that the existence of TNCs were a good thing, viewed from his perspective as a customer... ... He did also not believe conventional taxis would disappear, because still a lot of people made use of them, according to Hendry."

5.2.2 Supplement

One interesting conclusion which can be made related to the interview with Hendry is that the TNCs in Yogyakarta brought something entirely new, namely the ride-hailing service by motorcycle. This is a good example of TNCs which can supplement existing public transport. TNCs make the existing public transportation better, but it is a must-have, it is necessary TNC services are available.

"sometimes you do not have a choice between a TNC service or a conventional taxi. He once had to go from his home to the city center, but as usual, there was a huge traffic jam. Normally he would take his own motorcycle, but it had a flat tire. He was in a hurry, so he had the option between a conventional taxi or a Go-Ride, the motorcycle ride hailing service. For him it was not even a decision to make, because he never thought of the conventional taxi, because it would take way to long in the busy traffic in Yogyakarta."

5.2.3 Competition

Also out of the perspective of customers, TNCs are competition to existing public transport. For customers this is a good case, because the prices can be kept as low as possible. This because of the rivalry between TNCs and existing public transport.

"He said it was fairer with the appearance of TNCs, because it meant competition for conventional taxis, so the one with the lowest price would have more customers."

5.2.4 Panacea/cure for the FMLM problem

From my own experience TNCs can also be a panacea or cure for the First Mile Last Mile [FMLM] problem. Again, the FMLM problem refers to the situation to get to a public transport station or stop

[first mile], and after they are dropped off at a station or stop [last mile] when travelling with public transport from A to B. TNC services can fill this gap in the FMLM problem.

This was the case when we went by bus to a big bus stop, but we were way out of the city center. We did not know what the number of the taxi central was, so we used Grabcar to give us a ride to the city center. Otherwise we did not know how to travel the 'last mile'.

5.3 Social consequences

5.3.1 Time saving

One of the most important reasons TNC services were used is because it saves time, especially in the busy city center of Yogyakarta;

"he said that he only used Go-Jek and his own motorcycle, which he bought for only €80, -[≈1.375.000 IDR]. He never ordered a conventional taxi. He told me that the GO-RIDE, the ride-hailing service by motorcycle, was the best way to go from A to B in Yogyakarta. This because of the frequent traffic jams. When you are on a motorcycle, you could just pass the cars left and right. I said to Afan that I also did the same thing when riding an own motorcycle, so it was familiar."

This could be also concluded according to the interview with Hendry;

"The services of Go-Jek [also Grab] were fast, reliable"

"The time factor may be the main advantage. Instead of having to physically flag down a taxi (especially during foul weather conditions) where it could plausibly take more than an hour for a vehicle to be available, a TNC can be at your service within minutes. This is much quicker than your traditional taxi, commuter bus or rail system." (Kessler 2017). Hendry gave a good example of this;

"Also, you could order a GO-RIDE with literally 3 clicks on your mobile phone he said. The first for the pickup location, the second one for your drop off location. The last click was to order the GO-RIDE."

This also refers to reduction of search costs [see paragraph 5.4.3 below].

5.3.2 Accessibility

The services of Go-Jek and Grab were very accessible, even for tourists like us. This is a big difference with conventional public transport methods, because they did not speak English most of the time so it was impossible to order a taxi by ourselves. Also the supply of Go-Jek and Grab motorcycles and cars available was huge, according to Afan and myself;

"…there were always a lot of GO-RIDES available [motorcycles], even when it was in the middle of the night."

But the services were not always accessible, according to Hendry;

"One negative side he told me was that when you were in an area far from the city center of Yogyakarta, you had the chance that no TNC rides were available, so you would still need a conventional method to get somewhere."

The conventional taxi was still needed in some situations.

5.3.3 Mobile justice

Another social consequence of the existence of TNCs according to the customers themselves is that it is a fair way to use transport, even though there was a debate about TNCs;

"When I asked about possible negative sides of TNCs in Yogyakarta he told me about the semi-illegal status of Go-Jek, Grab and Über in Yogyakarta, but even though the debate about the services being legal/illegal, they still existed. He thought it was a fair way to use public transport."

