RESEARCH REPORT

ANALYSIS OF FACTORS INFLUENCING GO-PAY SYSTEM USAGE TO ACHIEVE BENEFIT AMONG GO-JEK DRIVERS

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ANALYSIS OF FACTORS INFLUENCING GO-PAY SYSTEM USAGE TO ACHIEVE BENEFIT AMONG GO-JEK DRIVERS

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DECLARATION OF AUTHENTICITY

Hereby I declare the originality of the thesis; I have not presented anyone else's work to obtain my university degree, nor I have presented anyone else's word, ideas or expression without any the acknowledgements. All quotations are cited and listed in the references of the thesis.

If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequences.

Yogyakarta, 21 December 2018

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Writer

Mochammad Rahartyo Gigar

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ABSTRACT

In this era, cash began to be slightly abandoned, regarding the emergence of e-money (electronic money). E-money has been used in almost all transactions, including transportation such as online taxis. the use of e-money from the drivers perspective can be influenced by several factors such as perceived usefulness that are influenced by job relevance and output quality, also perceived ease of use that are influenced by perception of external control. These factors will become a great issue for the usage of E-money system, as it is expected to help the customer, company, and especially the driver to gain benefits of E-money system.

By distributing questionnaire to several Go-Jek (Online Transportation) drivers in two cities in Indonesia, the data are calculated and analysed. This show many things that are supported by the fact that actually all the factors have the impact of the E-money system usage, while E-money system usage also have impact on the benefit of E-money system as well.

Keyword: E-money, Perceived Usefulness, Perceived Ease of Use, E-money System Usage, Benefit of E-money System.

ABSTRAK

Di era ini, uang tunai mulai sedikit ditinggalkan, berkenaan dengan munculnya E-money (uang elektronik). Uang elektronik sudah digunakan hampir di semua transaksi, termasuk transportasi seperti taksi online. *Penggunaan uang elektronik dari perspektif pengemudi dapat dipengaruhi oleh berbagai faktor, seperti* perceived usefulness *yang dipengaruhi oleh* job relevance *dan* output quality, *juga* perceived ease of use *yang dipengaruhi oleh* perception of external control. *Faktor-faktor ini dapat menjadi akibat besar penggunaan uang elektronik, sebagai mana diharapkan dapat menolong konsumen, perusahaan, dan tentunya pengemudi (pekerja) untuk mendapatkan keuntungan dari sistem uang elektronik.*

Dengan menyebarkan kuesioner ke beberapa pengemudi Go-Jek (Transportasi Online*) di dua kota di Indonesia, data yang terkumpul sudah diolah. Data yang terkumpul menunjukan banyak hal yang didukung oleh fakta yang sebenarnya semua faktor mempunyai pengaruh terhadap penggunaan uang elektronik. Sedangkan, penggunaan system uang elektronik juga mempunya pengaruh terhadap keuntungan dari penggunaan system uang elektronik.*

Kata kunci: Uang Elektronik, Perceived Usefulness, Perceived Ease of Use, Penggunaan Sistem Uang Elektronik, Keuntungan dari Sistem Uang Elektronik.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Since a long time ago, the role of money is to replace the object in which it belongs or with any other object to be exchanged. Oktasari (2014) mentioned that increasingly, the development forms of money, from metal, paper, until now being applied in Indonesia, even some countries have been used it for quite a long time, namely e-money (electronic money). This development is affected by the rapid development of technology. E-money itself is electronic money in the form of data in computer networks such as internet (Daily Social id, 2017). Bank Indonesia defines electronic money as any kind of money stored in a system such as a server or chip which the object is used by the consumer as an e-wallet or prepaid card (Lukman, 2015).

Compared to other non-cash payment instruments, the use of technology-based payment transactions, e-money has a good potential for expanding access to payment systems in Indonesia (Primadhyta, 2015). On the other hand, the use of e-money does not require users to have bank accounts.

In some countries, e-money system has been used previously. In the first appearance, e-money in some countries was used for some purposes, like in Malaysia and Singapore, which applied this method of payment by using e-money to pay public transportation costs and expenditures on retail stores (Kamal, 2017). While in Japan, the usage of e-money is wider, it can be used to buy meals in restaurants, drink coffee in cafes or buy clothes in shopping centers. Some countries

like England, Australia and the other Europe countries make use of e-money as well (Kamal, 2017).

In Indonesia, the implementation of e-money is dominated from banking and telecommunication companies, but the function of e-money from e-money system itself are so many like for shopping in the mini market, many kind of tickets purchasing, also e-parking and paying public transportation for certain cities (Lukman, 2015).

Based on the news from Bank Indonesia, they issued e-money licenses in 2009 through Bank Indonesia Regulation Number: 11/12 / PBI / 2009 to support the Less Cash Society and to encourage and extend the range of non-cash use, especially e-money (Bank Indonesia, 2014).

Many companies are already implementing e-money system as a means of payment of cash replacement. In general, companies that apply the e-money system are banking and telecommunications companies (Sunandar, 2017). In Indonesia recently, not only from the two types of companies that apply e-money system, but there are other types of companies that are online transportation company, which is Go-Jek, with their e-money system named Go-Pay. Nadiem Makariem as CEO of Go-Jek said that Go-Pay's mission is to provide financial access for Indonesia citizens, because there are those who do not have access to banking services (Go-Jek, 2017). "We help actors in the informal sector get into the professional world so that they can deal directly with larger consumers. So their chances to expand become more open", said Nadiem. Now Go-Pay is purely an e-money platform with added features Transfer, receive money and withdraw money to bank account. This

process takes place gradually and is only available to some users (Daily Social id, 2017).

Meanwhile, the increasing of Go-pay system usage was followed by some complains from Go-Jek drivers, such as the limitation of withdrawal from the Go-pay or Go-Jek account that connected to Go-Jek driver's bank account that was maximum just three times within a week and the other complain was the driver got charges (20%) if the customer use Go-pay as the paying tool (Ruly, 2016). Besides, those complains does not affecting the usage of the Go-pay system from the driver, because the one who can choose to use Go-pay or cash is the customer, not the driver.

Previous researches have discussed about e-money and its usage factors. Many of the researches were used TAM 3 as the theory and model. But, the researchers just put "perceived usefulness" and "perceived ease of use" as the factors of e-money system usage, without any external factors which affecting "perceived ease of use" and "perceived usefulness". Some research also used IS success from Delone and Mclean as the theory. But, there is no research yet about e-money system usage which combining TAM and IS success as the theory and the model.

This research is trying to examine the external factors that affected Go-pay system usage in order to achieve net benefit based on Technology Acceptance Model 3 (TAM 3) which the researcher took three external factors of it (job relevance, output quality and perception of external control).

The first external factor is “job relevance”. “Job relevance” is the assumption that the system is applicable for their job (Venkatesh & Davis, 2000). System can be the one of the supporting aspect of the job. Therefore, if the system is applicable to the job, then it will be very useful and helpful, and it can make the job performance better.

The second external factor is “output quality”. It is the individual assumption that by using the system, the job tasks will be done well (Venkatesh & Davis, 2000). Actually, “output quality” has a relationship with “job relevance”, because if the system is applicable to the job, then the system will support the job performance. Based on the TAM 3 model, “job relevance” and “output quality” are directly related to the perceived usefulness.

The third external control is “perception of external control”. It is the individual believes that organizational and technical resources exist to support the use of the system (Venkatesh et al., 2003). The organization resource refers to proper utilization of such resources as assets, information, human and financial resources (eResource Scheduler, 2013). While, technical resources are those which related to computers and technology (Business Dictionary). Based on TAM 3 model, perception of external control is directly related to the perceived ease of use.

Those three external factors related to “perceived ease of use” and “perceived usefulness” are continuously related to the usage of the system. According to Davis (1989), “perceived ease of use” is defined that an application perceived to be easier to use than another is more likely to be accepted by users. The easier the system to use, the more it will be used. It has a strong influence on behavioral intentions on the adoption of information technology, if a technology is “perceived easy to use”,

people will choose to use it (Juniwati, 2014). Consult (2002) noted that "perceived ease of use" refers to the ability of consumers to experiment with a new innovation and evaluate its benefits easily.

In addition to "perceived ease of use", there is "perceived usefulness", which according to Davis et al. (1989), "perceived usefulness" explains the user's perception to the extent that the technology will improve the user's workplace performance. Bugembe , J (2010) mentioned that "perceived usefulness" is the user perception of how useful the technology in performing their job, it is also defined as a person's subjective perception of the ability of a computer to increase job performance when completing a task.

TAM 3 models then combined with the Information Systems (IS) success model from Delone and Mclean. The researcher took two variables from Delone and Mclean IS success model, which are the "Go-pay system usage" and "benefit of Go-pay", which is the result of Go-pay system use.

The first variable which is taken from the Delone and Mclean IS success model is "use". "Use" here means the behavior of using the system (DeLone & McLean, 2003). Actually in the Delone and Mclean IS success model, "use" is coincide with "intention to use", where "Intention to use" is the attitude, and "use" is the behavior. In this research, the researcher only takes "use" because the researcher wants to focus to the user, which means already use the Go-pay system with their behavior to use. Therefore, the variable "use" in this research is interpreted as "Go-pay System Usage"

"Net benefit" is the last variable which is taken from Delone and Mclean IS success model. "Net benefit" is the most important success measures as they capture the balance of positive and negative impacts of the e-commerce on the customers, suppliers, employees, organizations, markets, industries, economies, and even the societies (DeLone & McLean, 2003). An information system will be used by the user if it provides benefits for the user, so if the user feels that the information system have benefits, then the use of information systems will increase (Sitti, 2015). Because this research is in the context of E-money system, especially Go-pay, therefore the "Net Benefit" is interpreted as "Benefit of Go-pay System". Based on the explanation above, then the title of this research is **"Analysis of Factors Influencing Go-pay System Usage to Achieve Benefit among Go-Jek Drivers"**

1.2 Problem Formulation

Based on the explanation in the research background that has been explained before and based on the variable in the TAM 3 model (2003), the researcher finds problem formulations that will be analyzed in this research, they are:

1. Is there any relationship between "job relevance" and "perceived usefulness"?
2. Is there any relationship between "output quality" and "perceived usefulness"?
3. Is there any relationship between "perceptions of external control" and "perceived ease of use"?
4. Is there any relationship between "perceived usefulness" and "Go-pay system usage"?

5. Is there any relationship between “perceived ease of use” and “Go-pay system usage”?
6. Is there any relationship between “Go-pay system usage” and “Benefit of Go-pay system”?

1.3 Research Objective

From the explanation above, the purpose of this research is to understand the affect of the factors that is affecting the adoption Go-pay system. Thus, there are several objectives that would like to be achieved, which are:

1. To know whether there is relationship between “job relevance” and “perceived usefulness”.
2. To know whether there is relationship between “output quality” and “perceived usefulness”.
3. To know wheter there is relationship between “perceptions of external control” and “perceived ease of use”.
4. To know wheter there is relationship between “perceived usefulness” and “Go-pay system usage”.
5. To know wheter there is relationship between “perceived ease of use” and “Go-pay system usage”.
6. To know wheter there is relationship between “Go-pay system usage” and “Benefit of Go-pay system”.

1.4 Research Contributions

The contribution of this research is to test the factors that are affecting the adoption of e-money system (Go-pay) to achieve net benefit on the practical basis and theoritical basis. Thus, below are the contributions of the research:

1. The researcher is expecting that the result of this research can determine wheter the adoption of e-money system can really bring net benefit toward the employee of the company that adopted e-money system.
2. From this research, the researcher is expecting that the result can give additional knowledge that is beneficial as a reference that can be used as a guidance for the future researcher who choose the topic of information system especially related to e-money.

1.5 Systematics of Writing

Chapter I: Introduction

In this chapter, the researcher gives a brief explanation about the research background, problem formulation, study objective, significance of the research and writing system

Chapter II: Theoritical Review

In this chapter, the researcher gives a brief explanation about the review of literature about e-money system, Factors in e-money system adoption, net benefit of e-money system usage, and Development of the Hypothesis.

