

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### 2.1 Theoretical Review

##### 2.1.1 Information System Success Model

As stated by Jessup & Valacich (2008) cited in Alter (2008), Information System (IS) is interpreted as a computer-based system used in organizations to collect, process, and produce information that is useful for users. Based on its purpose, various forms of system might be created, for instance, transaction processing systems, data mining systems, data processing systems, management information systems, workflow management systems, environmental scanning systems, executive information systems, decision support systems, and many more (Carvalho, 2000). In 1992, William H. DeLone and Ephraim R. McLean introduced a multidimensional design called DeLone & McLean IS Success Model, which was constructed based on prior empirical studies carried out by several researchers for the purpose of assessing organizational performance. The original model used dimensions of “system quality” to measure technical level, “information quality” to measure semantic level, and “use, user satisfaction, individual impact, organizational impact” to measure effectiveness level (DeLone & McLean, 2003). As mentioned in the communication research conducted by Shannon (1948), the level of technical, semantic, and effectiveness described the success of Information System as a whole.

Since its introduction, the DeLone & McLean IS success model has been applied and modified in several studies (Halonen, Thomander, & Laukkanen, 2010). One of them was conducted by Pitt, Watson, & Kavan (1995) cited in Jiang, Klein, & Carr (2002), mentioned that the success of IS should be assessed not only from its products but also its services. This statement was based on the fact that IS organizations have two functions, which are information provider and service provider. In performing services, IS professionals will assist users if there are difficulties they face. Meaning that there will be an interaction between IS professionals and users. Therefore, the dimension of service quality was deemed necessary to be included in the model of IS success to represent its function as a service provider, so that it can be assessed whether the quality of service matches users' expectation. There are at least five aspects used to measure service quality such as tangible, assurance, responsiveness, reliability, and empathy (DeLone & McLean, 2003). Furthermore, researchers may add or modify items contained in each aspect that suits the IS conditions applied in the organization being studied. The addition of service quality dimension was also supported by empirical study carried out by Jiang et al. (2002) on managers from diverse companies. The empirical evidence revealed that service quality is useful for measuring the overall success of IS as well as evaluating the service systems.

In addition, some other dimensions were also reviewed. Multidimensional aspects of “use” was considered difficult to define as it

has comprehensive meaning (DeLone & McLean, 2003). Hence, it will be better if the model uses more specific dimension, which is “intention to use” (DeLone & McLean, 2003). However, researchers may prefer to continue to keep “use”, depending on the purpose of the study. Thus, instead of removing “use”, “intention to use” was added in the model. In the context of “impact”, dimensions of “individual impact” and “organizational impact” were replaced by a single dimension called “net benefits” (Halonen et al., 2010). The reason is because measurement of IS impact covers not only individual and organizational, but also another entities.

Referring to the research contributions and changes in the function of information system management previously mentioned, DeLone & McLean decided to update their IS success model by adding dimensions of “service quality” and “intention to use”, also combining “individual impact” and “organizational impact” into “net benefits”. The models are figured as shown below:

