

Analysis of Technology Acceptance Model on the Taxpayers Using Electronic Tax Return at the Large Taxpayers Office 4

Risa Mustika Handari and Milla Sepliana Setyowati
Faculty of Administrative Sciences, University of Indonesia, Depok, Indonesia

Abstract: Development of e-Government system in tax administration in the Directorate General of Taxation (DGT) by using information technology is the implementation of electronic tax return (e-Tax return). This study, aimed to describe the corporate taxpayers' view in Large Taxpayers Office (LTO) 4 in terms of the approach to Technology Acceptance Models (TAM) as well as the driving and inhibiting factors in the use of e-Tax return. This study, uses a quantitative approach and data collection through surveys. The results showed that the taxpayer in LTO 4 accepts e-Tax return seen from the dimensions of job relevance has the highest mean, followed by usefulness, intention to use and ease of use. This indicates tax payers' interest to use electronic tax return is based on conformity with the purpose of their jobs, benefits or usefulness of e-Tax return and also ease of operation. Factors that encourage taxpayers to use electronic tax return is the obligation as LTO tax payers, the results were neat, reduce paper usage, facilitate the work as well as time is used more efficiently. While inhibiting factor is the frequent application errors, complex data import formats as well as CSV file which are often not readable by the system in LTO 4.

Key words: Technology, acceptance model, electronic tax return, e-Government, tax administration

INTRODUCTION

Globalization is driving the development of information technology in all fields. Implementation of the Internet, electronic commerce, electronic data interchange, virtual office, telemedicine, intranet and so forth have to break through the physical boundaries between countries. Information is now becoming a very important commodity. The ability to access and provide information quickly and accurately becomes very essential for an organization, either in the form of commercial organizations (companies), universities, government agencies and individuals. The internet has changed the pattern of daily life, technology user behavior as well as the various concepts and systems business, government, education, journalism, social relationships and so forth.

Implementation of information systems in the broad sense refers to all the things that must be done by the organization to be able to take advantage of the ability of certain proposed information technology (Sarker, 2000). The main factors that determine the success of the application of information technology in organizations is human resources, in particular is a user. User acceptance for a technology can be measured by using Technology Acceptance Model (TAM). TAM was first introduced by Davis (1993) is an adaptation of the Theory of Reasoned

Action (TRA) made specifically for modeling user acceptance of information systems. According to Davis *et al.* (1989), TAM main goal is to provide a basis for tracking the influence of external factors on beliefs, attitudes and goals of the user. TAM assume that two individual beliefs, namely the perception of benefits (perceived usefulness) and perceived ease of use is a major influence on the behavior of computer receipt.

The era of transparency and accountability demands coupled with the development of information and communication technologies, at the same time, encourage the growing demands, expectations, and desires of the people for the government to build and/or develop e-Government. The Directorate General of Taxation (DGT) under the Ministry of Finance is also developing e-Government, the use of information technology to provide service more convenient and efficient for citizens and organizations to information and government services. Institutional transformation in the Ministry of Finance itself is implemented in three phases throughout 2013-2025, the short-term phase 2013-2015, medium-term phase 2015-2020 and the phase of the Long term 2020-2025. In the short term phase, one form of transformation is the use of integrated information technology. The use of information technology is intended to allow taxpayers to meet the tax obligations that are expected to improve adherence. The Directorate

General of Taxation (DGT) since 2002 has made fundamental changes, ranging from organizational restructuring to human resources development and use of information technology in tax administration.

DGT modernization program based on the implementation of good governance, namely the application of the tax administration system that is transparent and accountable, by utilizing information technology systems that are reliable and up to date. DGT has developed e-government in the tax service among other things makes it easy for taxpayers to register (e-Registration), paying taxes (e-Billing), filling the annual tax return (e-Filing) and monitor the application process related to tax services (e-Tracking). Gradually, the reporting obligations undertaken taxation taxpayers developed toward tax reporting electronically, known as e-Tax return. Data for e-Tax return transferred to the DGT information system as soon as it is received and validated by the TPT (a place of integrated services in tax office). This data will be recorded automatically into account relevant taxpayer.

