ANALYSIS OF MOTOR SHARING (ONLINE TRANSPORTATION) CUSTOMER IN BANDUNG CASE STUDY: GO-JEK IN BANDUNG

Jenis Jaya Waruwu and Akbar Adhiutama
School of Business and Management
Institut Teknologi Bandung, Indonesia
jenis.jaya@sbm-itb.ac.id

Abstract— Globalization era makes the technology advancement more rapidly, this matter can be seen from the number of internet users in the world will increasing each year that reach until 200 to 300 million users per year. Internet usage is very diverse depending on the needs of user, for example is for an online business. Recently the online business was trended in Indonesia such as for online transportation. The online transportation business in Indonesia was booming like as the GO-JEK, the Bojek, the Wheel Line, the Blu-Jek, the Transjek, the PRO-JEK, the TEKNOJEK, the Bangjek, etc. The GO-JEK is a pioneer of online transportation in Indonesia, this matter can be seen by established of company is the first in Indonesia, the feature and the operational area also is wider than the other company. Certainly, the presence the online transportation or motor sharing in the midst society will influenced of lifestyle the peoples who live in urban areas to avoid the traffic. So, there much perception of user towards experienced in used the service. This research aims to analyze the online transportation especially in Bandung based on the user/customer perception towards the service online transportation like as GO-JEK. The researcher will analyze to make sure whether the issue from some news about GO-JEK is appropriate towards the result of this research or not. The researcher will analyze it with the three the theoretical basis: the first is Diffusion of Innovation to identify the adopter categories of user. The second is TAM & TPB combination to find out the factors acceptance the Go-JEK, and the last is SERVQUAL to identify the actual service quality of GO-JEK in Bandung based on user perception. Then, the researcher used the Correlation Coefficient Analysis method to correlate the above theories. Besides that, the researcher used SPSS (statistic packages for social science) to process the research questionnaire result. The result of research shows that the categories of GO-JEK user in Bandung consist as 8,3% as the innovators, 21,7% is the early adopters, 28,1% is the early majority, 26,9 is the late majority, and the last is 15% as the laggards. Overall TAM towards TPB, Diffusion of Innovation (DOI) towards TAM & TPB combination, DOI towards SERVQUAL variables, TAM & TPB towards SERVQUAL variable, and SERVQUAL variables have significant correlation in use the GO-JEK service in Bandung. Generally, the GO-JEK service quality in Bandung shows the high of level percentage based on user perspective. It means the result of the research it does not same with the research background which published by some media about the service of GO-JEK because media it cannot representative the service quality a company.

Keyword: GO-JEK, online transportation, Diffusion of Innovation, TAM & TPB combination, Service Quality, Correlation Coefficient Analysis.

Introduction

Currently online business the transportation online has been the trending, this matter evidenced by establishment of the online transportation companies online such as Kuadi Group, Easy Weixing Technology Co. from China and Uber who operated in many countries such as Australia, Taiwan, Russia, South Korean, Philippine, Canada, UK, Belgium, Japan, Mexico, France, Spain, India even Indonesia. (Owler) (Dharmasaputra, 2015). In Indonesia, online transportation or motor sharing also it was booming evidenced by the emergence of various companies engaged in transportation-based smartphone application such as Grabbike, Bangjek, Transjek, Uber, Wheel Line, Blue-Jek, Ojeks Syar'l, and GO-JEK. The GO-JEK is a largest pioneer of motor sharing in Indonesia.

GO-JEK is a start-up business engaged in transportation sharing or online transportation as the aim of service. GO-JEK founded by Nadim Makarim in 2011, in Jakarta. Based on the information is written in the company website said that GO-JEK is a socially minded technology company that aims to improve the welfare of workers in a variety of informal sector in Indonesia. GO-JEK service activity rests on three fundamental values of speed, innovation, and social impact. Currently GO-JEK has partnered with about 200000 motorcycle drivers in all regions of Indonesia, and has been officially operates in 10 cities in Indonesia such as Jakarta, Bandung, Surabaya, Yogyakarta, Semarang, Medan, Bali, Balikpapan, Makassar, and Palembang. Besides that, the GO-JEK also has a planning to expanse their operating to other cities in Indonesia.

There are some key figures in GO-JEK company like as Nadim Makarim as CEO of company, Michaelangelo Moran as CO-Founder, Rama Notowidigdo as CPO, and Kevin Aluwi as CFO. Besides the personage of company, there is important information that we need to know that is there are 14 type and features of service such as delivery of goods (GO-SEND), motor sharing/online transportation (GO-RIDE). Besides that, there is food order (GO-FOOD), shopping (GO-MART), delivering goods in large quantity (GO-BOX), cleaning service (GO-CLEAN), the beauty service (GO-GLAM), message (GO-MESSAGE), Transjakarta schedule, and shuttle from/to the nearest bus stop (GO-BUSWAY), ticket order (GO-TIX), the car sharing/online transportation (GO-CAR), the mechanic service (GO-AUTO), the health medicine (GO-MED), and the pulse (GO-PULSA).

However the presence of GO-JEK and similar company in Indonesia it doesn't run smooth, there is some incident who make the customer is lost like as accident, fraudulent in transaction, late of service delivery, the facilities not complete, and the unsecure of data and user information. By some reviews case above are appear customer perception about GO-JEK service. So, the researcher have purpose in this research such as to understand the kind of motor sharing customer categories and the factors to adopt motor sharing for customers in Bandung and the correlation between TAM towards TPB. Also to understand the correlation between DOI factors and TAM & TPB factors GO-JEK user in Bandung, to understand the correlation between DOI factor and SERVQUAL factor's GO-JEK in Bandung, to understand the correlation between TAM & TPB factors and SERVQUAL factors GO-JEK in Bandung, and to understand the correlation among SERVQUAL factors GO-JEK in Bandung.