Also inhabitants with less economic resources could make use of the services of the TNCs.

"He said it was fairer with the appearance of TNCs, because it meant competition for conventional taxis, so the one with the lowest price would have more customers. In this case the TNCs had lower costs. Hendry thought this was nothing strange, but it was a good development for the society in Yogyakarta. This because not everybody in Yogyakarta has a lot of money, so with the appearance of TNCs they had the chance to make use of transportation without paying high prices."

5.4 Economic consequences

5.4.1 Less costs

A main reason the customers were positive about the existence of the TNCs were the lower costs;

"He liked the TNCs also because they were simply much cheaper than conventional public transport methods, which I could confirm myself"

"The services of Go-Jek [also Grab] were fast, reliable and cheaper than conventional transport methods."

I can conclude, from the fieldwork done, the TNC services are way cheaper than conventional transport methods in Yogyakarta. E.g., a taxi ride from our home adress to the University was around €7.50,- per person [in total 4 persons] so which comes to a total of €30,- euro for a ride of 14.2 KM [see figure 9]. When you ordered a Grabcar, you would pay around €10,- in total.

5.4.2 Cashless transactions

With Go-Jek you had an option to pay by credit card, so the transaction could be completed in seconds. You do not need cash anymore to make use of transportation.

"…you have the option to pay by credit card to use a service of Go-Jek, but for Grab Afan was not sure. This means you just could pair your credit card with your Go-Jek account and be able to have a ride whenever you wanted, without having cash on you."

5.4.3 Reduction of search costs

This is also part of the accessibility of TNCs, but it also means a reduction of search costs. With a mobile application and 3 clicks you could order a taxi or motorcycle to go from A to B.

"Also, you could order a GO-RIDE with literally 3 clicks on your mobile phone he said. The first for the pickup location, the second one for your drop off location. The last click was to order the GO-RIDE."

5.4.4 New opportunities

The appearance from the TNCs have a positive side for people with less economic resources. The TNC could be a possible new employer for them;

"Also, he mentioned that almost everybody could apply at Go-Jek to be a motorcycle driver. He did not know the precise requirements, but it was an economic opportunity for people without jobs, or jobs which were paying not that good."

5.4.5 Better overview of quality and prices

"The drivers are rated by consumers and may be removed from the system if their rating falls below a certain threshold. Prices of the rides are estimated beforehand and can be easily compared across several applications, introducing greater transparency – something that taxi regulation attempted for years by requiring taxis to publish their price lists inside and outside of the vehicle" European Parliament (2015) [see paragraph 2.1.4].

During own fieldwork, it was hard to get a conventional taxi. For example, on the airport are tons of taxi's. They all offer a different price for transporting you, but there is no determined price. You just have to guess, as a tourist, how much you should pay for a taxi. With TNCs the price is predetermined, so you will not pay too much for a ride to your location.

Chapter 6 – The conventional taxi drivers' viewpoint

In this chapter the viewpoint of the conventional taxi drivers will be described and analyzed.

Unfortunately, it was hard to find two conventional taxi drivers to interview for this chapter. For this reason, the viewpoint of the conventional taxi drivers will be described through scientific publications and news articles.

The sub question for this chapter is;

What is the view of conventional taxi drivers on the existence of TNCs?

The outcome of the literature will be also divided and analyzed into three dimensions; the impact on existing public transport, social consequences and economic consequences.

This chapter will go straight to the three dimensions described above.

6.1 The impact on existing public transport

6.1.1 Replacement

As described by the European Parliament (2015), TNCs could aspire to become monopolies. They could be replacement for conventional taxi services and other forms of public transport. According to a TNC driver [Agus], conventional taxi drivers in Yogyakarta were thinking the same thing;

"He told me that the conventional taxi driver saw him as unfair competition who was taking away all the customers."