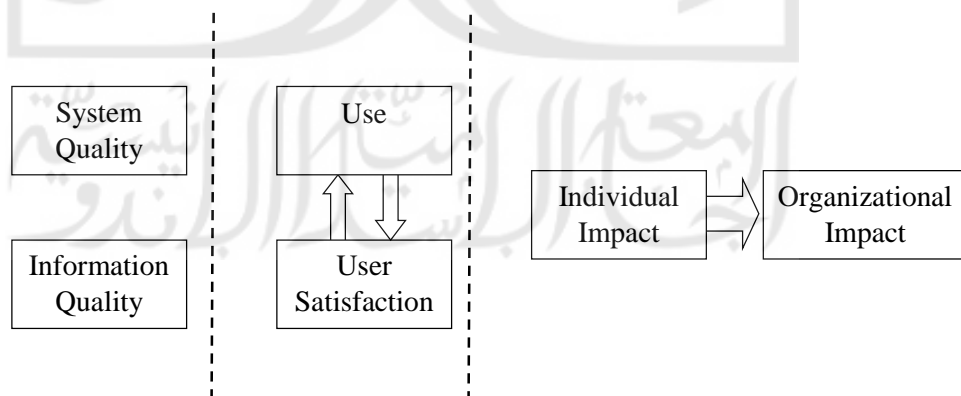


Figure 2.1: Original DeLone & McLean IS Success Model

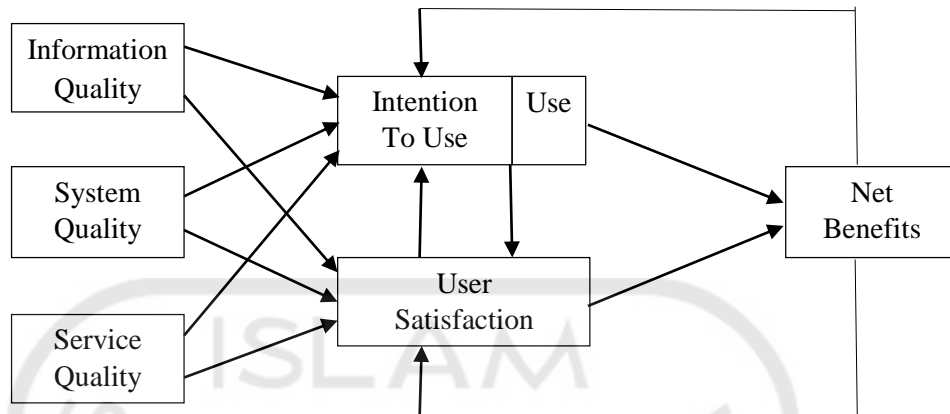


Figure 2.2: Updated DeLone & McLean IS Success Model

### 2.1.2 Factors Influencing Taxpayer Satisfaction

Jogiyanto (2007) cited in Lastri & Indrawati (2018) explained that user satisfaction is user's response to the use of information system output. Doll & Torkzadeh (1988) cited in Somers, Nelson, & Karimi (2003) defined user satisfaction as someone's attitude towards certain application after interacting with the application directly. Satisfaction arises because the system applied can be utilized optimally by direct interaction between individual who operates the system and the computer (Fendini, Kertahadi, & Riyadi, 2013). In this study, satisfaction is measured using indicators from the updated DeLone & McLean IS Success Model, which revealed the three dimensions of user satisfaction measurement, including: information quality, system quality, and service quality.

#### 1. Information Quality

Information provided by an application system is useful for a company or organization in making decisions. Thus, the quality of

information must be the main focus in establishing a system, especially if the system has a role as an information provider. The information quality is determined by the output of the system as well as the value of output itself for the user (Fendini et al., 2013). In other words, the level of information quality will be followed by the level of system usefulness obtained by user. DeLone & McLean (2003) believed that the higher quality of information leads to the higher satisfaction of users. Furthermore, Jogiyanto (2005) cited in Fendini et al. (2013) explained the aspects of information quality measurement, which includes:

- a. Accuracy, meaning that information must be unbiased and free from errors. Also, information should have certain level of accuracy to obtain credibility.
- b. Timeliness, meaning that information must be delivered at the right time. Information that is received not on time will no longer be valuable as it is needed in the decision-making process.
- c. Relevancy, meaning that information provided must meet the user's needs. The level of information relevancy depends on the level of user.

## **2. System Quality**

System quality describes the technical capability of a system in providing simple and quick information access to the user with guaranteed security which will then affect satisfaction (Teo, Srivastava, & Jiang, 2009). The user will not be satisfied if he or she has experienced inconveniences during operating the system, for instance, unresponsiveness to commands

or incompatibility with various types of devices. In detail, DeLone & McLean (2003) stated that system quality has more to do with the features owned by a system, such as usability, availability, reliability, adaptability, and response time. Similarly, Nelson, Todd, & Wixom (2005) mentioned the five dimensions contained in system quality are as follows:

- a. Accessibility, which measures the level of ease in accessing a system experienced by the user. A system is accessible if the user does not put a lot of effort to access information.
- b. Reliability, which measures the dependability of the system being operated.
- c. Flexibility, a key determinant of quality, which measures the ability of the system to adapt to adjusting user needs and changing conditions.
- d. Response time, which measures quickness of the system to response user requests for information. The response time of a system based on the type of task performed (e.g., transaction processing, decision support).
- e. Integration, which measures the ability of a system to combine various information that is subsequently used to support business decisions.