Literature Review

1. *Diffusion of Innovation*

According Rogers on his book "Diffusion of Innovation" third edition page 5, said that *Diffusion* is the process by which an improvement is communication through certain networks over time among the memberships of a social system. Whereas the *Innovation* is new idea, practice or object who created by individual or group. According to Nickerson R. *et al*. (2014): "Rogers has provided a fundamental theory which has related alike this research with his influential work on adopter categories. On Rogers's later book extended on his ideas to broader audience (Rogers 2003). Rogers identified five categories of adopters based on time to adoption: innovators, early adopters, early majority, late majority, and laggards. Based on data gathered in Rogers's research in the 1958, he has been defined that adopters were coarsely distributed in these categories such as shown in figure 1-1."
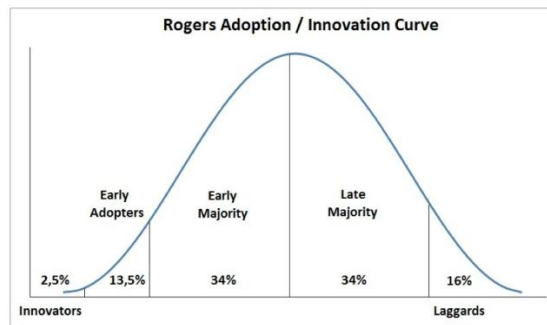
Figure 2-1: Categories Adopter Model (source: Roger, 1958)

Figure 2-1 displays the percentage of adopter categories about how the people adopt the new idea or nee technology. This adoption consisted of the innovators, the early adopters, the early majority, the late majority, and the laggards. Based on the Rogers research, he has find out there is 2,5% who include as Innovators, 13,5% as the Early Adopters, 34% as the Early Majority, 34% as the Late Majority, and 16% as the Laggards. According to Rogers's book third edition explained about the five adopter categories above as following:

Innovators
They are very excited to try new ideas. This concern leads them out of a local round of peer networks and into more wider of social relationships. Being an innovator has some prerequisite. These counted control of considerable financial resources to engross the possible loss due to an unsuccessful innovation and the ability to know and apply multifaceted technical knowledge. The innovator should be capable to cope with the high degree of doubt about an innovation at the time that the innovator adopts. (Rogers, 1983).

Moreover Robert J. *et al*. (2009), mention several of the Innovators characteristics such as this adopter has express high level of risk-taking propensity to adopt something new. They are information seekers about something new, enjoy to try out of something new idea/innovation, they want to be the first adopt to used something new idea/innovation, possess advancement in technical knowledge, have ability to handling the uncertainty about an innovation when they used it, and they have a high insight in the knowledge of advanced technology development.

Early Adopters
The early adopter is measured by many as "the individual to check with" before using a new idea. This adopter become as role model for other people in around their social life. The early adopter mostly deliberated by many as "the individual to check with" before accepting a new idea. As general, this adopter category's seeking by change agents to be a local missionary for speeding the diffusion process. Because early adopters are not too far ahead of the average individual in innovativeness, they serve as a role model for many other members of a social system (Rogers, 1983) Moreover, Robert J. *et al*. (2009) mention that the Early Adopter has several characteristics such as the adopters mostly they action like opinion leaders, and they are share alike characteristics with those of innovators but at a faintly lower degree.

Early Majority
The early majority adopt new ideas just before the average member of a social system. They are first followers to using new technology. They very considering anything for adopt new idea. The early majority might be careful for a moment before totally adopting a new something. Their innovation-decision time is relatively more long time than of the innovator and the early adopter. "Be not the first by which the new is tried or the last to lay the old aside" (quoted from Alexander Pope at the beginning of this chapter), might be the early majority's motto. (Rogers, 1983)

(Robert J. *et al*, 2009). Said that the Early Majority has several characteristics that are they are mostly show of their willingness in adopting a new idea to others, and they are do not want to be a first user in using something new but also do not want to be the last user to using a new innovation.

Late Majority

The late majority adopt new ideas just after the average peoples of a social system using that new technology. Usually they using about new ideas because considered about economic system and social pressures. The late majority do not adopt until most others in their social system have done so. The weight of system norms must definitely favor the innovation before the late majority convinced. They can persuaded of the utility of new ideas, but the pressure of peers is necessary to motivate adoption. Their relatively scarce resources means that almost all of the uncertainty about a new idea must be removed before the late majority feel that it is safe to adopt. (Rogers, 1983).

According to Robert J. *et al*. (2009) said that the late majority have several characteristic that are the adopters mostly skeptical with the innovations. Using a new ideas/innovation only if has becomes an established standard in society, and they are not using the new idea if they still not capable to handle the technology as well (Robert J. *et al*, 2009).

Laggards

Laggards are the last in a social system to adopt new ideas. This adopter has lower insight about information and new technology. Even they are not interested in using something that is new. When laggards finally adopt an innovation, it may already have been superseded by another more recent idea that is already being used by the innovators. Laggards tend to be frankly suspicious of innovations and change agents. Their traditional orientation slows the innovation-decision process to a crawl, with adoption lagging far behind awareness-knowledge of a new idea. (Rogers, 1983)

The Laggards have the characteristics such as they're prone to cautious about the innovations or something new idea, they are perforce to use the something new if it have becomes common necessity, and they have low insight about the innovation and a little experienced in using the something new (Robert J. *et al*, 2009).

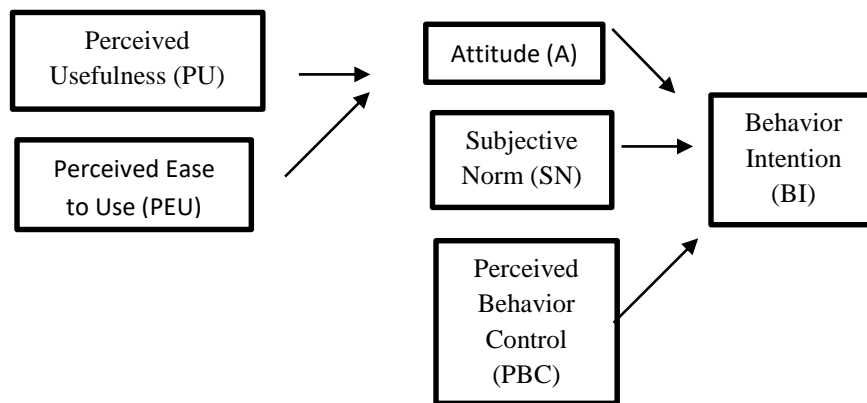### 2. *Technology* Acceptance Model (TAM)

According to Suci S. (2012), Technology Acceptance model (TAM) introduced by Fred D. Davis in 1986 which is that theory is adjustment from TRA (Theory Reasoned Action) by Fishbein and Ajzen (1975). TAM have purpose to know the adopter factors towards user attitudes for technology acceptance. TAM models derived from psychology theory to explain the behavior of users towards *belief, attitude, intention,* and *user behavior relationship*.

TAM added two components in TRA that are *perceived usefulness* and *perceived ease of use.* This component has high determined and the validity which have been tested empirically (Davis, 1989). Both of that components have an importance to determine how someone attitude when using the technology. TAM models refers that attitude towards behavior be affected by perceived usefulness and perceived ease of use. Then, perceived ease of use also affected of perceived usefulness the technology.

3. *Theory of Planned Behavior (TPB)*

The theory of planned behavior (TPB) is more advancement the theory of reasoned action (TRA) and adding a new variable that is *perceived behavior control* (PBC) by Ajzen (1991). The purpose of TPB is to find out the intentions of individual perform. According to Silistiyarini S. (2012) TPB show that people action is directed by three beliefs: behavioral beliefs, normative beliefs, and control beliefs.