6.1.2 Competition

According to the European Parliament (2015), TNCs could also unfairly compete with taxi drivers by entering their market without following regulations or fare schedules. This is in Yogyakarta also the case;

"The government never fails to regulate their service, but taxi operators often have poor initiative in improving the quality of their service. Having a direct competitor for taxis will give alternative and options for commuters" (Regidor & Napalang, 2016).

TNCs can be seen as unfair competition by taxi drivers, but the conventional taxi businesses have to improve and innovate, according to Regidor & Napalang.

6.2 Social consequences

6.2.1 Ban on TNCs

According to news articles in Indonesia, Gatot Saptadi [Yogyakarta's Transportation Department], wants to ban all the TNCs in Yogyakarta.

"All online vehicles such as Go-Jek, Go-Car and Grab Car and Uber will be banned. Because they are unlicensed," said Gatot Saptadi, the of Yogyakarta's Transportation Department, on Friday as quoted by Metro TV.

In fact, the national government has already officially okayed the existence of ride-hailing apps in Indonesia as long as they meet a number of regulatory requirements, which means Yogyakarta will have to obtain an exception from the Ministry of Transportation to enact their regional ban.

Yogyakarta Governor Sri Sultan Hamengkubuwono X is currently drafting the regulations that will serve as the foundation of the ban and they are expected to be completed and applied as soon as this week.

Gatot said that the ban on ride-hailing apps will be offset by an increase the number of vehicles on the TransJogja line.

Yogyakarta Police Chief Ahmad Dofiti asked that all online transport drivers cease operation immediately and said they would crack down on those who continued to pick up customers." (Coconuts.co, 2017)

6.2.2 Protests

The existence of TNCs have brought a lot of protests among conventional taxi drivers, according to diverse news articles;

"For example, on February 17, 2017, there were about 300 conventional taxi drivers who held a rally in North Alun Alun in Yogyakarta, protesting ride-sharing apps (TheJakartaPost, 2017). They demanded that the Yogyakarta administration ban ride-sharing apps in the province. Sutiman, the coordinator of Yogyakarta Metered Taxi Drivers Community (Kopetayo), said that the TNCs offered lower prices and hurt their livelihoods. Their income has dropped 90 percent, according to Sutiman." (TheJakartaPost, 2017).

"In Yogyakarta, taxi drivers have held several protests in front of the Sultan's Palace demanding that online taxis be banned. There have also been incidences of violence, such as one taxi's attack on a Go-Car driver last month which led to this harrowing car chase that was caught on video." (Coconuts.co, 2017)

It is nothing new in the Indonesian media that there are protests the ride-hailing companies.

"As many as 500 conventional taxi drivers from six companies across Surakarta held a rally at the Gladag traffic circle on Tuesday to protest the existence of app-based taxi services in the city. The drivers deem the ride-hailing services a threat to their livelihood" (Thejakartapost, 2017).

6.2.5 Violence

Next to protests, there is also violence, especially against TNC drivers. Agus also approved this during the interview.

We also talked about if Agus had some bad experiences as a Go-Jek/GrabCar driver. He told me that one time when he picked up passengers who ordered his GrabCar, a conventional taxi saw this and chased him and his customers. The conventional taxi was driving really close behind him and was honking and signaling with his headlights. He also filmed it at the time and had it on his mobile phone. He showed it to me and told me his passengers were really scared at the time. Agus himself was also nervous in that situation and it was a negative experience for him for sure. He told me that the conventional taxi driver saw him as unfair competition who was taking away all the customers. [interview with Agus].

News articles in Indonesia could approve this;

"There were even violent protests against Go-Jek and Grab drivers in Indonesia in 2016; *"Images of Go-Jek drivers being attacked by protesters were among the more disturbing sights from the day. However, there were also reports in the media of Go-Jek drivers, angered by the attacks on their colleagues, fighting with taxi drivers as well."* (Coconuts.co, 2016).

Another source also described a violent chase;

"As was the case in Tangerang, some angkot drivers in Bandung committed acts of violence during their protest. Just how violent they got was captured in this viral video showing several angkot drivers

attacking a car after they mistook it for an "online taxi" – a local term for app-based ride-sharing services like Uber and Grab.