Chapter III: Research Methodology

In this chapter, the researcher gives a brief explanation about methods that are going to use in this research and how the data that are collected being processed.

Chapter IV: Data Analysis and Discussions

In this chapter, the researcher gives a brief explanation about the data collecting, description of the data, result of the validity and reliability, result of test

and result of hypothesis after being test.

Chapter V: Conclusions and Recomendations

In this chapter, the researcher gives a brief explanation about the conclusion based on the research, the limitation during the research progress, and also suggestion and recommendation.

CHAPTER 2

THEORITICAL REVIEW

2.1 Technology Acceptance Model (TAM)

Fred Davis developed the TAM first in 1986 in his doctoral study (Woollard, 2015). The TAM originated as an adaptation of the more generalised TRA and was developed more specifically later to predict and explain technology usage behaviour and it was developed to identify the factors which lead to user's acceptance or rejection a technology by integrating technological aspects with organisational behaviour concepts (Davis et al., 1989; Davis, 1989). In TAM, there are two cognitive beliefs, they are perceived usefulness and perceived ease of use. Perceived usefulness and perceived ease of use then directly affect the use of certain IS/IT technologies. Perceived usefulness is user's perceptions concerning usefulness of Information Technology (IT) (Davis, 1986). Meanwhile, perceived ease of use is the degree to which a person believes that using a particular system would be free from effort (Davis, 1989). Perceived usefulness and perceived ease of use are affected by the external variables.

TAM is a theory that has some changes from TAM, TAM 2 and TAM 3.

The updated from TAM to be TAM2 was added some variable that related to the social influence (subjective norm, voluntariness, and image) and cognitive instrumental processes (job relevance, output quality, result demonstrability, and perceived ease of use) (Sullivian, 2016). TAM 2 then developed to be TAM 3, which is proposed in the context of e-commerce with an inclusion of the effects of trust and perceived risk on system use (Venkatesh & Bala, 2008).

TAM that the researcher uses for this research is TAM 3. The model of TAM 3 is containing of external control for using a system, perceived usefulness and perceived ease of use, until the usage of the system. In this research, the external variables are taken from the factors that are related to e-money system usage, which are job relevance, output quality and also perception of external control. The model of TAM developed by Davis can be seen below in the Figure 2.1.

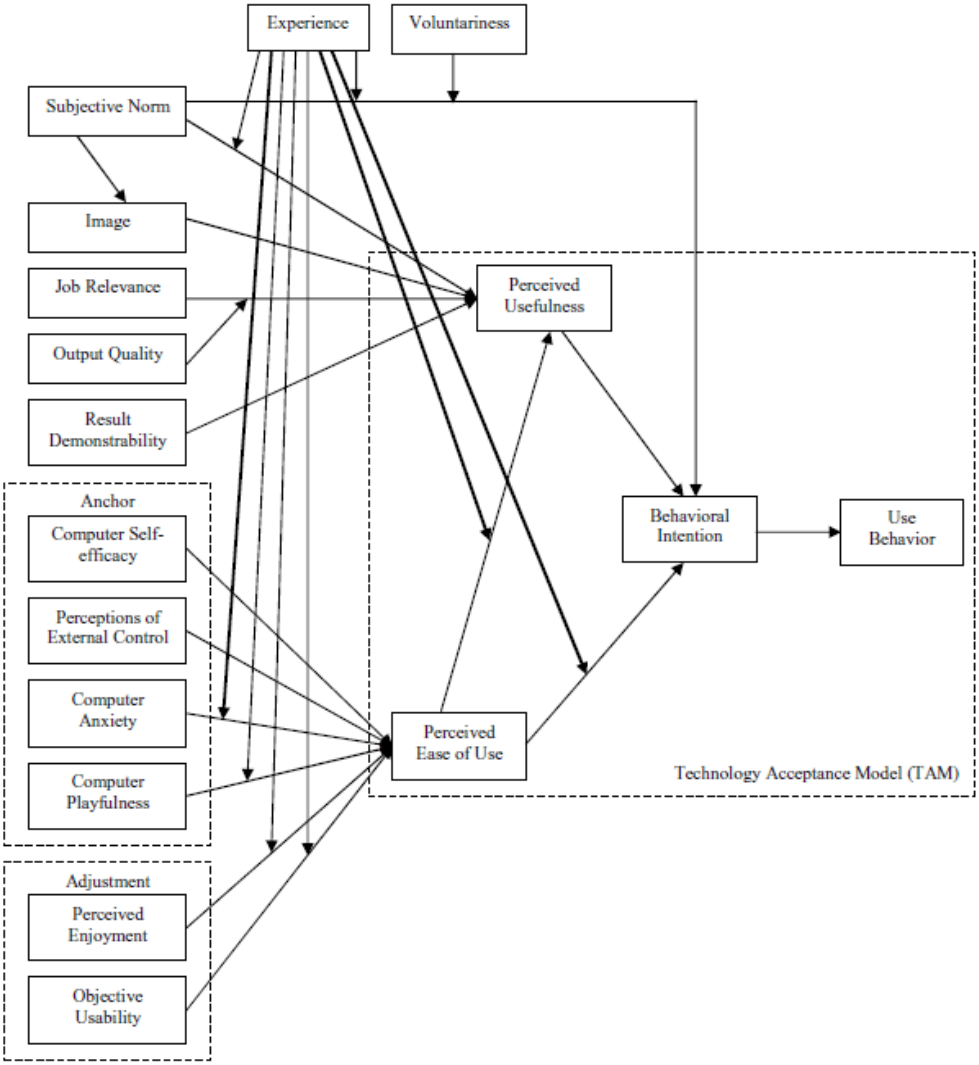

Figure 2.1

Technology Acceptance Model 3 (Venkatesh & Bala, 2008)

2.2 The Information System/Information Technology Success Model

DeLone and McLean (1992) conducted a study aimed to measure the aspects that affect the success of information systems. DeLone and McLean (1992) stated that the success of an information system can be seen from the system quality, output information quality, use, user satisfaction, individual impact and organizational impact. DeLone and McLean (2003) then updated the IS Succes

model, based on suggestions and critiques from other studies using the IS Success model. The basic differences between the initial model and the latest model are as follows:

1. Added service quality which is considered an important variable in assessing the overall success of department of information system.
2. Changing the "individual impact" and the "organizational impact" into "net benefit", because it is considered to have a broader meaning. the original term "impacts" may be positive or negative, thus leading to a possible confusion whether the results are good or bad. Also, the inclusion of "net" in "net benefits" is important because no outcome is wholly positive, without any negative consequences. Thus, "net benefits" is probably the most accurate descriptor of the final success variable.
3. Added intention to use to measure user behavior, even though there was "use" as the measurement for the using behavior. But, McLean and DeLone (2003) also mentioned that intention and behavior are so difficult to be measured.

This theory and model have an objective which is to assess the success of IS/IT. In the IS success model developed by McLean and DeLone (2003), net benefit is the variable that used to determine wheter company have a better performance in adopting certain IS/IT project or not. In this research, researcher only takes 2 variables from this IS success model, they are use and net benefit because this research want to focus on the factors that affecting the usage of the e-money system which is Go-pay. Futhermore, the IS success model developed by McLean and DeLone is shown below in the Figure 2.2.

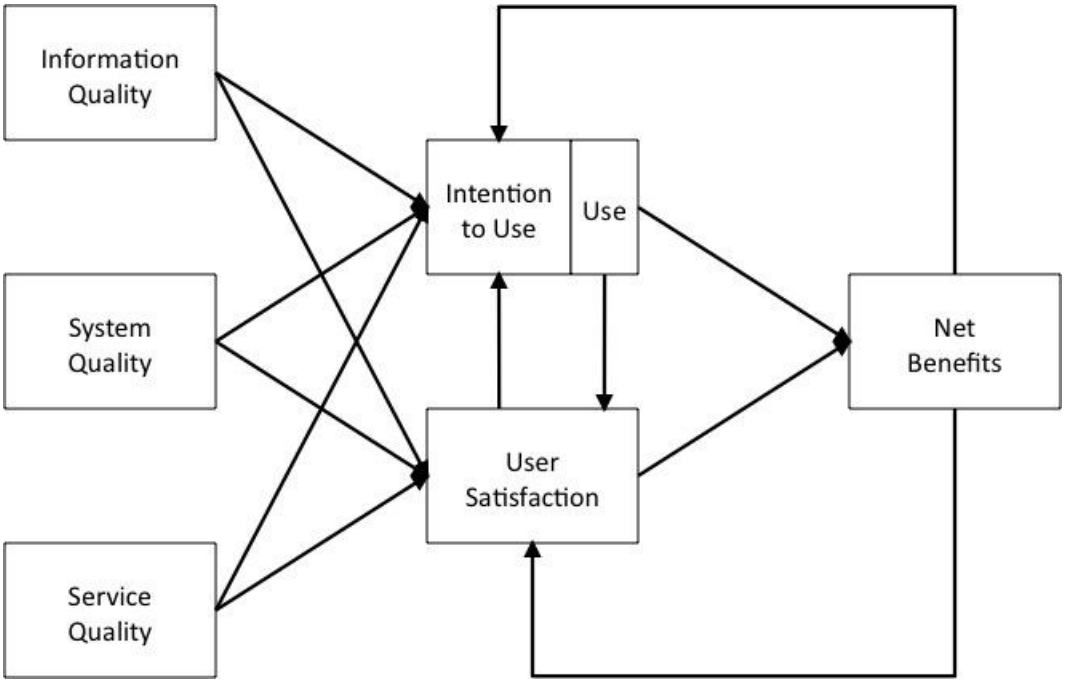

Figure 2.2

The Information System Success Model (Delone & Mclean 2003)

2.3 E-money (Go-pay)

Go-pay is an e-money system that was born by an online transportation company, Go-Jek (Go-Jek, 2017). According to the Go-Jek application, Go-Jek is a technology-based application that provides *ojek* (motorcycle taxi), taxi, delivering goods, massage and also mechanic that the users can order through internet. Go-jek provides these services through two ways of payment, cash and Go-pay. The Go-pay system does not use bank accounts, but uses only the account used to order Go-Jek services. Go-pay system use is very simple. Top-up balances can be done through the Go-Jek driver and can be directly used. In this research, researcher determines Go-pay as the object of the research, because the researcher sees Go-Jek in Indonesia is getting a great response from its users from the very beginning.

Not long afterwards, Go-Jek added a Go-pay feature which also earned excellent response from its users. Therefore, the researcher wants to examine the factors that affect the success of the Go-pay system among TAM 3 and IS success models.

2.4 Factors in E-Money System Use

2.4.1 Organisational Factors Influencing E-money System Use

2.4.1.1 Job Relevance

"Job relevance" is the degree to which an individual believes that the target system is applicable to his or her job (Venkatesh & Davis, 2000). "Job Relevance" measures to what extent the user believes that the system will be relevant for her job, in other words, will this system support the user's job-activities (Radeskog, Strömstedt, & Söderström, 2009).

"Job Relevance" is operationalized by the factors regulatory environment and process landscape, while regulatory environment describes the regulatory pressure of a company to comply with regulations, the factor process landscape describes the size and scope of the business repository (Eggert, 2014).

2.4.1.2. Output Quality

"Output quality" is the degree to which an individual believes that the system performs his or her job task well (Venkatesh & Davis, 2000). "Output quality" is most usefully defined in terms of how well outputs meet user needs, or whether they are 'fit for purpose' (Matheson, 2013).

2.4.1.3 Perception of external control

According to Venkatesh et al. (2003), "perception of external control" is the individual assumption that the using of the system can be supported by two aspects, which are organizational and technical resources. "Perception of external control" is considered to be the perception of individual that the technical and organizational infrastructure required to use and support an intended system are available and thus intention to adopt new technologies should not be an issue (Kasse, Nansubuga, & Moya, 2015).