4. TAM & TPB Combination

Figures 2-2: Model TAM and TPB Combination (Sulistiyarini, 2012)

Figures 2-4 describe the correlation model between TAM (Technology Acceptance Model) towards TPB (Theory Planned of Behavior). In this figure shows the correlation of Perceived Usefulness (PU) and Perceived Ease of Use (PEU) towards Attitude (A) in use mobile apps, and the correlation of Attitude (A), Subjective Norms (SN), and Perceived Behavior Control (PBC) towards Behavior Intention (BI). The model above will be used in the next research as guidance to analyze of personal GO-JEK user in Bandung.

Following explanation of each component:

Perceived usefulness towards attitude

Perceived usefulness is function to looking for the level of a person's belief that technology will enhance their performance and productivity (Davis, 1989; Taylor and Todd, 1995). Wallace and Sheetz was mention some indicators which can used for PU (Perceived Usefulness); the first is by using the technology will enhance the productivity. The second is by using the technology can will improve the job performance, the third is using by the technology will be increases of working quality, the fourth is the advantages of using the technology more than the disadvantage, and the last is using the technology make it easier to doing a job and useful. According to Sulistiyarini S. (2012) by many of research said that perceived usefulness extend positive correlation and significant towards individual attitude in the use of technology system.

Perceived Ease of Use towards Attitude

Perceived ease of use is the level of individual trust to use technology system because ease to use (Davis, 1989). Perceived ease of use has a strong significant correlation towards individual attitude in the use technology (Taylor and Todd, 1995).

Attitude towards Behavior Intention

Attitude is defined as positive or negative feeling someone to perform certain behaviors (Davis, 1989). According to Sulistiyarini S. (2012) some researcher said that between attitude and behavioral intention has positive correlation towards in the use technology.

Subjective Norm towards Behavior Intention

Subjective norm is defined as someone perception about social pressure to do or not perform behavior (Azjen 1988). According to Sulistiyarini S. (2012) some researcher said that subjective norm has been positive correlation towards individual behavior in the use technology (Lee Jihyun, 2003; Gurung, 2006; Chen, 2008).

Perceived Behavior Control towards Behavior Intention

Taylor and Todd (1995) has been defined of perceived behavior control as perspective and internal and external constructs of behavior. According to Sulistiyarini S. (2012) some researcher said that behavior control has been positive correlation towards behavior in the use technology.

5. Service Quality (SERVQUAL)

Service quality is one important thing to achieve success in a company service. However, to measure the service quality is not easy because there are two that involvement that are buyer and

seller of service and both can give different perception to measure it. But, in this research the researcher only focus on customer perception to know the actual service quality of GO-JEK in Bandung. There are some ideas about service quality that have discussed by three authors that are: first, service quality is more challenging than to evaluate the goods quality, and the second service quality is yield of comparison customers perspective with the actual of enterprise service performance, Valerie A. *et al.*(1985). It means bad or good of quality service a company a given meet or exceed of customer expectancy about service quality with the actual service performance.

Parsu Parasuraman, Valerie Zeithaml, and Leonardo Berry have been identified the five dimensions of service quality which are has been used in many kind of service contexts. This method they called SERVQUAL.

Tangibles
The tangibles is the actual condition of facilities as physically like equipment, personnel appearance, and written materials that used of company and it also representative who they are. According to Kambiz H. *et al.* (2012) the tangibles is the facility, instruments, staff, and communication tools appearance. Ability to show their facilities and features will be real evidence towards their service to customers.

Reliability
Reliability is ability to perform the promised service as on time, quickly, accurate, and consistency. The company will give service substantial to each their customers. Similarly Kambiz H. *et al.* (2012) said the reliability is the ability of company to fulfill their service promised with dependably and accurately. Besides that, the service provided must be appropriate customer expectation.

Responsiveness
Responsiveness is ability to serve customer with efficient. It means as readiness to provide prompt service and stay ready to help customers if they get something problem or grievance. According to Kambiz H. *et al.* (2012) the responsiveness is the ability a company to serve customers and provide agile of service. For example, sending the transaction slip quickly and perceptive towards customer grievance.

Assurance
Assurance means company ability to perform the best things for customer, they have a good knowledge, skills, courtesy, and understand what customer requirements. Kambiz H. *et al.* (2012) said the Assurance is the knowledge and politeness of company personnel and ability to make the consumers are feeling confident with them. Company should make sure their product or service is secure and they are stay responsible if occurs something wrong or accident.

Empathy
Empathy is defined as company ability to knowing specific about customer needs, what they were feeling, and the employees will stay ready to given individualized attention. Company personnel are care about customer problem and they providing to help them if needful by customer. Similarly Kambiz H. *et al.* (2012) said that Empathy is ability of company personnel to provide service with their awareness and individualized attention to consumers. Certainly, if a company can apply this dimension as well to their customer and its increasing the customer impress.

Research Methodology

Population and Sample
In this research, the author used the random sampling to distribute questionnaire to GO-JEK user in Bandung. The sample gathered from via online only. The questionnaires distributed via media social group such as Line, Facebook, BBM, and WhatsApp. Based on the data gathered the user of GO-JEK in Bandung is mostly young man between 17 to 32 years old. Currently, the number of population Bandung citizens aged 15 to 34 years old is 950.976 peoples (BPS Bandung, 2016). In this research, there are 32 attributes/indicator multiplied 10 (Roscoe, 1975). So, to fulfill the number of sample based on attributes researcher need at least 160 respondents.

Furthermore according to Slovin, the formula to determine minimum the number of sample is:

$$n = \frac{N}{1 + N\,e^2}$$

Description:

n = Sample needed

N   = Total population in operation division area

E   = Margin error (7%)

$n = \frac{950.976}{1+950.976(0.07)^2}$ = 204.78 ≈ 205 respondents.

$$So, minimum\ of\ data\ needed\ is\ 205\ respondents$$

Currently there are 260 data gathered from respondents. But, from that data there are 9 (3.5 % from the data totally) which is not valid or not appropriate questionnaire criteria. Its means the totally data which valid is 251 (96.5 % from the data totally) this data use for analyze in next stage of research.

Data Collection Method

Primary Data

Primary data taken from questionnaire distributed towards GO-JEK user in Bandung. The questionnaire data collection started on 28th June 2016 to the 26th of September 2016. The method to selecting respondent is random sampling. Distribution of questionnaire process is by way of sending the link of questionnaire to social media Bandung community such as college communities and many other organizations especially to those who have used GO-JEK in Bandung. Attributes data of questionnaire are using the methods of Diffusion of Innovation (DOI), Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and Service Quality (SERVQUAL). By this data will represent the customer perception about both things of GO-JEK that is satisfaction of customers towards GO-JEK application (mobile apps) and the actual of employee service quality.