The success of the DGT develop e-Government system is the use of information technology in tax administration such as e-Tax return can be seen from how the user or taxpayer in receiving the information technology. This research was conducted at the Large Tax Office (LTO) 4. Based on the information obtained from the Office of Large Taxpayers, LTO 4 has the highest number of registered taxpayers compared to other LTO both entities and private persons. Corporate taxpayers registered in the LTO 4 totaled 1,107 large corporate taxpayers. Based on the above, the purpose of this study are: to analyze the views of taxpayers in LTO 4 in the use of e-Tax return in terms of approach to technology acceptance models. Explain the factors driving and inhibiting taxpayers to use e-Tax return in LTO 4.

Literature review: Tax administration according to De Leon is a set manner and procedure of calculating (assessing), collection (collection) or billing (enforcing) the tax payable. According to Tanzi as quoted Bird and Jantscher, tax administration plays a crucial role in determining the success or failure of a system and taxation policies taken by a country. The tax administration in a broad sense includes the functions, systems and organizations/institutions. Mansury citing the opinion from Nowak states that the tax administration contains three terms, namely: an agency or body having authority and responsibility for levying taxes; those which consist of officers and employees who work on real tax authority conducting tax collection and the process of the implementation of manageable tax collection in such

a way so as to achieve the objectives outlined in tax policy, by means of the law determined by the tax laws efficiently.

e-Government is a computer and internet-based applications that are used to improve the relations and government services to their peoples. World Bank defines e-Government as follows:

“e-Government” refers to the use by government agencies of information technologies (such as Wide Area Networks, the internet and mobile computing) that have the ability to transform relations with citizens, businesses and other arms of government. Reviews these technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth and/or cost reductions”

The development of e-Government is an attempt to develop the implementation of electronic-based governance in order to improve the quality of public services effectively and efficiently. Through the development of e-Government to restructure management systems and work processes within the government by optimizing the utilization of information technology.

Technology Acceptance Model (TAM) is one model that is built to analyze and understand the factors that influence the acceptance of the use of computer technology which was first introduced by Davis (1993). TAM is a result of the development of the Theory of Reasoned Action (TRA) which first developed by Fishbein and Ajzen in 1980. TAM aims to explain and predict the acceptance (acceptance) the user to an information system. TAM provides a theoretical basis to determine the factors that affect the acceptance of the technology within an organization. TAM explain the causal relationship between faith (the benefits of a system of information and ease of use) and behavior, the purpose or purposes and the actual use of the user of an information system (Budi, 2010).

TAM developed a model of psychological theory, describes the behavior of computer users that is based on trust (belief), attitude (attitude), desire (intention) and relations user behavior (user behavior relationship). The purpose of this model to explain the main factors of user behavior on user acceptance of the technology. Explaining in more detail about the acceptance of IT with certain dimensions that can affect IT acceptance by the user (user).

TAM theory says that Behavioral Intention (BI) to use the system depends on two factors, namely the attitude towards the use of the system (attitude toward using) and perceived usefulness of the system (perceived usefulness). While a person's attitude towards the system (attitude toward using) depends on two factors: first, the perception of the usefulness of the system (perceived usefulness) and secondly, perceived ease of use of a system (perceived ease of use). TAM initial version does not include subjective norm. However, in the next stage TAM2 found that the social context of an individual can alter one's perception of technology acceptance. Venkatesh and Davis (2000) looked at the importance of subjective norm thus making the hypothesis that subjective norms affect the perceived benefits (perceived usefulness) and the intention to use in TAM2. TAM uses as a starting point, additional construction combines theoretical TAM2 include social influences that reflect the impact of three interrelated social forces affecting individuals facing an opportunity to adopt or reject a new system: subjective norm, volunteering and imagery. In addition TAM2 also includes important cognitive processes is the relevance of the work, quality of output, results can be seen and perceived ease of use (Venkatesh *et al.*, 2003).

Electronic tax return is the application made by the tax authorities for use by the taxpayer to ease in the tax return. e-Tax return has several types such as e-Tax return for value added tax, corporate income tax Article 25/29 (available for tax year 2008 and earlier, the fiscal year 2009 and fiscal year 2010), e-Tax return tax year 2009 includes income tax Article 4 (2), Article 15, Article 21, Article 22, Article 23/26 and while for application extension submission of annual income tax returns only available for fiscal year 2008 and earlier.

Benefits of e-Tax return can be seen from two sides, the first of the taxpayer, namely: may administer tax return data electronically and reporting tax return more efficient and secure as the data stored in electronic form and encrypted. Then from the directorate general of taxation, the benefits of e-Tax return, namely: the recording of data in tax office can be done quickly and accurately without recorded attendant manually, saving of human resources in the data recording tax return and study the tax return data can be done quickly and precisely because it is done by the application system.