2.4.2 Individual Factor Influencing E-money System Use

2.4.2.1 Perceived Usefulness

"Perceived Usefulness" (PU) refers to a measure in which a person believes that if using a particular system can improve the performance of his work. "Perception of usefulness" has an important role in shaping attitude toward using (behavioral intention to use) (Sun & Zhang, 2006). According to Adams et al. (1992) and Davis et al. (1989), most of the user's acceptance of information systems is driven by perceptions of "perceived usefulness". "Perceived usefulness" can be considered as subjective probability that the application of new technology will improve the way users complete their assigned tasks (Davis, 1989; Adams et al., 1992).

2.4.2.2 Perceived Ease of Use

"Perceived Ease of Use" refers to a measure that indicates the extent to which a person believes that using a particular system is easy to use (Davis, 1989). It can be said that "perceived ease of use" can reduce one's effort both time and energy to learn the system or technology because individuals believe that the system or technology is easy to understand (Adams et al., 1992). Rogers (1983) stated that

the “perceived ease of use” is a measure of the extent to which innovative technology is considered not difficult to learn, understand, and operate.

2.4.2.3 Go-pay System Usage

Basically, this variable is the meeting point from the merging of two model, which are TAM and Delone & Mclean model. This variable is coming from Delone and Mclean updated IS success model (2003) that actually coincide with “Intention to Use”, but Delone and Mclean stated that the reason why “intention to use” and “use” are placed coincide in their model, because actually “intention to use” is the attitude, while “use” is the behavior. However, attitudes and their links with behavior are notoriously difficult to measure (Delone & Mclean, 2003). While from TAM, the same variable was also named “use”. Both the explanation about use from D&M model and from TAM is also explaining the mean of use in this research, which is the using of Go-pay system. Because this research focuses on they who had used Go-pay, then the researcher removes the variable “intention to use” and just using variable “use”.

2.4.3 Benefit of Go-pay System

A reciprocal effect will occur from the positive (or negative) Net Benefit, reinforcing (or decreasing) the subsequent use (DeLone and McLean, 2003; Wang, 2008). An information system will be used by the user if it provides benefits for the user, so if the user feels that the information system has benefits for him then the use of information systems will increase which will increase the perception of the net benefits of information systems (Sitti Ardiyanti, 2015).

2.5 Previous Study

The previous studies which discussed the factors that are influencing the usage of IT or system can be seen in Table 2.1 on the next page.

Table 2. 1

Previous Studies

No	Researcher (Year)	Variable		Method, Tools, Sample	Result
		Independent	Dependent		
1.	Alambaigi & Ahangari (2015)	1. Previous experience 2. Company's willingness to fund 3. Job relevance	1. Perceived ease of use 2. Perceived usefulness 3. Intention 4. Actual use	- Survey, questionnaire, purposive sampling - Partial Least Squares (PLS) - West Azerbaijan Agricultural extension agents	"Company's willingness" to fund does not have significant effect on "perceived usefulness" and "perceived ease of use". "Job relevance" has a significant effect on "perceived usefulness" and "perceived ease of use". "Experience" has a significant effect on "perceived usefulness" & "actual use". "Perceived usefulness" has a significant effect on "perceived ease of use". "Perceived usefulness" & "perceived ease of use" has a significant effect on using intention. "Intention" has a significant effect on "actual use".
2.	Ardiyanti (2015)	1. System Quality 2. Information Quality 3. Service Quality	1. Use 2. User Satisfaction 3. Net Benefit	- Questionnaire, Purposive sampling - SmartPLS 2.0 version - Users of regional financial information systems, in the city government of Baubau	"System quality" and "information quality" affect "user satisfaction" and also affect "net benefits". "Service quality" does not affect "net benefits". "User satisfaction" does not affect "use". "Use" does not affect "net benefits". "User satisfaction" affects "net benefits".

Table 2.1 (Continued)

Previous Studies

No	Researcher (Year)	Variable		Method, Tools, Sample	Result
		Independent	Dependent		
3.	Ma'ruf (2016)	1. Perceived behavior control 2. Subjective norm	1. Perceived ease of use 2. Perceived usefulness 3. Attitude 4. Behavioral intention to use	- Questionnaire, Simple random sampling - SmartPLS 3.2.4 version - Students of Yogyakarta	"Perceived ease of use" has a positive but not significant effect on "attitudes". "Perceived Usefulness" has a significant positive effect on "attitude". "Perceived ease of use" & "Subjective norm" has a significant positive effect on "perceived usefulness". "Perceived Usefulness" has positive but not significant effect on "Behavioral Intention to Use". "Subjective norm" has no significant effect on "Behavioral Intention to Use". "Perceived behavior control" has a significant positive effect on "perceived ease of use". "Perceived behavior control" & Attitude has a significant positive effect on "Behavioral Intention to Use".

Table 2.1 (Continued)

Previous Studies

No	Researcher (Year)	Variable		Method, Tools, Sample	Result
		Independent	**Dependent**		
4.	Kim, Chun & Song (2009)	1. Perceived ease of use 2. Perceived usefulness	1. Attitude 2. Behavioral intention to use	- Survey, Questionnaire, Convenience sampling - Lisrel - MIS students from a database management course	The positive relationship between "attitude" and system use to "behavioral intention to system use" is stronger when the "attitude" is strong than when it is weak. The result of H2 and H3 are full or partial mediation of the effect of "perceived ease of use" and "perceived usefulness" are determined by the strength of the "attitude".
5.	Rajan & Baral (2015)	1. Computer Self Efficacy 2. Organisational Support 3. Training 4. Complexity 5. Compatibility	1. Perceived Ease of Use of ERP System 2. Perceived Usefullness of ERP System	- Purposive sampling - Partial Least Squares (PLS) - End users of ERP in Indian organisation	The relationship between the external variables (computer self-efficacy, organizational support, training, and compatibility) and "perceived usefulness" and "perceived ease of use" were found to be significant and positively related. While the relationship between "complexity" and "perceived usefulness" and "perceived ease of use" had the negative effect.

Table 2.1 (Continued)

Previous Studies

No	Researcher (Year)	Variable		Method, Tools, Sample	Result
		Independent	Dependent		
6.	Juniwati (2014)	1. Perceived Usefulness 2. Perceived ease of use 3. Perceived Risk	1. Attitude toward online shopping 2. Intention to shop online	- Questionnaire, Purposive sampling - Structural Equation Modeling (SEM) - Active university students in Pontianak	PU and PEoU have positive and significant influence on "attitude toward online" shopping but have not significant influence on "intention to shop online". "Perceived risk" has negative significant effect on "attitude toward online" shopping. "Perceived risk" on "intention to shop online" is negative and significant.
7.	Bugembe (2010)	1. perceived usefulness 2. perceived ease of use	1. attitude towards using 2. actual usage	- Proportionate stratified, Questionnaire, observation, Simple random sampling - SPSS (Statistical Package for Social Scientists) - Academic and administrative staff.	The relation between "perceived ease of use" and "perceived usefulness" has the significant positive relation. While "perceived ease of use" and "perceived usefulness" to "attitude toward using" also has the significant positive relation. And "attitude toward using" to "actual usage" has the significant positive relation as well.

2.6 Development of Hypothesis

2.6.1 Job Relevance as Individual Factor in External Factor with Perceived Usefulness

"Job relevance" is an important function within one's job that the system is capable of supporting (Venkatesh & Davis, 2000). "Job relevance" means individuals have different perceptions of outcomes they expect obtain from technology because of the different nature of their job, also they are exposed to external information, which may affect them in choosing which technology they need (Amir & Ismael, 2015). If the system is relevant with the job, then the system is considered to be helpful to the job. From the TAM 3 theory, this factor is directly connected with "perceived usefulness".

Relationship between "job relevance" and "perceived usefulness" has been proven by previous study (Ataran & Nami, 2011; Venkatesh & Bala, 2008). Surowiec and Wansal (2016) discovered that "job relevance" positively impacts "perceived usefulness". In other words, the system that relevant with the job is believed to be useful in the job. From the explanation above, then the proposed hypothesis is as follows:

H1: "Job relevance" has positive effect to "perceived usefulness" to the Go-pay system usage among Go-Jek drivers.

2.6.2 Output Quality as Individual Factor in External Factor with Perceived Usefulness

"Output quality" is distinct from "job relevance" because given a comparison between two systems that are equally job relevant, an individual will

choose the system with the higher output quality (Ducey, 2013). Development of the system is expected to be more helpful to do the job to be done better. The more helpful the technology, the better the output quality of the job.

In this research, "output quality" can be defined as the Go-pay system that can perform the Go-Jek driver's task well, the Go-pay system is expected to be more helpful for the Go-Jek drivers job. From the theory of TAM 3, this factor is directly connected to "perceived usefulness".

The previous study has been proved the relationship between "output quality" and "perceived usefulness" (Chismar & Wiley-Patton, 2003; Venkatesh & Davis, 2003). Mather, Caputi and Jayasuriya (2002) discovered that "output quality" have positive effect to "perceived usefulness". From the description above, the proposed hypothesis is as follows:

H2: "Output quality" has positive effect to "perceived usefulness" to the Go-pay system usage among Go-Jek drivers.

2.6.3 Perception of External Control as Organisational factor in External Factor for Perceived Ease of Use

"Perceptions of external control" are the related resources or technical infrastructures in an organization that help people perform their jobs (Wu, Chou, Weng, & Huang, 2012). "Perceptions of external control" is defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system (Adamopoulos, 2012). "Perception of External Control" in this research was seen from organizational and technical resources that can support Go-Jek drivers to use Go-pay system. Go-pay as a product of Go-Jek can be spelled out to see from these two aspects (organizational and technical

resources).

From the TAM 3 theory, perception of external control is directly connected to "perceived ease of use". The previous research, Huang et al. (2012) discovered that "perceptions of external control" have positive effect toward the "Perceived ease of use". That is why, the proposed hypothesis is as follows:

H3: "Perception of external control" has positive effect to "perceived ease of use" to the Go-pay system usage among Go-Jek drivers.

2.6.4 Perceived Usefulness as Individual factor for E-Money System Use

According to Davis et al. (1992), "perceived usefulness" refers to consumers' perceptions regarding the outcome of the experience. While Aditya (2016) defined "perceived usefulness" is defined as the usefulness of a technology so that if the use of technology is in doubt, there will be no intention of someone to use it. "Use" in this research means the usage of e-money system. It is basically affected by two factors, which are "perceived usefulness" and "perceived ease of use".

Davis (1993) defined "perceived usefulness" as the individual's perception that is using the new technology will enhance or improve her/his performance. The more people think that technology is useful the more they intend to use it (Juniwati, 2014).

The positive and significant relationship between "perceived usefulness" and the use of the system was discovered by Davis (1989), Rigopoulos and Askounis (2007) and also Nasri and Charfeddine (2012). On the use of e-library, Yusoff et al. (2009) mentioned if students feel that the system is useful, then its use

will increase. From the descriptions above, it can be concluded that the more people perceives the system is useful for their job, the more the system will be used. That is why, the proposed hypothesis is as follows:

H4: "Perceived usefulness" has positive effect to "Go-pay system usage" among Go-Jek drivers.

2.6.5 Perceived Ease of Use as Individual factor in Internal Factor for Go-pay System Usage

"Perceived usefulness" refers to consumer's perceptions regarding to the outcome of the e-money system usage (Monsuwe, Dellaert, and Ruyter, 2004). The usage of the system is directly influenced by perceived ease of use, which is explained by the fact that in usage, consumer attempt to minimize their effort (Davis et al., 1989).

According to Rogers (1962), "perceived ease of use" is the term that represents the degree to which an innovation is perceived not to be difficult to understand, learn or operate. "Perceived ease of use" is based on the extent to which potential users expect the new system to be used free of difficulty (Ricky & Aditya, 2016).

Previous studies has found that "perceived ease of use" has the positive relationship toward the use of the system (Suh & Han, 2002; Shih, 2004 & Al-Somali et al, 2009). The more people perceive technology is easy to use, the positive their attitude to the technology will be (Juniwati, 2014). From the explanation above, the researcher proposed the hypothesis as follows:

H5: "Perceived ease of use" has positive effect to "Go-pay system usage" among

Go-Jek drivers.