Secondary Data

Secondary data taken by reading like as paper, journal, article, news, and book related with the research.

Validity

Validity is a measurement method which can be used to quantify what it is designed to assess. It can indicate how well the instruments assemble it purposes to measure (Carmines & Zeller, 1979). In this research, the researcher used Spearman for validity test. According to Friedenberg (1995) in the development and preparation of psychological scales of typically used correlation coefficient is at least equal to 0.3 (correlation coefficient > 0.3).

Reliability

Reliability is measurement method which can be used to obtain the constant results upon repetitive questions (Carmines & Zeller, 1979). According to Ghozali (2005) related to check the reliability of data, the data is reliable if the value of Cronbach's Alpha is greater than 0.60.

Correlation Coefficient Analysis

Correlation coefficient is used for measured the level of the statistical correlation between two ratio and interval level variables. The scaled of correlation coefficient always be between -1 and +1. If the value of correlation is 0 indicates the relationship between of both variables are very low, whereas if the value of correlation coefficient is farther away from -1 or +1 indicates that both variables has a strong relationship. In this research, to test the correlation coefficient the researcher used the Spearman's rho because the type of data is ordinal data. Spearman's rank correlation coefficient is a tools recommended to measure of the strength relationship between two variables for a nonparametric (distribution-free) rank statistic. Jan H. *et al.*(2011)

Data analysis

Respondent Profile
the percentage of respondent gender that answered questionnaire with 66% or 166 peoples of the respondents are female and 34% or 85 peoples of the respondents are male. Can be concluded that the female as the biggest users of GO-JEK in Bandung. The students are dominated of the occupation respondents for 94% or 236 peoples, official employees for 4% or 11 peoples, and the last is entrepreneur for 2% or 4 peoples from the totally respondents. Mostly of them are 17-24 years old for 95% or 237 respondents, followed by 25-32 years old for 4% or 11 respondents, and the less than 17 years only 1% or 3 respondents. Go-Ride is the type of GO-JEK service which mostly user used for 88% or 220 respondents, followed by Go-Food for 11% or 27 respondents, and the last is Go-Box for 1% or 4 respondents.

Validity Result

No	Variable	Item	Correlation Coefficient	Critical Limit	Explanation
1	Innovator	P1	0.95	0.3	Valid
		P2	0.952	0.3	Valid
2	Early Adopter	P3	0.858	0.3	Valid
		P4	0.824	0.3	Valid
3	Early Majority	P5	0.891	0.3	Valid
		P6	0.775	0.3	Valid
4	Late Majority	P7	0.854	0.3	Valid
		P8	0.856	0.3	Valid
5	Laggards	P9	0.854	0.3	Valid
		P10	0.847	0.3	Valid
6	Perceived Usefulness	P11	0.845	0.3	Valid
		P12	0.857	0.3	Valid
7	Perceived Ease of Use	P13	0.845	0.3	Valid
		P14	0.873	0.3	Valid
8	Attitude	P15	0.856	0.3	Valid
		P16	0.898	0.3	Valid
9	Subjective Norms	P17	0.922	0.3	Valid
		P18	0.88	0.3	Valid
10	Perceived Behavior Control	P19	0.816	0.3	Valid
		P20	0.914	0.3	Valid
11	Behavior Intention	P21	0.939	0.3	Valid
		P22	0.949	0.3	Valid
12	Tangibles	P23	0.831	0.3	Valid
		P24	0.88	0.3	Valid
13	Reliability	P25	0.818	0.3	Valid
		P26	0.854	0.3	Valid
14	Responsiveness	P27	0.847	0.3	Valid
		P28	0.797	0.3	Valid
15	Assurance	P29	0.885	0.3	Valid
		P30	0.837	0.3	Valid
16	Empathy	P31	0.808	0.3	Valid
		P32	0.853	0.3	Valid

The validity test in this research is using Spearman's Correlation Coefficient in SPSS 21.0 for windows. An attribute is valid if the correlation coefficient at least 0.3 and if the value of correlation coefficient < 0.3 or negative indicates that attribute is not valid. Based on the table above shows that all of items has correlation coefficient greater than 0.3. So, can be regard as all variables in this research are valid.

Reliability

No	Variable	Cronbach's Alpha	Critical Limit	Explanation
1	Innovators	0.916	0.6	Reliable
2	Early Adopters	0.619	0.6	Reliable
3	Early Majority	0.618	0.6	Reliable
4	Late Majority	0.658	0.6	Reliable
5	Laggards	0.628	0.6	Reliable
6	Perceived Usefulness	0.615	0.6	Reliable
7	Perceived Ease of Use	0.619	0.6	Reliable
8	Attitude	0.704	0.6	Reliable
9	Subjective Norm	0.807	0.6	Reliable
10	Perceived Behaviour Control	0.638	0.6	Reliable
11	Behaviour Intention	0.882	0.6	Reliable
12	Tangibles	0.673	0.6	Reliable
13	Reliability	0.655	0.6	Reliable
14	Responsiveness	0.62	0.6	Reliable
15	Assurance	0.69	0.6	Reliable
16	Empathy	0.654	0.6	Reliable

Appropriate with Cronbach Alpha a variable is reliable if critical limit nearing 1 or α ≥ 0,61. Based on table 4-2 shows all variables are reliable because the value of critical limit is greater than 0.6.

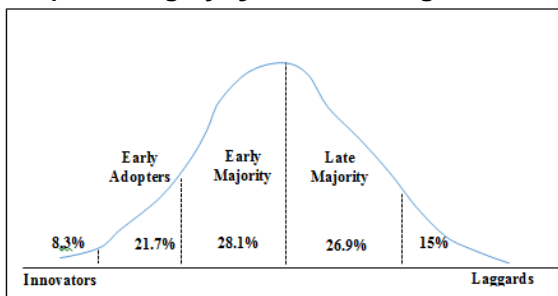*Adopter Category of Motor Sharing Customer in Bandung*

Figure 4-5: User adopter categories of GO-JEK in Bandung

Figure 4-5 displays the result of adoption categories in use the GO-JEK in Bandung appropriate the Diffusion of Innovation model by Rogers. As general based on figure result above have a similar with the result of Rogers research, where the innovators is the smallest adopter, followed by laggards, early adopters, late majority and the early majority is the largest adoption. The difference is the percentage of each user category. Can be seen in the graph above that the user of GO-JEK in Bandung consist of 8.3% is the innovators category, 21.7% is the early adopters, 28.1% as the early majority, 26.9% is the late majority, and the last is 15% as laggards.