### **3. Service Quality**

Both public and private institutions are competing to provide the best service quality to its customers as a way of maintaining reputation (Hanaysha, Kumar, & Hilman, 2012). The reason is because reputation will create an image of the institution itself since very first time the service was

provided to customers. Another reason that in the context of online service, the quality of service has direct influence on customer satisfaction and eventually shapes customer behavior (Sharma, 2017). The customer's judgment of a service determines whether the actual performance has met their needs as expected. If most of the needs are met, customer would have high level of satisfaction. Initially, Parasuraman, Zeithaml, & Berry (1985) cited in Hanaysha et al. (2012) identified ten dimensions of service quality measurement that includes tangibles, reliability, courtesy, responsiveness, security, competency, access, communication, credibility, and understanding. After doing further research in 1988 on the conceptual of service quality, the researchers summarized ten dimensions to five, namely:

- a. Tangibles, which describes physical form of service received by users, including the building, facilities, and appearance of employees.
- b. Assurance, which describes the guarantee given to users, such as security and confidentiality in transactions.
- c. Reliability, which describes the ability of employees to provide services as promised and help solve problems faced by users quickly.
- d. Responsiveness, which describes willingness to help users and provide services quickly.
- e. Empathy, which describes personal care or attention given by employees to users.

### 2.1.3 Taxation

Stipulated in Article 1 of Law Number 28 Year 2007, tax is defined as a mandatory contribution to the state that is owed by an individual or entity, by not directly receiving compensation in return and being used for the needs of state for the greatest prosperity of the people. Furthermore, Mardiasmo (2016) explained that one of the tax functions is *budgetair*, which means that tax as the main and biggest source of state's income is used for financing governmental activities such as regular expenditures, infrastructure construction, and state investments. In other words, it is considered as the most important element for sustainable development of the state. Besides, tax also has a function of *regulerend*, meaning that it is used as an instrument to achieve specific purposes in the fields of social and economic by means of equal distribution and allocation of income. Thus, economic stability can be achieved. Related to this, the website of pajak.go.id also mentioned that because of tax collection, the state can provide citizens the following facilities:

1. Affordable health service
2. Affordable education costs
3. Subsidies for low-cost housing
4. Subsidies for basic needs

The payments of tax can be completed by coming directly to the Tax Office or through an electronic payment system. The fundamental differences between conventional and technology-based process lies on filling method,



identification system, payment and submission method. In addition, Directorate General of Taxation has created systems of e-Billing, e-SPT, e-Filing, and e-Faktur which allow taxpayers to complete transactions online. Therefore, the taxpayers have options on how they will pay taxes.

#### **2.1.4 E-Government**

According to World Bank, e-Government is defined as a form of innovative information technology implemented by the government with intention to improve service provided to the society as well as facilitate the cooperation between government institutions, in which all transactions are completed electronically. The government takes advantage of information and communication technology development, then applied it in the form of public services. E-Government intends to improve service quality, time savings, transparency, responsibility, and other resources (Fang, 2002). In practice, e-Government is influenced by participation, human resources, infrastructure and support from the government. Conceptually, Cahyadi (2003) concluded that e-Government encompasses a broader scope of stakeholders that interact with each other through information technology, they are:

1. Government Employees
2. Citizens
3. Business Community
4. Other Government Institutions
5. Office Equipment Suppliers

The use of e-Government allows stakeholders to have wider access of information, better quality of service, and greater opportunity to participate in government affairs (Fang, 2002). This will result in transparency in which the role of citizens will be more involved as a consideration for executives in making decisions.