2.6.6 Benefit of Go-pay system as the result and impact of Go-pay System Usage

Basically, "net benefit" is defined as a term that is used frequently in business finance. "Net benefit" calculation allows a company to analyze how much profit was made from a specific product (Johnson, 2017). There is a different with "Net benefit" in the context of e-money, which means the impact of using e-money system.

According to Peter et al. (2008), "usage" is the achievement of the use of information systems capabilities for those using. An information system will be used by the user if it provides benefits to the user, so if the user feels that the information system have benefits for the user, then the use of information systems will increase which will increase "net benefits" of information systems. Otherwise, if the users feel that the information system does not give benefits, then its use will reduce (Sitti, 2015).

Saputro, Budianto, and Santoso (2015) discovered that the use of the system has positive relationship to the "net benefit". Based on the description above, the usage of information system will be followed by the benefits to its users. That is why, the proposed hypothesis is as follows:

H6: "Go-pay system Usage" has positive effect to "Benefit of Go-pay system" among Go-Jek drivers.

2.7 Theoritical Framework

From the explanation and hypothesis that is already explained above, so the proposed research model are illustrated in Figure 2.3

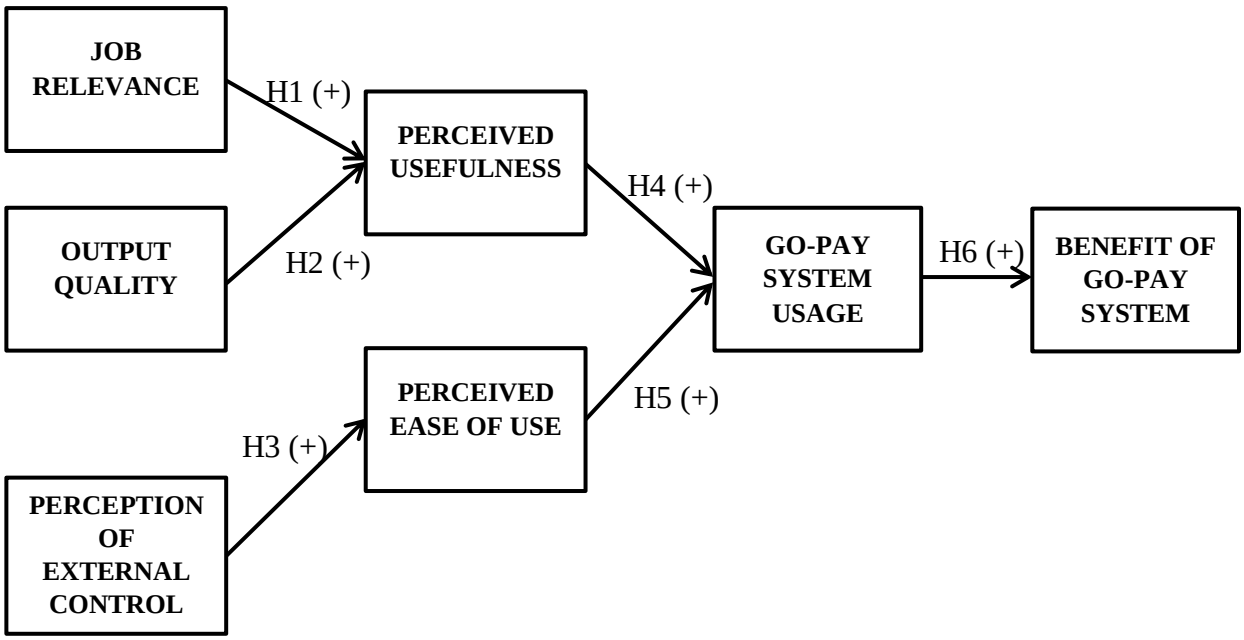

Figure 2.3
Research Model

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Design

This research is using quantitative approach. The data is taken directly from the respondent as the sample by using survey method and questionnaire technique. Hence, the data that is used in this research is considered as primary data. The type of question in the questionnaire is close ended question, so the respondent just have to choose the agreement scale without any explanation.

3.2 Population and Sample

Population is the broader group of people to whom the researchers intend to generalize the results of the research (David, 2017). In this research, respondent that is going to use is the employee who especially work in the field, which named as Go-Jek drivers, because they absolutely know and use Go-pay system.

Sample is part of object which used in all of object area which is being observed and could represent the research's population. In this research, the sample are Go-Jek drivers in Yogyakarta.

3.3 Data Collection Method

The data that is used in this research is considered as primer data because, in this research, the data is taken directly from the sample using questionnaire. The type of question in the questionnaire is close ended question, which the respondent will choose the answer from the question that has been prepared by the researcher.

The data collection technique is convinient sampling. Convenience sampling (also known as availability sampling) is a specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate in study (Saunders, Lewis, & Thornhill, 2012).

3.4 Operational Definition and Variables Measurement

Variables are attributes as well as objects that become the focus of a research, such components are important in drawing the conclusions or inferences of a study (Dahlan, 2016). The variable in this research will be divided into two types of variable, which are independent variable and dependent variable. Futhermore, in this research there are 3 independent variables, which are Job relevance, Output quality and Perception of external control and 4 dependent variables, which are Perceived usefulness, Perceived ease of use, Use, and Net benefit.

Respondents are asked to answer the question related to the variables and Go-pay system usage. Those variables are valued using likert scale from 1 to 6, started from totally do not agree to totally agree.

3.4.1 Independent Variables

Independent variable can be considered as a variable that is unaffected by the other variables. Kaur (2013, p. 36) shared additional explanation that independent variable is the antecedent while the dependent variable is the consequent.

3.4.1.1 Job Relevance

"Job relevance" is defined as an individual's perception of how applicable the technology to one's job is (Ducey, 2013). "Job relevance" in this research is defined as a perception that the system of Go-pay is applicable to the Go-Jek driver job. This variable is measured using 3 indicators which are adopted from previous research (Venkatesh & Bala, 2003), which consist of the importance, relevance and pertinent of the system, that are showed in table 3.1.

Table 3.1

Measurement Indicators of Job Relevance

Variable	Item	Reference
Job Relevance	1. In my job, usage of the system is important. 2. In my job, usage of the system is relevant. 3. The use of the system is pertinent to my various job-related tasks.	Davis et al. (1992)

3.4.1.2 Output Quality

According to Mei-Ying et al. (2013), "output quality" is the degree to which one thinks that a new system can perform required tasks. The success of the system can be measured from its output. In this research, "output quality" means that by using Go-pay system, Go-Jek driver's job task will be done well or better than using cash. "Output quality" is important because a good performance is useful to increase the quality both for the driver and the Go-Jek company itself. This variable is measured using 3 indicators which are adopted from previous research

(Venkatesh & Bala, 2003), which consist of system quality rate, fluency using the system and system result rate, which are showed in table 3.2.

Table 3.2

Measurement Indicators of Output quality

Variable	Item	Reference
Output quality	1. The quality of the output I get from the system is high. 2. I have no problem with the quality of the system output. 3. I rate the results from the system to be excellent.	Davis et al. (1992)

3.4.1.3 Perception of External Control

"Perception of External Control" relates to one's perception of available knowledge, resources, and opportunities that are required to perform a specific behavior, and is the key addition to the Theory of Reasoned Action (TRA) from which TAM was derived (Ajzen & Fishbein, 1980). In this research, the external controls are the Go-Jek Company which provide Go-pay system as the one of the payment tool and also its technical resource toward Go-pay system usage, and those two aspect are supporting the job of Go-Jek drivers. "Perception of External Control" is interpreted to Go-Jek which provides an easier way to do the transaction. While technical resource toward Go-pay system usage is the way the drivers use the Go-pay system. This variable is measured using 2 indicators which are adopted from previous research (Venkatesh & Bala, 2003), which consist of control toward the system, easiness through the resources and the ownership of the resources, which are showed in table 3.3.

Table 3.3

Measurement Indicators of Perception of External Control

Variable	Item	Reference
Perception of External Control	1. I have control in using the system. 2. Given the resources, opportunities and knowledge it takes to use the system, it would be easy for me to use the system. 3. I have the resources necessary to use the system.	(Venkatesh et al., 2003)

3.4.2 Dependent Variable

As mentioned previously by Sugiyono (2009), dependent variable is the variable that is affected or existed because of the independent variable existance. Thus, the variable dependents in this research are perceived usefulness, perceived ease of use, use and net benefit.

3.4.2.1 Perceived usefulness

When the individual perceives the information and communication technologies (ICT) to improve their performances, they use it more frequently in their daily activities at work (Sabri Khayati, 2013). "Perceived Usefulness" is one of the two key variables in the technology acceptance model. It is "the degree to which a person believes that using a particular system would enhance his/her job performance" (Davis, 1989). In this research, it means that the particular system (Go-pay) would enhance the driver's job performance. This variable is measured

using 4 indicators which are adopted from previous research (Kim, Chung & Song, 2009), which consist of: usefulness, job performance, productivity and effectiveness by using the system, which are showed in table 3.4.

Table 3.4

Measurement Indicators of Perceived usefulness

Variable	Item	Reference
Perceived usefulness	1. I find the system to be useful in my job. 2. Using the system improves my performance in my job. 3. Using the system in my job increases my productivity. 4. Using the system enhances my effectiveness in my job.	(Venkatesh et al., 2003)

3.4.2.2 Perceived Ease of Use

The degree to which a person believes that using an IT will be free of effort (Davis et al., 1989). "Perceived ease of use" is the term that represents the degree to which an innovation is perceived not to be difficult to understand, learn or operate (Rogers, 1983). While Zeithaml et al. (2002) stated that the degree to which an innovation is easy to understand or use could be considered as perceived ease of use. "Perceived ease of use" in this research means the Go-Jek drivers perception for the easiness of using Go-pay system. This variable is measured using 3 indicators which are adopted from previous research (Kim, Chung & Song, 2009), which consist of understandable, less effort and easiness using the system, which are showed in Table 3.5.

Table 3.5

Measurement Indicators of Perceived Ease of Use

Variable	Item	Reference
Perceived Ease of Use	1. My interaction with the system is clear and understandable. 2. Interacting with the system does not require a lot of my effort. 3. I find the system is easy to use.	(Venkatesh et al., 2003)

3.4.2.3 E-money System Usage

According to Davis (1989), system usage is defined as an external psychomotor response measured by someone with real use. System usage is conceptualized in the form of measurements of frequency and duration of technology usage (Ratnaningrum, 2013). According to Ajsen (1980), attitude is the affection (feeling) of a person to accept or reject an object or behavior and is measured by a procedure that places the individual on an evaluative scale of two poles, such as good or bad; agree or reject, and so forth. This variable is measured using 4 indicators which are adopted from previous research (Adebowale, 2017), which consist of speed of accomplishing task, job performance, ease of job & usefulness in work, which are showed in Table 3.6.

Table 3.6

Measurement Indicators of Use

Variable	Item	Reference
E-money System Usage	1. Using Go-pay system enables me to accomplish tasks more quickly. 2. Using Go-pay system has improved my job performance. 3. Using Go-pay system has made my job easier. 4. I find the Go-pay system useful in my job.	Adebowale (2017)

3.4.2.4 Benefit of E-Money System

According to Delone and Mclean (2003), "net benefit" can be measured from performance efficiency, increasing productivity and increasing effectively. In this research, "Net benefit" is the impact of using Go-pay system by Go-Jek drivers. The impact can be used to measure the success of Go-pay system use. This variable is measured using 5 indicators which are adopted from previous research (Saputro, Santoso & Setyohadi, 2015), which consist of speed of accomplishing task, job performance, effectiveness, ease of job & usefulness in work, which are showed in Table 3.7.

Table 3.7

Measurement Indicators of Benefit of E-money System

Variable	Item	Reference
Benefit of E-money System	1. I can complete the work faster by using Go-pay system 2. My performance is better with Go-pay system	(Davis, 1989)

Table 3.7 (Cont.)