The innovators is the user individual of GO-JEK in Bandung who claim that they are the first user GO-JEK service. This adopter is uses much their lives to discover the innovation or new ideas. Early adopter is the user type who has high degree creativity, high insight towards technological advancement, high mobility, and ambitious looking for the innovation like the GO-JEK. They like to try a new thing, willing to risk in used. Besides that, this is adopter category have ability to operate the advanced technology.

Based on the research there is 21.7% the GO-JEK user in Bandung are the early adopters. They are pioneers in used GO-JEK service in Bandung. This adoption category is the key figures, the leaders, and the peoples who respected in society element that invites the environment to use GO-JEK

service in their daily life. They did not need persuasive to use the new idea or innovations because they will seek the something new to got advantage in their social life and economic.

The early majority is the type of GO-JEK user in Bandung as first followers to adopt new idea/innovations directly the largest adopter category to adopt something new. They have a high consideration and the interaction internal in organization or environmental society when decided to using GO-JEK. This is adopter have some characteristics like as will cautious before adopt something new like GO-JEK, often interact with the environment peoples, pragmatism like as prioritizes practicality, and like to use something new but only if already there is a real evidence the advantage in used. Besides that, this adopter category did not want to be the first to adopt or the last to adopt something new like GO-JEK in their daily life.

The late majority adopter is the user of GO-JEK in Bandung who used only if already used all peoples around like as the friends, the relative, and the families. They are the last followers who decided to adopt the innovation like GO-JEK. This adopter too cautious and have a high doubt when decided to use GO-JEK in their daily life. Usually they are decided to used something new because economic and social pressure.

The last adopter category in this research is laggards. The laggard is the users of GO-JEK in Bandung who have conservative/traditional thought and has a low insight towards technology advancement. This adopter category did not care with the happening in environment society. When they decided to adopt a new idea like GO-JEK, it was because constrained and it has will be common necessity. Besides that, they are isolated from technological advancement.

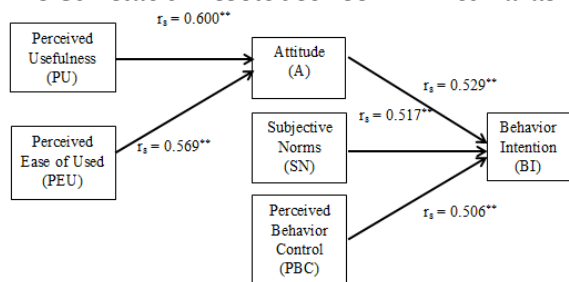### *The Correlation result between TAM towards TPB Variables*

Figure 4-5 Model Framework Result

** → Has the significant correlation

Figure 4-5 describe the correlation test result of TAM towards TPB. If the correlation coefficient between the two variables is greater than 0.6, then both variables have a significant relationship. Based on framework result shows that Perceived Usefulness and Perceived Ease of Use has a significant correlation towards Attitude. As well as Attitude, Subjective Norms, and Perceived Behavior Control has significant correlation towards Behavior Intention. The firstly, it means the GO-JEK users in Bandung are trusting by using GO-JEK will enhanced their productivity and the application of GO-JEK's ease to learning for use. Based on the framework result above shows that both these perceptions have a significant relationship to the attitude of users where they trusted that using the GO-JEK is thing they want.

The secondly; the users of GO-JEK in Bandung are trust that using GO-JEK is the good idea, their family and friends are encourage them to continue to use the service, and they claim that they have the knowledge about GO-JEK service in Bandung. These perspectives have a significant relationship towards their behavior intentions where the users are claim they have an interest and a desire to use and will keep using it in the future.

The Correlation Result between DOI towards TAM & TPB Combination
The variable were have a greater significant correlation with the innovator is Subjective Norm with the score of correlation is 0.260 and Sig. (2-tailed) 0. It means the Innovators adopter is first user of GO-JEK in Bandung have perception which significant relationship towards Subjective Norms adopter (supporting from their family and friends to use the GO-JEK). The variable which has a greater significant correlation is Subjective Norm with score of correlation 0.290 and Sig. (2-tailed) 0. Based on the table above shows this adopter are used the GO-JEK because have a significant relationship with encouragement from their family and their friends to keep using GO-JEK in their daily lives.

The variable which has a greater significant correlation with the early majority is Attitude with score of correlation 0.273 and Sig. (2-tailed) 0. Early Majority adopter is the type of GO-JEK user in Bandung that be careful and make sure first whether GO-JEK is ease to use or not from the others experienced in used. This adopter has a significant relationship towards desired to use the GO-JEK in their daily life.

The correlation result of Late Majority towards TAM & TPB combination there is no the variables which have significant correlation. It means the type of people who tends to use the new technology only if it has become common needs and has been used by all people closest there is not has been significant relationship with usefulness, ease of use, attitude, encouragement from the family and friends, the knowledge about that new idea, and desire to use the new technology. The variable which has a greater significant correlation with the laggard is Behavior Intention with score of correlation -0.139 and Sig. (2-tailed) 0.028. The Laggards adopter is the type of people who did not care and not interest with the new technologies. They feel that their daily life is going well without using the GO-JEK. This adopter has a negative significant relationship towards desire to accepted the technology.

The Correlation Result between DOI towards SERVQUAL
The variable which have greater significant with the innovator is the Tangibles with score of correlation 0.209 and Sig. (2-tailed) 0.001. It means the GO-JEK user in Bandung especially the Innovator adopter when decided to used GO-JEK there is a very strong relationship with the features, visually, and facilities of product/service.
The variable which have greater significant correlation with the early adopter is Reliability with score of correlation 0.248 and Sig. (2-tailed) 0. It means the GO-JEK user in Bandung especially the Early Adopter when decided to used GO-JEK there is a very strong relationship with the accurate and timeliness of service.
Based on the result shows that this adopter has a significant relationship only with the reliability of service like accurate and on time service delivery with score of correlation 0.139 and Sig. (2-tailed) 0.027.
The variable which have a high significant correlation with the Late Majority is Responsiveness with score of correlation 0.164 and Sig. (2-tailed) 0.009. It means this adopter use the GO-JEK in their daily life because has a strong relationship with the company responsiveness, for example the apps it can used anytime, and company will show their performance to solving the problem that may would occurs.
Based on the result shows that this adopter there is not has significant correlation towards tangibility, reliability, responsiveness, assurance, and the empathy of company. Can be regarded as when they were decided to use GO-JEK, they did not care anything about how the service quality.