Furthermore, Gartner (2000) cited in Alshehri Abdulrahman & Drew (2010) developed four phases of e-Government model, namely, presence, interaction, transaction, and transformation. In the phase of presence, the website is known as brochure-ware because it has the same function as a printed brochure that provides concise information and one-way communication to citizens/businesses. Moreover, the phase of interaction offers two-way communication between government to citizen (G2C), government to business (G2B), and government to government (G2G). It enables citizens/businesses to contact the government via e-mail and receive informative feedback afterwards. Also, governmental issues can be settled immediately by the existence of communication between government institutions. This type of interaction may create a better relationship between related parties. To the next level, phase of transaction provides self-service in which users have an option to pay taxes, license renewals, or even submit bids for procurement contracts through online system. In this stage, skill of users in operating the system becomes an important requirement to complete all transactions. In the final phase of e-government model, which is transformation, the concept is developed by integrating all interactions

between G2C, G2B, and G2G into one service with an expectation to give optimal facilities (Noman & Hebbbar, 2016).

Based on the Presidential Instruction Number 3 Year 2003, the implementation of e-Government in Indonesia is described in the following four stages: (1) First Stage which covers the establishment of website in each institution, management of human resources, accessibility of communication devices, and socialization of website for both internal and external users; (2) Second Stage which covers the establishment of interactive website for public and interface communication with other institutions; (3) Third Stage which covers the establishment of transaction website for public and interconnected application or data between institutions; and (4) Fourth Stage which covers the establishment of integrated G2G, G2B, and G2C services. In conclusion, the stages of e-Government in Indonesia are basically similar to the phases that have been developed by Gartner (2002).

#### **2.1.5 E-Filing**

E-filing is a form of e-Government adoption in the field of taxation that is applied almost every country in the world (Azmi, Kamarulzaman, & Hamid, 2012). Each country has a name for e-filing system applied, for example Australia uses the name MyTax, while Indonesia, Singapore, and Malaysia under the name e-filing. Besides the name, the system adopted is also varies. Some systems are directly integrated with official government portal and some others are still independent.

In Indonesia, e-filing system was introduced since 2004. The submission of SPT through e-filing was first regulated in KEP-05/PJ/2005 on the procedures for submitting SPT electronically through the internet network. In performing e-filing, the government uses electronic mail and billing payments as part of its transaction system. Subsequently, in order to improve tax services, the government accommodated a number of private companies that provide services and technology to report taxes online. This official partner is known as Application Service Provider (ASP). Initially, the Directorate General of Taxation separated between e-filing for person taxpayer and body taxpayer. For tax reporting, person taxpayer used government-owned application (DJP Online), while body taxpayer used Application Service Provider. However, today both person taxpayer and body taxpayer can report their taxes through government-owned application or Application Service Provider.

In order to be able to use e-filing, taxpayers must comprehend the procedures for accessing it. According to the official website of Directorate General of Taxation ([www.pajak.go.id](http://www.pajak.go.id)), several stages that must be fulfilled by taxpayers in using e-filing system are as follows:

1. Request for eFIN activation to the tax service office or *Kantor Pelayanan Penyuluhan dan Konsultasi Perpajakan (KP2KP)*. eFIN stands for electronic Filing Identification Number is an identity number issued by the DGT to taxpayer who make transactions electronically.

2. Register by creating an account with online tax services, which is the website of DGT online or the electronic SPT service provider. The data needed for register are NPWP and eFIN. Enter the NPWP, eFIN, and security code, then click verification. As a result, the system will automatically send the user identity, password, and activation link via email that has been registered. Click the activation link. After the account is activated, taxpayer can log in using the NPWP and password provided.
3. Fill out and submit the SPT. Taxpayer should open e-filing service page on the online tax service, then select “*buat SPT*”. Follow the guidelines provided, including those in the form of questions. Fill in the SPT in accordance with existing guidelines. If the SPT has been completed, the system will display the summary of it. Lastly, taxpayer can submit the SPT by entering a verification code that has been sent via email.

E-filing aims to facilitate taxpayers in completing tax obligations as well as help the government to increase tax revenues. Therefore, the implementation of e-filing is beneficial for taxpayers and tax office.

Taxpayers do not need to come to the tax service office for reporting SPT, while the tax office receives SPT reports that are faster and easier in the administration, distribution, and archive. Furthermore, Wahyuningsih et al.