Measurement Indicators of Benefit of E-money System

Variable	Item	Reference
Benefit of E-money System	3. I am more effective at working with Go-pay system 4. I find it easier to work with Go-pay system. 5. Go-pay system is very useful in completing work and organization activities.	(Davis, 1989)

3.5 Data Analysis Technique

3.5.1 Method of Structural Equation Model (SEM)

The method of Structural Equation Model (SEM) will be used as a model of for the quantitative analysis. According to Sarwono (2010), Structural equation modeling (SEM) is a statistical technique used to build and test statistical models in the form of causal models. Futhermore, Bechger and Hox (1998) stated that SEM is a powerful technique that can combine complex path models with latent variables. Thus, from the explanation above, the approach of SEM will allow the researcher to develop model that has a complex relationship, because SEM is a set of statistical technique.

The software that will be used in this research is Smart PLS 3.0. This software will be used to process the data that is related to SEM which is based on the variance. PLS will be used in this research because according to Hussein (2015), PLS can analyze more than one dependent variable and provides the overview of direct and indirect influence between variables. PLS analysis is done in 3 stages,

they are outer model analysis, inner model analysis and hypothesis testing. The outer model analysis is performed to ensure that the measurement used is feasible for measurement (valid and reliable), while the inner model analysis/structural analysis model is done to ensure that the structural model built robust/strong and accurate (Hussein, 2015).

3.6 Validity and Reliability Test

3.6.1 Validity Test

Validity is related with reliability (Kimberlin & Winterstein, 2008, p. 2278). The term reliability here means that the validity test can test wheter certain data is truth and can be trusted or in accordance with reality. Moreover, if certain data has high validity, it means the data is assurance enough. Additionally, the validity test will be conducted for all of the questions in the research variable. The reason why the researcher will do validity test for all of the question in the research variable in order to test the validity of each question in the research variable.

The researcher is measuring the validity of each question in the research variable by discovering wheter the unobserved variable can be measured using observed variable or not. Likewise, if the unobserved variable can be measured by using the observed variable, it can be concluded that the research's variable is having a high validity.

AVE (average variance extracted) will be used to examine the result of validity test. Moreover, the question in research variable can be considered as valid if the value of loading factor from each construct is more than 0.5 ($\lambda > 0.5$), with the

significant level of p-value is less than 5% ($p < 0.05$) (Fornell & Lacker, 1981, p. 47).

3.6.2 Reliability test

The purposes of reliability test is to evaluate the stability of measures administered at different times to the same individuals or using the same standard (test–retest reliability) or to evaluate the equivalence of sets of items from the same test (internal consistency) or of different observers scoring a behavior or event using the same instrument (interrater reliability) (Kimberlin & Winterstein, 2008, p. 2277).

The researcher are using the PLS to perform reliability test. The value of alpha will be considered to be reliable if the value of alpha is above 0.70 (Wells & Wollack, 2003). The reliability test depends on the seriousness of respondents in filling out the questionnaires.

3.7 Hypothesis Testing

According to Ghozali (2013), the hypothesis could be tested by using inner model or structural model testing. The inner model or structural model testing is made to test the reletionship between R-square, T-statistic, and path coeeficient.

3.7.1 R-Square (R^2)

R-Square (R^2) explains the amount of variance accounted for in the relationship between two (or more) variables (Chung, 2010). Futhermore, Ghozali (2013) stated that the ability of the model to explain the variation of dependent variable is indicated by the R^2 that is resulting the score between one and zero.

3.7.2 T-Statistic Test

T-Statistic Test (T-test) is a test that is used to examine whether the independent variable is affecting the dependent variable or not. In this research, the t-test will be helped by PLS software program. Furthermore, the result of the test will be accepted if the value of t-count > t-table (1.64) in the significance level of 5%.

3.7.3 Path Coefficient Test

Path coefficient test is path analysis model that is providing a systematically comparisson about the various pathway in relation with the independent variable that may influence the dependent variable. In path coefficient test, there is sructural and measurement model.

3.7.4 P-Value Test

P- value test is one of the techniques to determine the significance level of independent variable and dependent variable. The p-value test will be done by observing the output using the application of Smart PLS 3.0. Furthermore, if the p-value test is one way testing, the α is not required to be divided by 2 (two).

CHAPTER 4

ANALYSIS AND DISCUSSION

This chapter explains the result of the research based on the analysis of factors in Go-pay system usage to achieve benefit among Go-Jek drivers. Researcher had already distributed questionnaire to some of Go-Jek drivers. Furthermore, in this chapter writer is also going to analyse the data that has been collected from the respondent based on the problem formulation and hypothesis formulation mentioned previously in chapter two (II). The result of data processing will be used to check whether the hypothesis can be supported or not.

The analysis is divided into three different parts. The first part explains the result of the data collection which consists of total number of the data that has already ready to be analysed. The second part mostly discusses the result of data testing which are related to the test of reliability and validity of the data. Furthermore, the third part explains the discussion of the research result which is related to T-Test of hypotheses.

4.1 Result of Data Collection

Respondents in this research are Go-Jek drivers who have been using Go-pay. Furthermore, the result of the data collection which was already successfully collected from the questionnaire will be processed. Total questionnaires that are distributed are 130 that referring to the total potential respondent which are 125 respondents. The number of questionnaire returned are 127 questionnaires which

exceed of the total potential respondents. The response of returned questionnaire is considered valid since all questions are completed and all requirements are met. Those data could be seen on the Table 4.1.

Table 4.1 The Classification of Data Collection

Description	Amount	Percentage
Distributed Questionnaires	130	100%
Returned Questionnaires	127	97.69%
Valid Questionnaires	127	100%

4.2 Evaluation of Measurement (Outer Loading)

4.2.1 Test of validity

This research is uses convergent validity and discriminant validity to test the validity. The convergent validity is taken from the measurement model which is using a reflective indicator. This reflective indicator is based on the correlation using item score or component score with construct score that is calculated by using SmartPLS. The reflective measurement of an individual can be considered as high if the correlation is more than 0.5 (with significant level of 0.05 and T statistic >1.64).

Meanwhile, the validity test is conducted by using discriminant validity. Discriminant Validity can be used by comparing the value of square root of average variance extracted (AVE) in every construct with the correlation between one variable and another variable in the model. The good value of discriminant validity can be found if the square root of AVE in every construct is bigger than 0,50.

Table 4.2 describes the number of AVE for every variable of Output Quality (OUT), Perception of External Control (PEC), Job Relevance (REL), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Go-pay System Usage (USE), Benefit of Go-pay System (NB) which the values are above the minimum number of 0.5 and also loading factor of the indicators are already 0.7 or higher. From the explanation above, it can be concluded that the variables and indicators used in this research are considered as valid or has fulfilled the convergent validity.

Table 4.2 Initial Item Loadings and AVE in Initial Model

Variable	Item	Outer Loading	AVE
Output Quality	OUT1	0.9075	0.8175
	OUT2	0.8894	
	OUT3	0.9154	
Perception of External Control	PEC1	0.844	0.7097
	PEC2	0.8416	
	PEC3	0.8417	
Perceived Ease of Use	PEOU1	0.9149	0.8598
	PEOU2	0.9301	
	PEOU3	0.9366	
Perceived Usefulness	PU1	0.8921	0.7646
	PU2	0.8776	
	PU3	0.8866	
	PU4	0.8404	
Job Relevance	REL1	0.8614	0.7700
	REL2	0.9536	
	REL3	0.8115	
Go-pay System Usage	USE1	0.8955	0.7916
	USE2	0.8946	
	USE3	0.8464	
	USE4	0.9207	

Table 4.2 Initial Item Loadings and AVE in Initial Model (Cont.)

Benefit of Go-pay System	NB1	0.8797	0.8364
	NB2	0.9225	
	NB3	0.9157	
	NB4	0.9415	
	NB5	0.9124	

Along with table 4.2, Table 4.3 provides information about the score of the Cross Loading in this research. On the Table 4.3, the reflective indicator is tested by discriminant validity with cross loading. The indicator can be considered as valid if the loading factor is higher than construct that is appointed as compared to the other constructs. Value of cross loading shown in Table 4.3 are having good correlation.

Table 4.3 Cross Loading

	NB	OUT	PEC	PEOU	PU	REL	USE
NB1	0.8797	0.4964	0.4816	0.5578	0.6753	0.509	0.8003
NB2	0.9225	0.4835	0.4615	0.5	0.7187	0.6462	0.8136
NB3	0.9157	0.5804	0.5314	0.5918	0.7735	0.7008	0.8848
NB4	0.9415	0.5551	0.5766	0.5528	0.7555	0.5927	0.8615
NB5	0.9124	0.6371	0.6318	0.5934	0.7557	0.5429	0.8761
OUT1	0.6127	0.9075	0.5621	0.5579	0.5541	0.5047	0.6136
OUT2	0.4686	0.8894	0.5103	0.4676	0.3819	0.4684	0.4849
OUT3	0.536	0.9154	0.5715	0.5317	0.5672	0.5567	0.5765
PEC1	0.4601	0.5382	0.844	0.6202	0.5319	0.4386	0.5492
PEC2	0.5325	0.4586	0.8416	0.5326	0.5742	0.5983	0.5417
PEC3	0.502	0.5444	0.8417	0.467	0.4681	0.4903	0.5213
PEOU1	0.4835	0.569	0.5828	0.9149	0.4731	0.5045	0.5667
PEOU2	0.5805	0.5278	0.5569	0.9301	0.6083	0.5341	0.6571
PEOU3	0.6272	0.5208	0.659	0.9366	0.6188	0.5743	0.7309
PU1	0.6955	0.4651	0.5578	0.4989	0.8921	0.745	0.6962
PU2	0.7535	0.5157	0.6028	0.5072	0.8776	0.6578	0.7444
PU3	0.7295	0.4645	0.4344	0.5543	0.8866	0.608	0.7636
PU4	0.6373	0.5464	0.5947	0.5953	0.8404	0.5811	0.7238
REL1	0.5023	0.4475	0.4888	0.4582	0.6147	0.8614	0.4872
REL2	0.619	0.5455	0.6108	0.5857	0.7516	0.9536	0.6554
REL3	0.6065	0.5026	0.468	0.4781	0.5712	0.8115	0.6061

Table 4.3 Cross Loading (Cont.)

USE1	0.7882	0.6123	0.6032	0.7472	0.8195	0.649	0.8955
USE2	0.8484	0.5762	0.5608	0.681	0.7093	0.5269	0.8946
USE3	0.8101	0.5089	0.5366	0.4491	0.7458	0.6085	0.8464
USE4	0.8558	0.5257	0.5727	0.6291	0.7021	0.585	0.9207

Table 4.4 shows the internal correlation among variables. This table is used to test the discriminant validity. On the Table 4.4, it can be seen that the value of correlation among variables (the one that printed bold), shows that the variable is having more correlation to itself and it is represented by the higher value compare to the other. In the end, it could be concluded that the entire variable in this research has already fulfill the requirement of discriminant validity test.

Table 4.4 Internal Correlation among Variables

Variable	NB	OUT	PEC	PEOU	PU	REL	USE
NB	**1**	0	0	0	0	0	0
OUT	0.604	**1**	0	0	0	0	0
PEC	0.5887	0.6099	**1**	0	0	0	0
PEOU	0.6123	0.5796	0.6495	**1**	0	0	0
PU	0.8057	0.5688	0.626	0.6153	**1**	0	0
REL	0.6553	0.5686	0.6006	0.5819	0.7422	**1**	0
USE	0.9277	0.6258	0.6394	0.7079	0.8369	0.6658	**1**

4.2.2 Test of Reliability

To test the reliability from the data of the variables, this research uses the composite reliability. The variables can be considered reliable if the value of composite reliability is higher than 0,70. Table 4.5 provides the result of composite reliability calculation of the research variables.