The Correlation Result between TAM & TPB Combination towards SERVQUAL
The variable which have greater significant correlation with the perceived usefulness is assurance with score correlation 0.372 and Sig. (2-tailed) 0. It means when the user of GO-JEK in Bandung are considers that GO-JEK is usefulness, then this perception any strong relationship to assurance from company to customer like safety and comfortable in transaction.

The variable which have greater significant correlation between PEU towards all SERVQUAL variables is Assurance with score correlation 0.346 and Sig. (2-tailed) 0. It means when the users decided that GO-JEK apps is ease to use, then safety and comfortable of user also become the matter which is very important.

The variable which greater significant correlation with attitude is empathy with score correlation 0.320 and Sig. (2-tailed) 0. It means the user of GO-JEK in Bandung when they have desire and decide to used it, then they are also wishes the company employee will understand what they need specifically, and be able to give a good impression to user.

The variable which have a greater significant correlation with the subjective norm is Empathy with score correlation 0.211 and Sig. (2-tailed) 0.001. It means the user of GO-JEK in Bandung when they consider the encouragement from those closest to using GO-JEK is important thing, then any relationship with the ability of company to understand specific of customer needs and the ability to give a good impression to customer are very important thing.

The variable which greater significant correlation to perceived behavior control is Assurance with scored of correlation is 0.324 and Sig. (2-tailed) 0. It means the user of GO-JEK in Bandung can be regarded as when they have knowledge how to use the apps, they have the high consideration towards the safety and comfortable in use.

The variable which greater significant correlation to behavior intention is Tangibles with the value correlation is 0.307 and Sig. (2-tailed) is 0. It means the user desired and planning to keep using GO-JEK in their daily life has a significant relationship towards the tangibles of apps and service like as the features, clean office, facilities and visually.

The Correlation Coefficient of SERVQUAL Variables

According to result shows that variables of service quality GO-JEK in Bandung has been strong relationship between one variable with each other. Can be regarded as the tangibility of product (features, visually, facilities) have significant relationship towards the reliability (accurateness, on time delivery), with the responsibility of company to solve the problem, with the assurance (safety and comfortable in use), and with the company ability to know specific the customer needs and be able to giving a good impression in transaction.

In Tangibles, the variable which have a greater significant correlation is Empathy with the value of correlation coefficient is 0.659 and Sig. (2-tailed) 0. It means the GO-JEK user in Bandung trust that GO-JEK have a good tangibility such as the features, facility and visually of product. This perception has a very strong relationship with the company ability to understand specific the customer needs and the ability to giving excellent impression to customer/user.

The variable which mostly significant correlation in Reliability is Tangibles with the value of correlation coefficient is 0.526 and Sig. (2-tailed) 0. It means the user of GO-JEK in Bandung trust that GO-JEK has a good accurateness and on time in transaction. This perspective has a very strong relationship towards their trusting with the tangibility of product/service like as the feature, facility, and the visually.

The variable which greater significant in Responsiveness is Tangibles with the correlation coefficient is 0.524 and Sig. (2-tailed) 0. The GO-JEK user in Bandung trust that GO-JEK have a good responsibility to solve the problem which may occurs and also trust that the apps can be accessed anytime. This perception has a very strong relationship with their trusts toward the tangibility of GO-JEK like the features, visually and the facilities.

The variable which greater significant in Assurance is Empathy with the correlation coefficient is 0.561 and Sig. (2-tailed) 0. It means the GO-JEK user in Bandung when they trust that GO-JEK is safe and comfortable in use there is a very strong relationship with the company ability to understand specific customer needs and the ability of company to give excellent impression in transaction.

The Actual Service Quality GO-JEK based on customer perception in Bandung

**Table 4-23: The Actual Service Quality
Based on Customer Perspective**

Variables	Percentage of Customer Perception	
	Good	Bad
Tangibles	88%	12%
Reliability	77%	23%
Responsiveness	85%	15%
Assurance	91%	9%
Empathy	85%	14%

Source: based on analysis

Table 4-23 describe the actual service quality of GO-JEK based on the customer perception where located in Bandung. The table above gathered from the result of questionnaire.

Based on the result of table 4-23 shows the level user satisfaction towards GO-JEK service in Bandung is high. This matter can be seen from the percentage who agree that GO-JEK service is good greater than the percentage who answer the GO-JEK service in Bandung is bad. The percentage of user who agree that GO-JEK is good service quality in tangibles as much 88%, reliability as 77%, responsiveness as 85%, assurance as 91%, and empathy is 85%.

- The tangibles of GO-JEK in Bandung
  Based on result, the user of GO-JEK in Bandung would trust that GO-JEK is good tangibility in their service. It means there is 88% the user of GO-JEK in Bandung were satisfying to the appearances and the feature of service. They trusted that GO-JEK have facilities and attractive fixtures that used by company personnel. The appearance and the features in meant is the apps of GO-JEK, the cleanness of equipment and company personnel, and the material that used to serve customers.

- The reliability of GO-JEK in Bandung
  The reliability is ability of company to give provide prompt service to customer appropriate that promised before like as agility of company, accurate, and on time delivery service. The user of GO-JEK in Bandung trusted that GO-JEK application is accurate and reliable. It means when users will ordered service pass through the application of GO-JEK, they got prompt service appropriate with the information listed in apps like as location accurateness (distance), and on time delivery service. There is 77% claimed that GO-JEK service in Bandung is on time and reliable.

- The responsiveness of GO-JEK in Bandung
  Based on the data gathered there is 85% the GO-JE user in Bandung trusted that GO-JEK has a high responsibility in their service. This matter related with the application of GO-JEK such as can access anytime when the user need, and show their performance to solving the problem and customer grievance.

- The assurance of GO-JEK in Bandung
  The assurance is ability of company to perform their best to serve the customer like as have skill, the knowledge, courtesy, and be able to make sure the user is confidence and felt safety in used company service. Based on the data, there is 91% the GO-JEK user in Bandung was trusted that GO-JEK is capable to giving well service to user. It means the user trusted that GO-JEK application is secure, kept the data and information of user, comfortable, and capable to make the users are convince if there is a problem, the company is immediately will be overcome.

- The empathy of GO-JEK in Bandung
  Empathy is ability of company to conceiving the customer needs specifically and capable to understand conditions of customer, and provide prompt service to customer. There is 85% the user of GO-JEK in Bandung trusted that GO-JEK able to understand the user needs specifically, and the drivers of Go-JEK capable to give well impression to customers.