The video shows a family in sheer terror as an untold number of angkot drivers assaulted their car. Screams, prayers, and repeated pleas of "Please stop! There's a baby in here!" can be heard throughout the disturbing video.

Egi Muhammad, 29, was driving his family near Jalan Sriwijaya yesterday morning when angkot drivers holding a protest nearby assaulted his car as shown in the video. He said his family members were all traumatized after the incident.

"At the time, everyone inside was panicking, my wife, my sister, my mother were all screaming," he said after the incident at a police station, as quoted by Kompas. At the time, Egi was driving a party of six, including his one-year-old baby. "All of a sudden people were banging on the back of the car. And then they shouted 'online! Online!' thinking our car was an online taxi," he said. "Someone tried to grab the car key. I tried to hold on, I was being pulled out, but I held on [in the car], but then someone hit my head. And then [the attack] stopped when police came."

Luckily, no one in the family was physically hurt. However, there was substantial damage to the car, including a smashed back window and numerous dents."(Coconuts.co, 2017)

6.2.4 Police actions

Because of the banning on TNC services, the police is asked to take action against TNC drivers who are still providing their services;

"Indonesian media is reporting that the Ministry of Transportation has asked local police to take action against the operators of internet-based transport services as well as prohibit drivers of the service due to their effect on other forms of public transport" (Businessinsider.com.au 2015).

In practice there is no action taken against these services according to inhabitants and own empirical data and observations.

6.3 Economic consequences

6.3.1 Less income

Obviously, by the appearance of the TNCs in Yogyakarta, conventional taxi drivers have less income, because of the competition. Like described in chapter 5, a lot of people use TNCs because it is simply cheaper than conventional taxi services.

"Sutiman, the coordinator of Yogyakarta Metered Taxi Drivers Community (Kopetayo), said that the TNCs offered lower prices and hurt their livelihoods. Their income has dropped 90 percent, according to Sutiman" (TheJakartaPost, 2017).

6.3.2 New opportunities

All the above consequences and impacts described are in general very negative for the conventional taxi drivers. But on the other hand, TNCs have brought new opportunities. As Kessler (2017) described; *"Drivers can work for any TNC or more than one 'platform for the same [TNC]', simultaneously. Allowing drivers to earn valuable experience and more income."*

Taxi drivers could also become TNC drivers and have a higher income. Also they could be a deliverer for other services the TNCs offers, like GO-FOOD etcetera.

Chapter 7 – Conclusion

This chapter contains the conclusion of this research, by answering the three sub questions and the main question. Also, a discussion of the research is contained in this chapter. Finally, the fieldwork will be reflected, and recommendations will be made for further research. As a reminder, the central research question of this research is:

"What are the influences of Transportation Network Companies on the society in Yogyakarta?"

7.1 Conclusion

This research was focused on the influences Transportation Network Companies have had since their appearance in Yogyakarta. The two TNCs this research focused on were Go-Jek and Grab. Grab appeared in Yogyakarta in 2014 and Go-Jek in 2015. To come to an answer on the central question described above, three sub questions were formed to come to a more in-depth answer;

"What is the view of TNC drivers on the existence of TNCs?" [Chapter 4]

"What is the view of customers of the TNCs on the existence of TNCs?" [Chapter 5]

"What is the view of conventional taxi drivers on the existence of TNCs?" [Chapter 6]

To come to an answer to these three sub questions, interviews, fieldwork, observations, scientific publications and news articles were consulted, read and analyzed.

To keep this chapter well-structured, the three sub questions will be answered first, and with the answers on these sub questions the central question will be answered.