Table 4.5 Score of Composite Reliability

Variable	Composite Reliability

OUT	0.8175
PEC	0.7097
PEOU	0.8598
PU	0.7646
REL	0.77
USE	0.7916
NB	0.8364

4.3 Valuing Inner Model or Structural Model from the Result of the Research

Once the estimated model fulfilled the criteria of outer module, the next step is conducting a test of structural model (inner model). In this section, the test of strucutral model consists of Test of R-Square (R^2) and Test of T-Statistics.

4.3.1 Test of R-Square (R^2)

From the data that has been analysed, the value of R-Square (R^2) can be seen in the Table 4.6. On the Table 4.6, it can be seen that the first variable is the value of Perceived Ease of Use (PEOU) variable is 0.4219, which means that Perception of External Control (PEC) is able to describe the variance of Perceived Ease of Use (PEOU) by 42.19%, meanwhile the other 57.81% is affected by another variable. The second one is Perceived Usefulness (PU) which has value of R-Square is 0.5827 which means the variable of Perceived Usefulness, that are Job Relevance (REL) and Output Quality (OUT) are able to describe the variance of Perceived Usefulness (PU) by 58.27% and the other 41.73% are described by another variable. The third one is the value of Go-pay System Usage (USE) has value of R-Square is 0.7603 affected by the variable of Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) that are able to describe the variance of Go-pay System Usage (USE) by 76.03%. The last one is the value of Benefit of Go-pay System (NB) has

value of R-Square is 0.8606 which is affected by the variable of Go-pay System Usage (USE) that are able to describe the variance of Benefit of Go-pay System (NB) by 86.06%.

Table 4.6 R^2 Value

Variable	R2
PEOU	0.4219
PU	0.5827
USE	0.7603
NB	0.8606

4.3.2 Test of T-Statistics

Based on the data that has been processed, the result of the test of T-Statistics that is used to test the hypotheses can be seen in the table 4.7.

Table 4.7 The Conclusion of Hypotheses (T-Statistics)

Relation	T-Statistics	Original Sample (β)	Status
OUT -> PU	2.313	0.2169	Accepted
PEC -> PEOU	5.9162	0.6495	Accepted
PEOU -> USE	6.0741	0.3105	Accepted
PU -> USE	11.6007	0.6458	Accepted
REL -> PU	6.1939	0.6189	Accepted
USE -> NB	45.1251	0.9277	Accepted

4.3.2.1 The Test of Hypotheses 1 (Job Relevance have relationship with Perceived Usefulness to Go-pay System Usage among Go-Jek drivers)

Table 4.7 describes the significant relationship between REL and PU with path coefficient that shows a number of 0.6189 and t-value by 6.1939 (> 1.64). The result of hypotheses 1 is consistent with the previous study which was conducted by Surowiec & Wansal (2016), whereas Job Relevance has positive impact toward

Perceived Usefulness. So, H1 shows that Job Relevance has positive impact toward Perceived Usefulness.

4.3.2.2 The Test of Hypotheses 2 (Output Quality have relationship with Perceived Usefulness to Go-pay system usage among Go-Jek drivers)

Table 4.7 describes the significant relationship between OUT and PU with path coefficient that shows a number of 0.2169 and t-value by 2.313 (> 1.64). The result of hypotheses 2 is consistent with the previous study which was conducted by Mather, Caputi & Jayasuriya (2002) whereas discovered that Output Quality has positive impact toward Perceived Usefulness. So, H2 shows that Output Quality has positive impact toward Perceived Usefulness.

4.3.2.3 The Test of Hypotheses 3 (Perception of External Control have relationship with Perceived Ease of Use to Go-pay system usage among Go-Jek drivers)

Table 4.7 describes the significant relationship between PEC and PEOU with path coefficient that shows a number of 0.6495 and t-value by 5.9162 (> 1.64). The result of hypotheses 3 is consistent with the previous study which was conducted by Huang et al. (2012) whereas discovered that Perception of External Control has positive impact toward Perceived Ease of Use. So, H3 shows that Perception of External Control has positive impact toward Perceived Ease of Use.

4.3.2.4 The Test of Hypotheses 4 (Perceived Usefulness have relationship with Go-pay system usage among Go-Jek drivers)

Table 4.7 describes the significant relationship between PU and USE with path coefficient that shows a number of 0.6458 and t-value by 11.6007 (> 1.64). The result of hypotheses 4 is consistent with the three previous studies which were conducted by Davis (1989), Rigopoulos and Askounis (2007) and also Nasri and Charfeddine (2012), where it was discovered that Perceived Usefulness has positive impact toward Use. So, H4 shows that Perceived Usefulness has positive impact toward Go-pay system Usage.

4.3.2.5 The Test of Hypotheses 5 (Perceived Ease of Use have relationship with Go-pay system usage among Go-Jek drivers)

Table 4.7 describes the significant relationship between PEOU and USE with path coefficient that shows a number of 0.3105 and t-value by 6.0741 (> 1.64). The result of hypotheses 5 is consistent with the three previous studies which were conducted by Suh and Han (2002), Shih (2004) and also Al-Somali et al (2009), where it was discovered that Perceived Ease of Use has positive impact toward Use. So, H5 shows that Perceived Ease of Use has positive impact toward Go-pay system Usage.

4.3.2.6 The Test of Hypotheses 6 (Perceived Ease of Use have relationship with Go-pay system usage among Go-Jek drivers)

Table 4.7 describes the significant relationship between USE and NB with path coefficient that shows a number of 0.9277 and t-value by 45.1251 (> 1.64). The result of hypotheses 6 is consistent with the previous study which was conducted by Saputro, Budianto and Santoso (2015), where it was discovered that Use has positive impact toward Net Benefit. So, H6 shows that Go-pay System Usage has positive impact toward Benefit of Go-pay system.

4.3.3 Discussion

In this part, the result of the analysis will be interpreted and being discussed with more explanation. In the first part, there will be given interpreted and discussion of the result which has correlation with the factor in Go-pay system usage to achieve benefit and on the second part there will be given the result of discussion of the effect from factors in this research.

In the previous part, it has already explained about the research process which leaded to the research result. Development of Hypotheses in the second chapter is based on the research model design (Figure 2.3). Hypotheses test was being done by looking at T-Value and Path Coefficient (β). Just like being explained on Table 4.7, all of the hypotheses are accepted. After doing evaluation, the next chapter will be given interpretation and discussion about the research result.

4.3.3.1. Relation between Job Relevance and Perceived Usefulness (H1)

From the hypotheses that has been developed to explain the relationship between Job relevance and Perceived usefulness, the result shows that job relevance has positive relationship with perceived usefulness. The result of hypotheses 1 is

consistent with the previous study which was conducted by Surowiec and Wansal (2016), where it was Job Relevance has positive impact toward Perceived Usefulness, which is similar to this research finding.

The explanation above can be interpreted that Go-pay system is applicable to Go-Jek driver's job. Since Go-pay system is applicable and support the job, then the system will be perceived useful for Go-jek driver's job.

4.3.3.2. Relation between Output Quality and Perceived Usefulness (H2)

From the hypotheses that has been developed to explain the relationship between output quality and perceived usefulness, the result shows that output quality has positive relationship with perceived usefulness. The result of hypotheses 2 is consistent with the previous study which was conducted by Mather, Caputi and Jayasuriya (2002) where it was Output Quality has positive impact toward Perceived Usefulness.

Most of the respondents of this research feel that Go-pay system meets their needs well, where the system fit on the Go-Jek driver's job. Go-Jek drivers believe that the system can perform their job task well. Therefore, the Go-pay system will be perceived useful for the Go-jek driver's job.

4.3.3.3. Relation between Perception of External Control and Perceived Ease of Use (H3)

From the hypotheses that has been developed to explain the relationship between Perception of External Control and Perceived Ease of Use, the result of hypotheses 3 is consistent with the previous study which was conducted by Huang

et al. (2012), where it was discovered that Perception of External Control has positive impact toward Perceived Ease of Use.

The result of this research shows that Perception of External Control has positive impact toward Perceived Ease of Use, it means that the using of the system is supported by two aspects, they are organizational and technical resources. This research also shows that most of the respondents can operate the system well, it could be concluded that the organizational and technical resources from the Go-pay system is easy to use.

4.3.3.4. Relation between Perceived Usefulness and Go-pay System Usage (H4)

From the hypotheses that has been developed to explain the relationship between Perceived Usefulness and Go-pay System Usage. The result of hypotheses 4 is consistent with the three previous studies which was conducted by Davis (1989), Rigopoulos and Askounis (2007) and also Nasri and Charfeddine (2012), where it was discovered that Perceived Usefulness has positive impact toward Use.

The result of this research shows that Perceived Usefulness has positive impact toward Go-pay System Usage. It could be concluded that the Go-pay system is useful to improve Go-Jek driver's performance of their job. Therefore, most of Go-Jek drivers use the Go-pay system because the usefulness of the Go-pay system for their job.

4.3.3.5. Relation between Perceived Ease of Use and Go-pay System Usage (H5)

From the hypotheses that has been developed to explain the relationship between Perceived Ease of Use and Go-pay System Usage, the result of hypotheses 5 is consistent with the three previous studies which was conducted by Suh and Han (2002), Shih (2004) and also Al-Somali et al. (2009), where it was discovered that Perceived Ease of Use has positive impact toward Use.

Perceived Ease of Use is also an important factor for the usage of the system, because the system does not only need to be useful, but also need to be easy to understand and operate. The result of this research shows that Perceived Ease of Use has positive impact toward Go-pay System Usage. It could be concluded that Go-Jek drivers believe the Go-pay system is easy to understand and to be operated. Therefore, the usages of Go-pay system among Go-Jek drivers are not only affected by the usefulness, but also the ease of use of Go-pay system to be understood and operated.

4.3.3.6. Relation between Go-pay System Usage and Benefit of Go-pay System (H6)

From the hypotheses that has been developed to explain the relationship between Perceived Ease of Use and Go-pay System Usage, the result of hypotheses 6 is consistent with the previous studies which is conducted by Saputro, Budianto and Santoso (2015) where it was discovered that Use has positive impact toward Net Benefit.

The information system will be used by the user if it provides benefits to the user, and the result of this research shows that Go-pay System Usage has positive impact toward Benefit of Go-pay System. It means that Go-Jek drivers got the

benefits of using Go-pay system. It also can be interpreted that by using Go-pay system, most of Go-Jek drivers got the ease of use and usefulness of the system for their job that can make their job performance to be effective and better.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter contains of the summary of this research, continued by research implications, and the limitation faced by the researcher during the research period.

Finally, it will be followed by suggestion from the researcher to the reader of this research and next researcher which have the same topic or even relevant agencies.

5.1 Conclusions

This research has objectives to investigate the relationship between Job Relevance and Output Quality to the Perceived Usefulness, Perception of External Control to the Perceived Ease of Use, Perceived Usefulness and Perceived Ease of Use to the Go-pay System Usage and also Go-pay System Usage to the Benefit of Go-pay System. Thus, the results of the research are:

1. Job relevance has positive relationship to the perceived usefulness and it is supported with the data that is gathered, thus the result of the research shows that job relevance affects the perceived usefulness.
2. Output quality has positive relationship to the perceived usefulness and it is supported with the data that is gathered, thus the result of the research shows that output quality affects the perceived usefulness.
3. Perception of external control has positive relationship to the perceived ease of use and it is supported with the data that is gathered, thus the result of the research shows that perception of external control affects the adoption of perceived ease of use.
4. Perceived usefulness has positive relationship to the Go-pay system usage and it is supported with the data that is gathered, thus the result of the research shows that perceived usefulness affects the Go-pay system usage.
5. Perceived ease of use has positive relationship to the Go-pay system usage and it is supported with the data that is gathered, thus the result of the research shows that perceived ease of use affects the Go-pay system usage.

6. Go-pay system usage has positive relationship to the benefit of Go-pay system and it is supported with the data that is gathered, thus the result of the research shows that Go-pay system usage affects the benefit of Go-pay system.

5.2 Research Contributions

This research is expected to have implication for the future, which are:

1. For Academics

   With this research, it is expected that it could help the academic to improves the development of the knowledge in the area of Information System/Information Technology as well as it is expected that this research would give chances for other researchers to prove whether there is any part of the research design could be applied to another topic in the future.