Conclusion

Accordance theory Diffusion of Innovation by Rogers, the result of this research has been fulfill curve's DOI model where the Innovator and Laggard are the smallest categories adopter, followed by Early Adopter and Late Majority, and the last is Early Majority which is the greater categories adopter. Based on the result of research there is 8.3% the user of Go-JEK in Bandung as innovators, 21.7% as the early adopter, 28.1% as the early majority, 26.9% as the late majority, and 15% is the laggards. The innovators is individual the first user in Bandung. The early adopter is the pioneer to adopt innovation in society like GO-JEK. The early majority is the first followers in used GO-JEK in Bandung. The late majority is the last followers in used something new like GO-JEK. The last is laggards, the user of GO-JEK in Bandung who conservative/traditional mind.

The user of GO-JEK in Bandung will adopt it because they have some consideration about the advantage of used. In the research, there is some variables which make they are decided to used GO-JEK service based on the TAM and TPB combination such as perceived usefulness, the ease of use, the attitude towards use, the subjective norm, perceived behavior control, and behavior intention. In the chapter before will shows result of customer perspective in the correlation between TAM towards TPB variables to accept GO-JEK in their daily life. Based on the result data analysis can be conclude that the perceived usefulness and ease of use in used GO-JEK there is a high significant relationship with the attitude towards use something new like GO-JEK. Then, the attitude in use GO-JEK, the subjective norms, and the perceived behavior control to accept GO-JEK also has a high significant relationship with the behavior intention in use GO-JEK in Bandung.

In the research result shows that overall all Diffusion of Innovation variables (Innovator, Early Adopter, Early Majority, Laggards, except the Late Majority prove that has been significant correlation towards TAM & TPB combination variables (PU, PEU, A, SN, PBC, and BI). It means when the user of GO-JEK in Bandung decided to adopt GO-JEK service, this matter any relationship with the factors to accept technology such as usefulness of product, ease of use, supporting by close peoples, and attitude towards use.

Furthermore, according to result of data analysis overall the Diffusion of Innovation variables except the Laggard, has significant correlation towards SERVQUAL variables (Tangibles, Reliability, Responsiveness, Assurance, and Empathy). It means when the user of GO-JEK in Bandung adopt innovation like GO-JEK there is relationship towards the appearance of facilities and feature of product/service, and the accurateness and on time service delivery. Besides that, there is a high correlation with the accessibility the apps, capable to solve the problem that occurs, safety, comfortable in transaction, conceiving the customer needs, and capable to give well impression user/customer.

Data analysis result shows that overall TAM & TPB combination variables (PU, PEU, A, PBC, and BI) has significant correlation towards SERVQUAL variables (Tangibles, Reliability, Responsiveness, Assurance, and Empathy). It means when the user of GO-JEK di Bandung were decided to accept the GO-JEK service and used it in their daily life, this matter any relationship with the service quality of GO-JEK. The service quality was included the tangibility of product, the reliability, responsibility of company, assurance, and the empathy company personnel to customer. The tangibility was including the appearance of equipment and features, the cleanness and completeness of material and company personnel. The reliability of product was included the ability of company to provide prompt service, and the accurateness the application. The responsibility was including like as company performance to solve the problem. The assurance was including the customer felt whether safety in use or not, and comfortable in transaction. The last is empathy, this matter related with the ability of company to understand the user needs specifically, and the conceiving to given excellent impression to user/customer.

Furthermore, according to data analysis also evidence that all variables of SERVQUAL are mutually significant correlation between a variable towards another variable. It means the user of GO-JEK in Bandung said that GO-JEK have a high service quality in all variable of service quality including the tangibles, the reliability, the responsiveness, the assurance, and the empathy of GO-JEK will mutually related between one variable to each other.

Generally, based on the data analysis, the service quality of GO-JEK in Bandung based on users perspective have been shows the high level. This matter was including of five variables of SERVQUAL that is the tangibles, the reliability, the responsiveness, the assurance, and empathy of company to serve customer. GO-JEK service quality obtained not as bad as the research background as exposed in several media. It means to measure is bad or good the service quality a company/institute, should analyze it the method recommended by experts with the number of sample which can representative the customers population.

Recommendation

In previous explanation said that the GO-JEK has been a good service quality in overall. But, if we are looking as more detail will shows that service quality of GO-JEK in Bandung in five aspects (Tangibles, Reliability, Responsiveness, Assurance, and Empathy) are uneven where in Tangibles as 88% said good, in Reliability for 77%, Responsiveness 85%, Assurance 91%, and Empathy is 85% agree that GO-JEK service quality is good. The GO-JEK needs to improve their service quality in the Reliability (the lower percentage), and find out the strategy how to achieve the equal service quality in all aspects.

The GO-JEK needs to make standardization employees vehicle for minimize the unsatisfied of users, accidents, and all negative issues that ever occurred. To decreasing the number of fraudulent, its better if the GO-JEK will continue to increasing the secure of data and user information, and the comfortable in used the apps. Then, because the lately a growing number of online transportation companies that have sprung up in Indonesia, it is better if the government would make specific laws that regulates online transportation, such as the standardization of vehicles, hours of operation, and security of data and user information.

Recommendation for future research

In the research, the perception gathered by researcher only from the user GO-JEK in Bandung, and this matter is not inflicts the gap satisfaction towards the company expectation. For future research, it is better if involving the both of party are the user/customers and the company's party. GO-JEK also suggested to using another method to analyze and evaluate the service quality of GO-JEK in Bandung from the other perspective. Besides that, this research also the only focus in Bandung area, GO-JEK suggested for future research analyze the company (service quality, adopter categories, and TAM model) in all operational area in Indonesia.

References

(n.d.). Retrieved 01 10, 2017, from Uber: https://www.uber.com/id/cities/jakarta/

Ojek Jeger Taksi Saingan Baru Ojek Online. (2015, 09 20). Retrieved 01 10, 2017, from gojakgojek.com: http://www.gojakgojek.com/2015/09/jeger-taksi.html

Jumlah Pengguna Internet di Dunia Mencapai 3,2 Miliar. (2016, 2 24). Retrieved 11 4, 2016, from Info Komputer: https://www.infokomputer.com/2016/02/berita/berita-reguler/pengguna-internet-mencapai-32-milyar/

Alwahaishi, S. (2014). Determinants of Consumer Acceptance of Mobile Internet: An Empirical Study. 9-19.

Amrillah, M. I. (2016). The Use Importance- Performance Analysis and Three-Factors Theory in Assessing the Service Quality of Rumah Amal Salman ITB (RASI). *Final Project*.

Arman, X. (2015, 05 12). Retrieved 01 10, 2017, from PRO-JEK: http://pro-jek.blogspot.co.id/2015/09/faq-pro-jek-indonesia.html

Bayu Adi Wicaksono, Irwandi Arsyad. (2016, pebruary 15). *Kronologi Detik-detik Kecelakaan Maut Gojek di Pancoran*. Retrieved from viva.co.id: http://metro.news.viva.co.id/news/read/736042-kronologi-detik-detik-kecelakaan-maut-gojek-di-pancoran

'Chris'Yang, H. (2013). Bon Appetit for Apps: Young American Consumers' Acceptance of Mobile Applications. *The Journal of Computer Information Systems* , 85-96.