(2014) elaborated on the advantages that can be obtained directly by taxpayers for using e-filing, they are:

- a. Taxpayers can report SPT safely and quickly within 24 hours every day.
- b. Taxpayers are not charged in reporting SPT.

- c. The calculations can be done correctly as the system is computer-based.
- d. Taxpayers can easily fill out SPT as it is in the form of wizard.
- e. Taxpayers will never be incomplete in reporting SPT as there is a validation system.
- f. Taxpayers can save paper costs and are environmentally friendly as they use online system.
- g. Taxpayers no longer need to bring other supplementary documents to the tax service office.

## **2.2 Previous Research**

Several studies related to taxpayer satisfaction with the online tax-filing system have been conducted. In Indonesia, the studies were carried out by Widyadinata & Toly (2014); Ningrum & Andi (2016); Hidayati, Harimurti, & SPA (2017); Permatasari, Susilo, & Topowijono (2015); and Lastri & Indrawati (2018). In addition, there were also studies in another country conducted by Chen (2010), Chen, Jubilado, Capistrano, & Yen (2015); Moradi Abadi, Moradi Abadi, & Jafari (2017); and Chumsombat (2015). All of these studies showed that taxpayer satisfaction on the online tax-filing system is affected by more than one factor.

### **2.2.1 Widyadinata & Toly**

Widyadinata & Toly (2014) conducted a study of taxpayer satisfaction towards e-filing by using variables of system quality, information quality, timeliness, and secrecy. The method of data collection was distributing questionnaires to person and body taxpayer listed in *KPP Surabaya Rungkut*. The analytical technique used was multiple linear regression, which run through the

SPSS program. The result of study revealed that system quality, information quality, and secrecy partially have significant effect on the satisfaction of taxpayers who use e-filing. However, it was found that timeliness partially have no significant effect on the satisfaction of taxpayers who use e-filing.

### **2.2.2 Ningrum & Andi**

Ningrum & Andi (2016) examined the factors affecting taxpayer satisfaction with e-filing system. They tested four determinant, which are system quality, information quality, timeliness, and confidentiality. The data were collected by using convenience sampling procedure through a questionnaire survey to 99 person taxpayers who have ever used e-filing system registered in *KPP Pratama Kota Serang*. Partial least squares path modeling (PLS-PM) with R was used to analyze the data that have been collected. The findings showed that three of the four determinants, namely, system quality, information quality, and confidentiality partially have positive effect on taxpayer satisfaction. However, timeliness was found partially has no effect on taxpayer satisfaction.

### **2.2.3 Hidayati, Harimurti, & SPA**

Hidayati, Harimurti, & SPA (2017) analyzed the effect of information system quality and information quality on user satisfaction with e-filing system. By using purposive sampling method, they distributed questionnaires to 100 respondents registered in *KPP Pratama Karanganyar* who used e-filing system in submitting tax returns. The data collected was analyzed using multiple linear regression technique. The result of study indicated that both quality of information

system and quality of information partially have significant effect on user satisfaction with e-filing system.

#### **2.2.4 Permatasari, Susilo, & Topowijono**

Permatasari, Susilo, & Topowijono (2015) studied the influence of service quality on taxpayer satisfaction with electronic system of taxation including e-registration, e-SPT, e-filing, and e-billing. The method of data collection was interviewing and distributing questionnaires to 100 person taxpayer who used e-filing and listed in *KPP Pratama Malang Utara*. Other than that, the data were also obtained from secondary data. By using SPSS program, the technique of multiple linear regression was used to analyze the data collected. The result of study showed that service quality electronic system of taxation partially has significant influence on taxpayer satisfaction.

#### **2.2.5 Lastri & Indrawati**

Lastri & Indrawati (2018) investigated the influence of system quality, information quality, security and confidentiality, and service quality on taxpayer satisfaction of the users of e-filing for tax reporting. In this study, the subject was 100 person taxpayer registered in *KPP Pratama Tampan Pekanbaru*. The method of accidental sampling was used to collect data through questionnaires. The data that have been collected were analyzed by using multiple linear regression. The outcome of this study revealed that security and confidentiality partially have no effect on taxpayer satisfaction, while system quality and information quality partially have significant effect on taxpayer satisfaction. Additionally, service quality was found as moderating variable.