7.1.1 The view of TNC drivers on the existence of TNCs

As described in chapter 4, TNCs have had a lot of impact on the society in Yogyakarta. According to TNC drivers, TNCs have caused the following impacts and consequences in Yogyakarta:

Impacts on existing public transport:

1. TNCs are competition to existing public transport
2. TNCs replace existing public transport

Social consequences:

3. TNC drivers can improve their network
4. TNC drivers have the opportunity to build relations with customers
5. TNC drivers have safety issues
6. TNCs improve mobile justice

Economic consequences:

7. TNC drivers have increased income
8. TNC drivers can have multiple employers
9. TNC drivers have multiple opportunities

7.1.2 The view of TNC customers on the existence of TNCs

Impacts on existing public transport:

1. TNCs are competition to existing public transport
2. TNCs complement existing public transport
3. TNCs supplement existing public transport

4. TNCs are a cure for the First Mile Last Mile problem

Social consequences:

5. TNCs save time
6. TNCs make transport accessible
7. TNCs improve mobile justice

Economic consequences:

8. TNCs cost less
9. TNCs make cash money unnecessary
10. TNCs lead to a reduction of search costs
11. TNCs bring new opportunities
12. TNCs have a better overview of quality and price

7.1.3 The view of conventional taxi drivers on the existence of TNCs

Impacts on existing public transport:

1. TNCs replace existing public transport
2. TNCs are competition to existing public transport

Social consequences:

3. TNCs caused a ban by the government
4. TNCs caused protests
5. TNCs caused violence
6. TNCs caused police actions against them

Economic consequences:

7. TNCs caused less income
8. TNCs brought new opportunities

7.1.4 The influences of Transportation Network Companies on the society in Yogyakarta
"What are the influences of Transportation Network Companies on the society in Yogyakarta?"

To answer this central question, the founded consequences on existing public transport, economic and societal impacts on the three sub questions will be combined and the most important will be described. The influence of TNCs in Yogyakarta are divided in three aspects;

1. TNCs have influence on the existing public transport in Yogyakarta;
   - TNCs are seen as competition:
     According to TNC drivers, TNC customers and conventional taxi drivers, the existence of TNCs cause an [unfair] competition between TNC services and conventional public transport.

   - TNCs are seen as replacement:
     According to TNC drivers and conventional taxi drivers, TNCs could replace conventional public transport. TNC customers did not agree with this, they believed the conventional public transport services would still exist in the future

   - TNCs are seen as supplementation/complementation:

TNC customers see TNC services as a supplement/complement to existing public transport. The existence of TNCs would only make the public transport sector better.

- TNCs are seen as a cure for the First Mile Last Mile problem:
  The FMLM problem refers to the situation to get to a public transport station or stop [first mile], and after they are dropped off at a station or stop [last mile] when travelling with public transport from A to B. TNC services fill this gap in the FMLM problem in Yogyakarta.

2. TNCs have social consequences on the inhabitants of Yogyakarta, TNCs cause;
   - An increase in mobile justice:
     Both TNC drivers and its customers argued that the mobile justice increased since the appearance of TNCs in Yogyakarta. Public transport was now more accessible for less wealthy inhabitants.

   - An increase in accessible public transport:
     TNC customers argued that with the existence of TNC, public transport was way more accessible. Not only because of the price, also because it was easy to use its services with a mobile phone application.

   - An increase in protests violence:
     Because of the tension between TNC drivers and conventional taxi drivers, there are protests and sometimes violence against the TNCs and its drivers.

3. TNCs have economic consequences on the inhabitants of Yogyakarta, TNCs cause;
   - An increased/less income:
     For TNC drivers the existence of TNCs meant an increase of income, for conventional taxi drivers it meant a loss of income, because of the competition with the TNC drivers. This means less customers so less income.

   - Opportunities:
     For all of the three interviewed groups, TNCs brought opportunities. TNC drivers could work for more than one TNC and they could transport people, food, packages or even medicine being an TNC employee. TNC customers could also become TNC drivers, and this also applies to conventional taxi drivers. TNCs brought employment into Yogyakarta.

   - Cheaper public transport:
     For the bigger public, TNCs meant cheaper transport. This because TNCs are simply cheaper than conventional transport methods.

   - A better overview of quality and price:
     Because there is a predetermined price when using service of a TNC, you will never pay too much for transport anymore.

   - A reduction of search costs:
     Because you can order a TNC service with a mobile application, it only takes 3 clicks to use public transport nowadays in Yogyakarta.