Davis, F. (1989). *Perceived Usefulness, Perceived ease of Use, and User Acceptance of Information Technology* (Vol. 13).

Derry. (2015, 08 11). *Perbandingan Peta Kekuatan Go-Jek & Grab Bike*. Retrieved 01 10, 2017, from Motorinanews.com: http://motorinanews.com/post/perbandingan-peta-kekuatan-gojek--grab-bike/

Destiny, T. (2014). The Assesment of Service Quality of PT. Interlink Tour and Travel in Bandung Using the SERVQUAL Scale and Time Study Analysis.

Dharmasaputra, M. (2015, June 29). *Kontroversi Taksi Uber di 16 Negara*. Retrieved from kadata.co.id: http://katadata.co.id/telaah/2015/06/29/kontroversi-taksi-uber-di-16-negara

Ghozali. (2005). *Aplikasi Analisis Multivariate Dengan Program SPSS.* Badan Penerbit Universitas Dipenogoro.

GO-JEK. (2016, may 11). Retrieved from Go-Jek.com: http://www.go-jek.com/

Han-Bin SUN; Ting-Ting LIU. (2011). Application of SPSS in Theoretical Mechanics Education. *Applied Mechanics and Materials, 120*, 186-189.

Hill, D. R. (1998). What Sample Size is "Enough" in Internet Survey Research? *Interpersonal Computing and Technology*.

internetlivestats.com. (n.d.). *Intenert Users*. Retrieved 11 4, 2016, from Internetlivestats: http://www.internetlivestats.com/internet-users/

Jan Hauke, Tomasz Kossowski. (2011). Comparison of Value Pearson's and Spearman's Correlation Coefficients on the Same Sets of Data. 87-93.

Kambiz Heidarzadeh Hanzaee and Adel Raeisi Dehkordi. (2012). Investigating gender's impact on the relationship between generation Y consumer culture values and service quality expectations. *African Journal of Business Management*, 404-1417.

Mary Tate, Joerg Evermann. (2010). The End of SERVQUAL in Online Services Research: Where to from here? 60-88.

Masibnoe. (2016, Pebruary 13). *Driver Gojek Nekat Grepek Penumpangnya*. Retrieved from redaksikota.com: http://redaksikota.com/2016/02/13/driver-gojek-nekat-grepek-penumpangnya/

Oni. (2016, Pebruary 15). *Wanita Yang Tewas di Flyover Pancoran Merupakan Penumpang Gojek Bernama Diah*. Retrieved from harianterbit.com: http://megapolitan.harianterbit.com/megapol/2016/02/15/56475/0/18/Wanita-Yang-Tewas-di-Flyover-Pancoran-Merupakan-Penumpang-Gojek-Bernama-Diah

Onky. (2016, 02 18). *8 Layanan Ojek Online Selain Gojek dan Grab*. Retrieved 01 10, 2017, from ngonoo.com: https://ngonoo.com/2016/02/083521/8-layanan-ojek-online-selain-gojek-dan-grab/

Owler. (n.d.). *Kuaidi ONE*. Retrieved 11 4, 2016, from Owler: https://www.owler.com/iaApp/1828859/kuaidi-one-company-profile

P.B, E. Z. (2011, July 25). *Go-Jek Menangkan Penghargaan dari GEPI dan Raih US$ 10 Ribu*. Retrieved from swa.co.id: http://swa.co.id/listed-articles/go-jek-menangkan-penghargaan-dari-gepi-dan-raih-us-10-ribu

Panji, A. (2016, 02 03). *2016, GrabBike Ekspansi ke Lima Kota Lebih*. Retrieved 01 10, 2017, from cnnindonesia: http://www.cnnindonesia.com/teknologi/20160203134616-185-108599/2016-grabbike-ekspansi-ke-lima-kota-lebih/

Pratama, A. H. (2015, 15 12). *Kilas Balik Perkembangan Ojek Online di Indonesia Sepanjang 2015*. Retrieved 11 04, 2016, from TECHINASIA: https://id.techinasia.com/kilas-balik-ojek-online-2015

RL. (n.d.). *Inilah 10 Aplikasi Ojek Online Terpopuler di Indonesia*. Retrieved 01 10, 2017, from carisinyal.com: http://carisinyal.com/aplikasi-ojek-online/

Robert C. Nickerson, Jamie Eng and Mark Austreich. (2014). Mobile Technology and Smartphone Apps: A Diffusion of Innovation Analysis. 2-3.

Robert J. Kauffiman; Angsana A. Techatassanasoontorn. (2009). Understanding early diffusion of digital wireless phones. *Telececomuncations Policy*, 432-450.

Rogers, E. M. (1983). *Disffusion of Innovation* (third ed.). United States of America: The American Center Library.

Startup Blu-Jek ~ Satu lagi Ojek Online yang Semarakkan Bisnis Jasa Transportasi. (n.d.). Retrieved 01 10, 2017, from maxmanroe.com: https://www.maxmanroe.com/startup-blu-jek-satu-lagi-ojek-online-yang-semarakkan-bisnis-jasa-transportasi.html

Sulistiyarini, S. (2012). Pengaruh Minat Individu Terhadap Penggunaan Mobile Banking: Model Kombinasi Technology Acceptance Model (TAM) dan Theory of Planned Behavior (TPB). 2-8.

Sunarya, A. (2016, Pebruary 14). *Ramai di Media Sosial Driver Gojek Lakukan Pelecehan Seksual*. Retrieved from suratkabar.co: http://www.suratkabar.co/7039/news/heboh-driver-gojek-lakukan-pelecehan-seksual-terhadap-penumpangnya

Uber (Perusahaan). (n.d.). Retrieved 01 11, 2017, from Wikipedia: https://id.wikipedia.org/wiki/Uber_(perusahaan)

Valarie A. Zeithaml, Mary Jo Bitner and Dwayne D. Gremler. (2009). *Service Marketing* (Fifth ed.). Singapore: McGraw-Hill/Irwin.

Valarie A. Zeithaml; Leonard L Berry. (1985, January). A Parasuraman, Conceptual Model of Service Quality and its. 42.

Widiartanto, Y. H. (2016, 10 24). *2016, Pengguna Internet di Indonesia Capai 132 Juta*. Retrieved 11 4, 2016, from Kompas Tekno: http://tekno.kompas.com/read/2016/10/24/15064727/2016.pengguna.internet.di.indonesia.capai.132.juta.