### **2.2.6 Chen**

Chen (2010) analyzed the relationship between information quality, system quality, and service quality with taxpayer satisfaction when using online tax filing system. The data were collected from 278 questionnaires distributed to the users of online tax filing system in Taiwan. The analytical technique was using structural equation modeling using (SEM) to analyze the factors and test the hypotheses. The results revealed that information quality, system quality, and service quality are positively associated with taxpayer satisfaction when using online tax filing system.

### **2.2.7 Chen, Jubilado, Capistrano, & Yen**

Chen, Jubilado, Capistrano, & Yen (2015) examined the factors affecting the use of online tax filing website services through three dimensions of information quality, service quality, and system quality. In collecting data, survey questionnaires were distributed to 300 users of online tax-filing system in Metro Manila, Philippines. The analytical technique of structural equation modeling using partial least squares (SEM-PLS) was used to analyze the factors and test the hypotheses. The outcome of study found that information quality is the most consistently and partially has significant effect on the perceptions of usefulness and satisfaction over the service quality and system quality.

### **2.2.8 Moradi Abadi, Moradi Abadi, & Jafari**

Moradi Abadi, Moradi Abadi, & Jafari (2017) conducted a study of factors affecting taxpayer satisfaction on the implementation of e-filing system in Tehran, Iran. In this study, three out of eleven factors being analyzed were information quality, service quality, and system quality. The random sampling method was used

to collect data through distribution of 150 questionnaires to the taxpayers. SPSS software was used to analyze data and linear regression model to test the hypotheses. The result found that information quality, service quality, and system quality partially have positive impact on taxpayer satisfaction.

### **2.2.9 Chumsombat**

Chumsombat (2015) investigated factors influencing the satisfaction of e-tax filing website, which included four dimensions of information quality, system quality in terms of functionality, system quality in terms of usefulness, and trust. This study was conducted by distributing questionnaires to 415 taxpayers in Bangkok, Thailand. The researcher adopted the method of structural equation modeling (SEM) in analyzing data. The findings indicated that information quality, system quality in terms of functionality, system quality in terms of usefulness, and trust partially have positive and significant influence on e-tax filing website satisfaction.

## **2.3 Hypothesis Formulation**

The dependent variable is taxpayer satisfaction, which will be analyzed its relationship with the following three independent variables of (1) information quality, (2) system quality, (3) service quality.

### **2.3.1 Taxpayer Satisfaction and Information Quality**

Information quality is an important point to taxpayer satisfaction with the online tax-filing system concerning the area of informativeness, relevancy, timeliness, and accuracy. In this context, information quality focuses on the information produced and it represents how well the

information can help taxpayer in filing his or her tax returns through the system. The information provided must be reliable and be suited to the needs of taxpayer, thus it can be categorized as good quality. Other than that, the completeness of information becomes an important factor which leads to easiness in making decision. This implies that good quality of information will affect taxpayer satisfaction (Widyadinata & Toly, 2014).

Related to the conceptual framework initiated by DeLone & McLean (2003) regarding information quality and user satisfaction, the concept can be applied as well in this study. Theoretically, the quality of information provided by e-filing should positively influence taxpayer satisfaction.

In addition, studies conducted by Widyadinata & Toly (2014), Ningrum & Andi (2016), Hidayati, Harimurti, & SPA (2017), Lastri & Indrawati (2018), Chen (2010), Chen et al. (2015), Moradi Abadi, Moradi Abadi, & Jafari (2017), and Chumsombat (2015) support the explanation above by showing that information quality has positive and significant influence on taxpayer satisfaction with the online tax-filing system.