2. For Practitioners

   The result of this research is expected to help the company that wants to adopt E-money system by giving knowledge on what are the factors that should be handled by the company to adopt E-money system and determine whether E-money system can actually net benefit toward the employee of the company that adopt E-money system.

5.3 Future Direction of the Research

In this research, there are some limitations that are faced by the researcher during the process of the research and several suggestions that could be accepted by other researchers in the future, they are:

5.3.1 Research Limitations

Regardless of the result form above research which is already presented previously, researchers thought that this research still has many limitations. The limitations of this research which are controllable and uncontrollable limitations have been tried to be minimized. The limitations of this research are:

1. Language that was used in the questionnaire is a little bit hard to be understood that could lead the respondent to a different understanding of the question.
2. Due to the fact that the respondent are the drivers, it is difficult to gather the data because they are all spreading on the road to find and serve their customer, it was hard to meet the respondent of this research.

5.3.2 Recommendations

1. Simplify and improve the language on the questionnaire in order to help the respondent easier in understanding and filling the questionnaire.
2. Make the questionnaire in the form of E-form in order to help the researcher gather the data, because the researcher do not have to meet the respondent one by one, but the researcher can just spread the questionnaire by using website link that directly corresponds to the questionnaire.
3. Improve and add some more factors that could influence the result of the research and could give additional value in the future research.

All of the limitations above have been minimized with the questionnaire that is easy to be understood. Moreover, by investigating the factors that will affect the Go-pay system usage to achieve benefit of Go-pay system, this research is expected to give

benefits toward company who wants to start adopting E-money system to their employee. However, it still needs efforts that have to do, especially for the future researchers who wants to do research in this topic.

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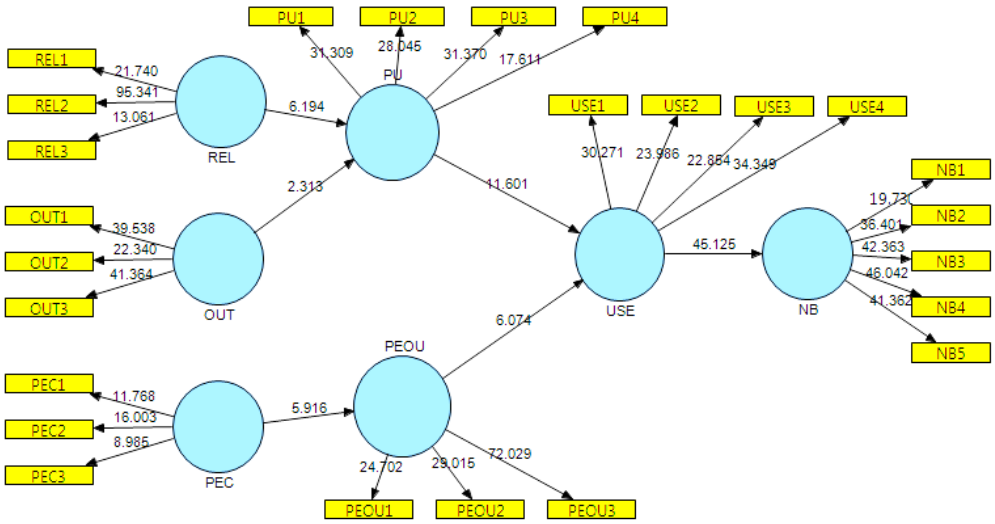
APPENDICES

Attachment 1. Result of Research



Attachment 2. Questionnaire that was being distributed via paper based.

Kuesioner Mengenai Penggunaan Sistem Go-pay

Dalam studi ini, Go-pay didefinisikan sebagai penyedia fasilitas pengolahan data guna membantu perusahaan dalam mengolah data yang di gunakan untuk alat transaksi (uang elektronik) pengganti uang tunai.

Tujuan utama dari kuesioner ini adalah untuk mengidentifikasi faktor-faktor yang dapat mempengaruhi *driver* Go-Jek dalam penggunaan sistem *e-money* (Go-pay) pada perusahaan Go-Jek.

Kuesioner ini terdiri dari 8 (delapan) bagian. Dimana 7 (tujuh) bagian pertama berisi aspek-aspek yang mempengaruhi pengadopsian *e-money* di perusahaan, sedangkan bagian sepuluh berisi tentang info demografi.

Silahkan jawab pernyataan-pernyataan di bawah dengan memberikan tanda silang (X) pada tempat yang tersedia (☐) untuk jawaban yang paling sesuai dengan kondisi anda.

Untuk menjawab bagian 1 – 9 silahkan menggunakan skala sebagai berikut:

1.	2.	3.	4.	5.	6.
Sangat Tidak Setuju	Tidak Setuju	Agak Tidak Setuju	Agak Setuju	Setuju	Sangat Setuju

Sejauh mana anda setuju atas pernyataan-pernyataan di bawah ini. Silahkan menggunakan skala di atas.

Dalam merespon pernyataan-pernyataan di bawah ini, silahkan merujuk pada sistem Go-pay yang biasa anda gunakan.

Bagian 1	**Kode: REL**	**1**	**2**	**3**	**4**	**5**	**6**
1.	Dalam pekerjaan saya, penggunaan sistem Go-pay sangatlah penting.	☐	☐	☐	☐	☐	☐
2.	Dalam pekerjaan saya, penggunaan sistem Go-pay sangat berkaitan dengan kebutuhan pekerjaan.	☐	☐	☐	☐	☐	☐
3.	Penggunaan sistem Go-pay berkaitan dengan berbagai pekerjaan yang berhubungan dengan tugas saya.	☐	☐	☐	☐	☐	☐

1.	2.	3.	4.	5.	6.
Sangat Tidak Setuju	Tidak Setuju	Agak Tidak Setuju	Agak Setuju	Setuju	Sangat Setuju

Sejauh mana anda setuju atas pernyataan-pernyataan di bawah ini. Silahkan menggunakan skala di atas.

Dalam merespon pernyataan-pernyataan di bawah ini, silahkan merujuk pada sistem Go-pay yang biasa anda gunakan.

Bagian 2	**Kode: OUT**	**1**	**2**	**3**	**4**	**5**	**6**
1.	Kualitas *output* yang saya dapatkan dari penggunaan sistem Go-pay sangat baik.	☐	☐	☐	☐	☐	☐
2.	Saya tidak memiliki masalah/keluhan mengenai kualitas dari *output* sistem Go-pay.	☐	☐	☐	☐	☐	☐
3.	Hasil dari sistem Go-pay saya rasakan baik.	☐	☐	☐	☐	☐	☐
Bagian 3	**Kode: PEC**	**1**	**2**	**3**	**4**	**5**	**6**
1.	Saya dapat mengoperasikan sistem Go-pay dengan baik.	☐	☐	☐	☐	☐	☐
2.	Saya memiliki sumber daya yang diperlukan untuk menggunakan sistem Go-pay.	☐	☐	☐	☐	☐	☐
3.	Sumber daya yang diperlukan dapat mempermudah saya untuk menggunakan sistem Go-pay.	☐	☐	☐	☐	☐	☐
Bagian 4	**Kode: PU**	**1**	**2**	**3**	**4**	**5**	**6**
1.	Penggunaan sistem Go-pay meningkatkan kinerja saya dalam bekerja.	☐	☐	☐	☐	☐	☐
2.	Penggunaan sistem Go-pay meningkatkan produktivitas saya dalam bekerja.	☐	☐	☐	☐	☐	☐
3.	Penggunaan sistem Go-pay membuat pekerjaan saya semakin efektif.	☐	☐	☐	☐	☐	☐
4.	Saya merasa sistem Go-pay bermanfaat dalam pekerjaan saya.	☐	☐	☐	☐	☐	☐

1.	2.	3.	4.	5.	6.
Sangat Tidak Setuju	Tidak Setuju	Agak Tidak Setuju	Agak Setuju	Setuju	Sangat Setuju

Sejauh mana anda setuju atas pernyataan-pernyataan di bawah ini. Silahkan menggunakan skala di atas.

Dalam merespon pernyataan-pernyataan di bawah ini, silahkan merujuk pada sistem Go-pay yang biasa anda gunakan.

Bagian 5	**Kode: PEOU**	**1**	**2**	**3**	**4**	**5**	**6**
1.	Sistem Go-pay dapat dipahami dengan mudah.	☐	☐	☐	☐	☐	☐
2.	Penggunaan sistem Go-pay sangat simpel.	☐	☐	☐	☐	☐	☐
3.	Saya merasa sistem Go-pay mudah untuk digunakan.	☐	☐	☐	☐	☐	☐
Bagian 6	**Kode: USE**	**1**	**2**	**3**	**4**	**5**	**6**
1.	Sistem Go-pay berguna dalam pekerjaan saya.	☐	☐	☐	☐	☐	☐
2.	Menggunakan sistem Go-pay memungkinkan saya menyelesaikan tugas lebih cepat.	☐	☐	☐	☐	☐	☐
3.	Menggunakan sistem Go-pay telah meningkatkan kinerja pekerjaan saya.	☐	☐	☐	☐	☐	☐
4.	Menggunakan sistem Go-pay membuat pekerjaan saya lebih mudah.	☐	☐	☐	☐	☐	☐
Bagian 7	**Kode: NB**	**1**	**2**	**3**	**4**	**5**	**6**
1.	Saya dapat menyelesaikan peekerjaan saya lebih cepat dengan menggunakan sistem Go-pay.	☐	☐	☐	☐	☐	☐
2.	Kinerja pekerjaan saya menjadi lebih baik dengan menggunakan sistem Go-pay.	☐	☐	☐	☐	☐	☐
3.	Pekerjaan saya menjadi lebih efektif dengan menggunakan sistem Go-pay.	☐	☐	☐	☐	☐	☐
4.	Pekerjaan saya menjadi lebih mudah dengan menggunakan sistem Go-pay.	☐	☐	☐	☐	☐	☐
5.	Sistem Go-pay sangat bermanfaat untuk membantu menyelesaikan pekerjaan saya.	☐	☐	☐	☐	☐	☐

Bagian 8 **Informasi Demografi**

1. Jenis kelamin:
   - ☐ Laki-laki
   - ☐ Perempuan
2. Kelompok Umur:
   - ☐ 25+ s/d 30 tahun
   - ☐ 30+ s/d 35 tahun
   - ☐ 35+ s/d 40 tahun
   - ☐ 40+ s/d 45 tahun
   - ☐ 45+ s/d 50 tahun
   - ☐ 50+ s/d 56 tahun
3. Pendidikan terakhir:
   - ☐ Sekolah Menegah Atas atau yang sederajat
   - ☐ Diploma atau yang sederajat
   - ☐ Sarjana atau yang sederajat
   - ☐ Master atau yang sederajat
   - ☐ Profesi
   - ☐ Lain – lain. Harap sebutkan _____
4. Pengalaman bekerja di posisi saat ini pada perusahaan Go-jek:
   - ☐ < 1 tahun
   - ☐ 1 – 2 tahun
   - ☐ 2 – 3 tahun
   - ☐ 3 – 5 tahun
   - ☐ > 5 tahun
5. Pengalaman penggunaan sistem Go-pay:
   - ☐ < 1 tahun
   - ☐ 1 – 2 tahun
   - ☐ 2 – 3 tahun
   - ☐ 3 – 5 tahun
   - ☐ > 5 tahun

Komentar Tambahan

Bila anda ingin memberikan komentar tambahan untuk studi ini, silahkan mengisi pada bagian yang telah disediakan di bawah ini:

_____

_____

_____

_____

Terima Kasih atas partisipasi dan kerjasama anda dalam studi ini. Mohon dipastikan bahwa anda telah melengkapi dengan menjawab semua bagian.