7.2 Recommendations

Recommendations I would make for further research came up when reading a lot of scientific publications and re-reading the interview reports. It would be interesting for further study to compare Go-Jek and Grab, because they are, competitors. Which TNC is the biggest? Which one is the best according to customers? What are the differences?

Another recommendation is to research only positive or negative sides of TNCs in Yogyakarta. This way a research can be more in-depth, in stead of looking at both sides. Also, another recommendation could be to research the perspective of just one group, in stead of three different groups. This way the results could be more in-depth. I think it would be very interesting to interview TNC customers only, because I only interviewed two of them, which both had a positive view on the existence of TNCs in Yogyakarta.

The final recommendation I would give is to do quantitative research on this subject. This way a broader view will be formed, but less in-depth. But it would give a better reflection of what groups of people think about the existence of TNCs.

7.3 Fieldwork reflections

During his research and when writing this thesis afterwards I tried to be as critical as possible. Of course, there are remarks to make on this research, e.g. chapter 6, where unfortunately no conventional taxi drivers were interviewed. The reason for this absence was because I was short on time. In the first instance I chose another research subject, namely the growth in the Sleman area. It was way too hard to do research about something so abstract, so I had to change my subject when I was already in Yogyakarta. This is a possible reason for the lack of the interviews with conventional taxi drivers. I was glad I made the switch to this subject, because I found it a lot more interesting than the growth in the Sleman area [which would also be interesting]. I think the research I finally did turned out pretty good, but it has it remarks.

The fieldwork done for this research went all by all fairly well. This because of the people I met [by accident]. I had a lot of luck when I met Agus and Afan, which became also friends of me. When I came home with the interviews I had done, I was quite surprised I had that much information gathered over time. I was not aware of this when I was in Yogyakarta. The literature I found later, when writing this thesis, fitted also with the interviews I had done.

Because of the limited amount of time that was available, the scope of this research is reasonable wide. This because I did not want to risk the chance of having too little data for writing this thesis. That is why I chose to research the impact on public transport, social impacts and economic impacts. I am glad I did not broaden the scope to also research the legal issues, like described in the introduction: *This thesis will not try to answer questions within the discussion about the informal economy, for example if its right or wrong what is going on, and if the government of Yogyakarta should ban the TNCs or not. This because of the reason these kinds of questions are too complicated to answer in one month of research and fieldwork, despite it also would be also very interesting.*

If I did this, this thesis would never be finished, because it would be very difficult to go so deep into that case in one month, although it is also very interesting to research. All in all, I am glad the way this research went in Yogyakarta, despite changing my research subject.

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Appendix 1: Interview Guide

Interview guidelines
(per interviewgroep vraagstelling anders stellen)

General questions:

What is your name?

What is your age?

Do you study or work?

Are you born in Yogyakarta?

For how long you have been living in Yogyakarta?

TNC user

Why do you use TNC services?

Why do you like/dislike TNC services?

What are social impacts from TNCs in Yogyakarta (mobility justice?)

What are/is the difference(s) between TNCs and Conventional public transport for you?

What changed when TNCs appeared in Yogyakarta

What do you think will happen to the existing public transport?

TNC driver

For how long have you been a TNC driver?

For which TNCs do you work?

What are social impacts from TNCs in Yogyakarta (mobility justice?)

What are/is the difference(s) between TNCs and Conventional public transport for you?

What changed when TNCs appeared in Yogyakarta

What do you think will happen to the existing public transport?

Appendix 2: Observation scheme and fieldwork scheme

Observations done in Yogyakarta mainly existed of seeing a lot of GO-JEK and Grab drivers on motorcycles. It was almost impossible to not see them, because the fleet was so big it was almost impossible.

Price TNCs

Price conventional taxi

Price difference TNC/conventional taxi

Usage TNC

Usage conventional taxi

Usage difference

How much motorcycles Go-Jek

How much motorcycles Grab

How do I make use of TNCs?

Complement existing transport services

Supplement existing transport services

Be *competition* to existing transport services

Replace existing transport services

Be a *panacea* or *cure* for the first mile last mile problem

Substitute instead of complement or replace