Based on the discussion above, it can be concluded that the higher quality of information, the more taxpayer will be satisfied with the online tax-filing system. Conversely, the lower quality of information, the less taxpayer will be satisfied with the online tax-filing system. Therefore, the first hypothesis proposed is:

*H1: information quality positively influences taxpayer satisfaction with e-filing system*

### **2.3.2 Taxpayer Satisfaction and System Quality**

A system can be interpreted as a method applied by the government to facilitate users in completing the ongoing work. One of the indicators used to determine the quality of a system is quick access. In condition that a system has quick access, it can be acknowledged that information system has good quality. Furthermore, the ability of a system to continue functioning properly without crashing while being used is also an important factor to determine the success of a system. As a result, good quality of system will satisfy users because they feel comfortable in using it and enable to complete the work with a minimum error (Widyadinata & Toly, 2014).

Related to the conceptual framework proposed by DeLone & McLean (2003) and Teo et al. (2009) on system quality and user satisfaction, the concept can be applied as well in this study. Theoretically, the quality of system performed by e-filing should positively influence taxpayer satisfaction.

In addition, studies conducted by Widyadinata & Toly (2014), Ningrum & Andi (2016), Lastri & Indrawati (2018), Chen (2010), Moradi Abadi, Moradi Abadi, & Jafari (2017), and Chumsombat (2015) support the explanation above by showing that system quality has positive and significant influence on taxpayer satisfaction with the online tax-filing system.

Based on the discussion above, it can be concluded that the higher quality of a system, the more taxpayer will be satisfied with the online tax-filing system. Conversely, the lower quality of a system, the less taxpayer will

be satisfied with the online tax-filing system. Therefore, the second hypothesis proposed is:

*H2: system quality positively influences taxpayer satisfaction with e-filing system*

### **2.3.3 Taxpayer Satisfaction and Service Quality**

Service in an entity is a set of procedures used to support the entity itself in meeting user needs. As stated by Chen et al. (2015), the level of service quality has an important influence on the output produced. By providing good quality of service, users will feel satisfied and as a result they will not hesitate to use the service further. In the context of online tax payments, service quality can be measured through the attitudes and abilities of employees of tax office in giving feedback to taxpayer's difficulties as well as through the facilities provided by tax office. Good quality of service will indirectly affect the behavior of taxpayers in reporting his or her tax returns voluntarily.

Related to the conceptual framework initiated by Parasuraman, Zeithaml, & Berry (1988) and Sharma (2017) regarding service quality and user satisfaction, the concept can be applied as well in this study. Theoretically, the quality of service performed by e-filing should positively influence taxpayer satisfaction.

In addition, studies conducted by Permatasari et al. (2015), Chen (2010), and Moradi Abadi, Moradi Abadi, & Jafari (2017) support the

explanation above by showing that service quality has positive and significant influence on taxpayer satisfaction with the online tax-filing system.

Based on the discussion above, it can be concluded that the higher quality of service, the more taxpayer will be satisfied with the online tax-filing system. Conversely, the lower quality of service, the less taxpayer will be satisfied with the online tax-filing system. Therefore, the third hypothesis proposed is:

*H3: service quality positively influences taxpayer satisfaction with e-filing system*

#### 2.4 Research Model

Based on the theoretical review, previous research, and hypotheses, the research model is illustrated in the following figure:

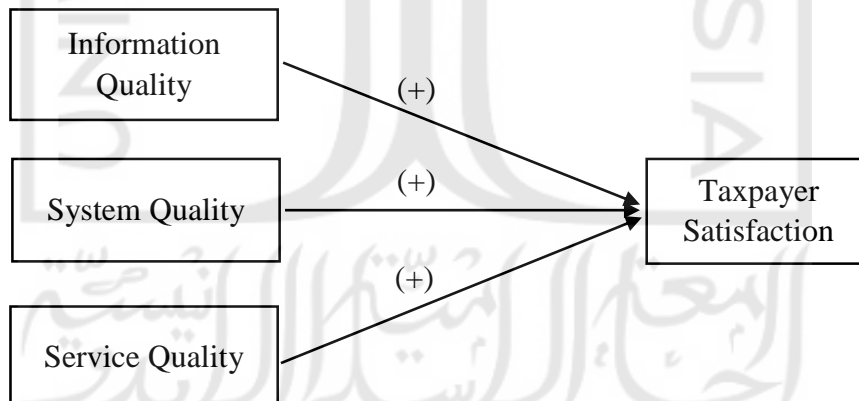


Figure 2.3: Research Model