Attachment 3. Result of Questionnaire

NO.	REL			OUT			PEC			PU				PEOU			USE				NB				
	REL1	REL2	REL3	OUT1	OUT2	OUT3	PEC1	PEC2	PEC3	PU1	PU2	PU3	PU4	PEOU1	PEOU2	PEOU3	USE1	USE2	USE3	USE4	NB1	NB2	NB3	NB4	NB5
1	6	6	6	6	5	6	5	5	5	6	6	6	6	5	6	5	6	6	6	6	6	6	6	6	6
2	5	5	5	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3	2	1	2	2	1	2	1	2	2	1	2	2	2	1	1	2	2	1	2	1	1	1	2	1	2
4	6	6	6	5	5	6	6	6	6	5	5	6	6	5	5	6	6	6	6	6	6	6	6	6	6
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
7	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
9	5	5	5	5	5	6	6	6	6	4	5	5	6	6	6	5	6	5	4	5	5	4	5	5	5
10	6	5	4	3	2	3	5	5	5	5	4	6	5	5	5	5	5	4	4	5	5	4	4	4	4
11	6	6	6	6	5	6	5	5	5	6	6	6	6	5	6	5	6	6	6	6	6	6	6	6	6
12	5	5	5	5	4	4	5	5	5	5	5	4	4	5	5	5	5	5	4	5	5	5	5	4	5
13	5	6	6	6	6	6	5	5	5	5	5	5	5	6	5	5	6	5	5	5	5	5	5	5	5
14	5	5	5	5	5	6	6	6	6	5	5	5	6	6	6	6	6	5	4	5	5	4	5	5	5
15	6	6	6	5	5	6	6	6	6	5	5	5	6	5	5	6	6	6	6	6	6	6	6	6	6
16	4	4	3	5	4	5	6	6	4	4	4	4	4	6	6	6	5	5	5	4	4	4	4	4	5
17	6	6	6	5	5	6	6	6	6	5	5	6	6	5	5	6	6	6	6	6	6	6	6	6	6
18	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
19	5	5	5	5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	4	5	5	5
20	5	5	5	5	5	4	4	5	5	3	4	5	5	6	6	6	5	6	4	5	6	6	5	5	5

Attachment 4. Result of Questionnaire (cont.)

NO.	REL			OUT			PEC			PU				PEOU			USE				NB				
	REL 1	REL 2	REL 3	OUT 1	OUT 2	OUT 3	PEC 1	PEC 2	PEC 3	PU 1	PU 2	PU 3	PU 4	PEOU1	PEOU2	PEOU3	USE 1	USE 2	USE 3	USE 4	NB 1	NB 2	NB 3	NB 4	NB 5
21	6	5	5	5	5	5	5	4	4	5	5	5	5	5	5	5	5	4	5	5	4	5	5	5	5
22	6	6	4	6	6	6	6	6	6	6	6	6	6	5	5	5	5	6	6	5	5	5	5	5	6
23	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
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26	5	5	5	5	4	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5	5	5	5
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28	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	5	4	4	5	4	4	5	4
29	6	6	6	4	5	5	5	6	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4
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40	6	5	3	3	2	5	5	1	2	5	3	6	5	5	5	5	5	4	1	2	5	4	3	3	2

Attachment 5. Result of Questionnaire (cont.)

NO.	REL			OUT			PEC			PU				PEOU			USE				NB				
	REL 1	REL 2	REL 3	OUT 1	OUT 2	OUT 3	PEC 1	PEC 2	PEC 3	PU 1	PU 2	PU 3	PU 4	PEOU 1	PEOU 2	PEOU 3	USE 1	USE 2	USE 3	USE 4	NB 1	NB 2	NB 3	NB 4	NB 5
41	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
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57	5	5	5	5	6	6	6	5	5	5	5	5	5	6	6	6	6	6	6	6	5	5	6	5	5
58	4	4	4	5	5	5	6	5	5	5	5	4	6	4	5	5	5	4	5	5	5	5	4	5	6
59	4	4	4	4	4	5	5	4	4	4	4	4	4	4	5	4	4	5	4	4	5	5	4	4	5
60	5	5	6	5	6	5	5	5	6	5	5	6	6	5	5	6	6	6	6	5	6	5	5	5	6

Attachment 6. Result of Questionnaire (cont.)

NO.	REL			OUT			PEC			PU				PEOU			USE				NB				
	REL1	REL2	REL3	OUT1	OUT2	OUT3	PEC1	PEC2	PEC3	PU1	PU2	PU3	PU4	PEOU1	PEOU2	PEOU3	USE1	USE2	USE3	USE4	NB1	NB2	NB3	NB4	NB
61	5	5	6	5	6	5	5	5	6	5	5	6	6	6	6	6	6	6	6	6	6	5	5	5	6
62	3	2	2	3	2	3	3	3	2	2	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3
63	5	5	5	5	5	5	6	5	5	5	5	5	5	6	5	6	6	5	4	5	5	5	5	5	5
64	5	5	5	5	5	5	5	5	5	5	5	3	3	5	5	5	5	5	5	5	5	5	5	5	5
65	5	5	5	2	1	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
66	5	3	2	4	5	6	6	1	4	2	2	5	6	5	5	5	5	6	2	5	5	3	4	4	4
67	5	4	4	4	4	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5	5	5	5
68	5	4	5	6	6	6	5	6	6	5	5	6	5	6	6	6	6	6	5	6	6	5	6	6	6
69	6	6	6	5	3	4	6	6	3	6	6	6	6	5	6	6	6	6	6	6	5	6	6	6	6
70	5	5	5	3	4	4	4	4	4	4	3	3	4	5	5	5	4	4	4	4	3	3	4	3	3
71	4	3	3	4	5	4	4	3	3	3	3	4	3	5	4	4	4	4	5	5	5	5	5	5	5
72	6	5	5	6	5	5	5	5	5	5	5	5	6	6	5	5	5	6	5	4	6	6	5	5	6
73	5	5	5	5	4	5	6	5	5	5	6	6	6	6	6	6	6	6	6	5	5	5	6	6	6
74	6	5	5	4	5	5	5	5	5	4	4	3	3	5	4	4	3	3	3	3	3	3	4	4	4
75	1	3	5	5	2	3	5	4	5	4	5	3	3	5	6	5	4	5	4	5	5	4	3	5	5
76	5	4	4	4	4	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5	5	5	5
77	5	5	2	3	3	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
78	5	3	2	4	5	6	6	1	4	2	2	5	6	5	5	5	5	6	2	5	5	3	4	4	4
79	6	6	6	5	5	5	5	5	5	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
80	5	6	5	5	5	5	5	5	5	6	5	5	5	6	6	5	5	6	5	6	6	6	6	6	6

Attachment 7. Result of Questionnaire (cont.)

NO.	REL			OUT			PEC			PU				PEOU			USE				NB				
	REL1	REL2	REL3	OUT1	OUT2	OUT3	PEC1	PEC2	PEC3	PU1	PU2	PU3	PU4	PEOU1	PEOU2	PEOU3	USE1	USE2	USE3	USE4	NB1	NB2	NB3	NB4	NB
81	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
82	5	5	6	5	6	5	5	5	6	5	5	6	6	6	6	6	6	6	6	6	6	5	5	5	6
83	4	3	3	4	5	4	4	3	3	3	3	4	3	5	4	4	4	4	5	5	5	5	5	5	5
84	3	2	2	3	2	3	3	3	2	2	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3
85	6	4	4	4	5	5	5	5	5	4	4	3	3	5	4	4	3	3	3	3	3	3	4	4	4
86	4	5	5	4	5	4	4	4	4	4	4	4	4	4	5	4	4	4	4	4	4	4	4	4	4
87	5	5	5	5	5	5	6	5	5	5	5	5	5	6	5	6	6	5	4	5	5	5	5	5	5
88	5	5	5	5	4	5	6	5	5	5	6	6	6	6	6	6	6	6	6	5	5	5	6	6	6
89	5	4	5	5	5	5	6	5	5	4	4	4	5	5	5	5	4	4	4	5	4	4	4	4	4
90	6	5	5	6	5	6	6	6	6	5	5	5	6	6	5	5	5	6	5	4	6	6	5	5	6
91	5	4	5	5	3	4	5	4	5	4	5	3	3	5	6	5	4	5	4	5	5	4	3	4	5
92	5	5	5	5	5	5	5	5	5	5	5	3	3	5	5	5	5	5	5	5	5	5	5	5	5
93	5	5	5	3	4	4	4	4	4	4	3	3	4	5	5	5	4	4	4	4	3	3	4	3	3
94	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
95	5	5	2	2	2	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
96	5	4	5	5	5	5	6	5	5	4	4	4	5	5	5	5	4	4	4	5	4	4	4	4	4
97	5	5	4	5	5	4	6	6	6	4	4	4	5	6	4	5	5	5	5	5	4	5	4	4	5
98	5	4	5	6	6	6	5	6	6	5	5	6	5	6	6	6	6	6	5	6	6	5	6	6	6
99	5	5	5	5	6	6	6	5	5	5	5	5	5	6	6	6	6	6	6	6	5	5	6	5	5
100	6	6	6	5	5	5	5	5	5	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5

Attachment 8. Result of Questionnaire (cont.)

NO.	REL			OUT			PEC			PU				PEOU			USE				NB				
	REL1	REL2	REL3	OUT1	OUT2	OUT3	PEC1	PEC2	PEC3	PU1	PU2	PU3	PU4	PEOU1	PEOU2	PEOU3	USE1	USE2	USE3	USE4	NB1	NB2	NB3	NB4	NB
101	4	4	4	5	5	5	6	5	5	5	5	4	6	4	5	5	5	4	5	5	5	5	4	5	5
102	6	6	6	5	4	6	5	6	3	6	6	6	6	6	6	6	6	6	6	6	5	6	6	6	6
103	6	6	6	5	4	6	5	6	3	6	6	6	6	6	6	6	6	6	6	6	5	6	6	6	6
104	4	4	4	4	4	5	5	4	4	4	4	4	4	4	5	4	4	5	4	4	5	5	4	4	5
105	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
106	5	5	6	5	6	5	5	5	6	5	5	6	6	5	5	6	6	6	6	5	6	5	5	5	6
107	6	6	6	5	3	4	6	6	3	6	6	6	6	5	6	6	6	6	6	6	5	6	6	6	6
108	6	6	4	6	6	6	6	6	6	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	5
109	6	6	4	6	6	6	6	6	6	5	5	5	5	6	6	6	5	5	5	5	5	5	5	5	5
110	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
111	6	6	6	5	5	6	6	6	6	5	5	6	6	5	5	6	6	6	6	6	6	6	6	6	6
112	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
113	6	6	6	6	5	6	5	5	5	6	6	6	6	5	6	5	6	6	6	6	6	6	6	6	6
114	5	5	5	3	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
116	6	6	6	5	5	6	6	6	6	5	5	6	6	5	5	6	6	6	6	6	6	6	6	6	6
117	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
118	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
119	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
120	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Attachment 9. Result of Questionnaire (cont.)

NO.	REL			OUT			PEC			PU				PEOU			USE				NB				
	REL1	REL2	REL3	OUT1	OUT2	OUT3	PEC1	PEC2	PEC3	PU1	PU2	PU3	PU4	PEOU1	PEOU2	PEOU3	USE1	USE2	USE3	USE4	NB1	NB2	NB3	NB4	NB
121	5	5	5	5	5	6	6	6	6	4	5	5	6	6	6	5	6	5	4	5	5	4	5	5	5
122	6	5	4	3	2	3	5	5	5	5	4	6	5	5	5	5	5	4	4	5	5	4	4	4	4
123	6	6	6	6	5	6	5	5	5	6	6	6	6	5	6	5	6	6	6	6	6	6	6	6	6
124	5	5	5	5	4	4	5	5	5	5	5	4	4	5	5	5	5	5	4	5	5	5	5	4	5
125	5	6	6	6	6	6	5	5	5	5	5	5	5	6	5	5	6	5	5	5	5	5	5	5	5
126	5	5	5	5	5	6	6	6	6	5	5	5	6	6	6	6	6	5	4	5	5	4	5	5	5
127	6	6	6	5	5	6	6	6	6	5	5	5	6	5	5	6	6	6	6	6	6	6	6	6	6