Submission of tax return electronically can be done 24 h a day and 7 days a week. Tax return submitted electronically at the end of the deadline for submission of the tax return falls on a holiday is considered delivered on time. The following is the procedure for the use of e-Tax return in general for all types of taxes:

- Taxpayer installation of e-Tax return on a computer system (applications may be obtained from the account representative each or can be copied from the installer e-Tax return)
- Taxpayer using e-Tax return for the tax record data to be reported
- Taxpayer who have had financial or tax administration system itself can make the process of import data from systems owned into e-Tax return application by referring to the data format in accordance with the application of e-Tax return
- Taxpayer scored withhold evidence by using e-Tax return and submit it to the party that is deducted or collected
- Taxpayer print the tax return form using the e-Tax return
- Taxpayer sign a form printouts of e-Tax return
- Taxpayer form of e-Tax return data files using e-Tax return and stored in a computer media (diskette/CD/USB)
- Taxpayer report tax return using electronic media to tax with a parent tax return form printouts of e-Tax return which was signed together with tax return data files stored on the computer

MATERIALS AND METHODS

This study, uses a quantitative approach is a design that gives a quantitative description and numeric number of fractional-sample populations through the data collection process by asking questions to people. Based on the research objectives, descriptive study that aims to explain, summarize a variety of conditions, situations or various variables that arise in the community which is the object of research is based on what happened. Descriptive research is a research method that is intended to describe the phenomena which took place at this time or past time (Newman, 2000).

This study, did a survey of 100 taxpayer who registered in LTO 4 as respondents. Taxpayers who were respondents in this study has various educational background such as high school/equivalent, D3 (Diploma degree), S1 (Bachelor degree) and S2 (Magister degree). The >90% of respondents use e-Tax return for VAT, Income Tax Article 4(2), Article 21 and Income Tax Article 23/26 show in Fig. 1.

The validity test of this research using the Pearson Correlation. Tests using two-tailed test (two-tailed) with a significance level of 0.05. Testing criteria is if the count $r \geq r$ table (test 2 sides with Sig. 0.05), the instruments or items otherwise valid question but if the count $r < r$ table then the items declared invalid question. This study, took

a sample of 100 respondents with a significance of 5% (0.05), obtained value $df = n-2$ is 98 (from 100-2). When looking into the figure 0.1654 r table. Based on the results of these calculations, the value of r count of 0,000 is smaller than 0.1654 r table, so it can be concluded that all items are valid questions in the questionnaire.

Reliability test in this study using Cronbach's alpha. The criteria used is if the value of alpha >0.7 means sufficient reliability (sufficient reliability) while if alpha >0.80 is suggest entire item reliably and consistently throughout the test internally because it has a strong reliability (Raisch, 2004). Reliability of a variable construct said to be good if it has a value of Cronbach's alpha >0.60 . Based on the results if the SPSS, the value of Cronbach's alpha of 0.935 so that it can be concluded that the respondents' answers to each question item can be said to be reliable.

This study, only measures the perceived ease of use, perceived usefulness, subjective norm, user interest, image, suitability of work, quality of output, the results can be demonstrated and actual use as there is in theory

TAM2 but does not measure the voluntary due to the use of e-Tax return it itself is mandatory (for regulations requiring) that is considered irrelevant and also does not measure the usage period for the application of e-Tax return by the taxpayer. This study did not conduct quantitative analysis such as SEM but carried out a qualitative analysis based on the literature that support.

This study, has limitations in that the data obtained from questionnaires distributed is not much because of the limited time. Questions in the questionnaire is more likely on the type of closed questions allowing respondents to be inconsistent. In addition, the samples used were 100 respondents while a population of 1,107 that is considered not to represent the real situation on the ground. However, the number has in accordance with the method of determining the amount of the sample used the method of Frankel and Wallen who suggested minimum sample size for a descriptive study of 100 respondents.

RESULTS AND DISCUSSION

Human behavior personally to the development of information technology systems related to the implementation of tasks within an organization or for personal interests may be affected by several factors generally as follows such as individual attitudes, norms subjective, intent, control behavioral, acceptance of information systems technology, compliance tasks with technology and confidence in the technology.

Views of taxpayer at LTO 4 in the use of electronic tax return reviewed by using technology acceptance model:

Figure 2 shows that appears that the dimension of job relevance has the highest mean score, followed by the dimensions of usefulness. This indicates the tendency of respondents to use e-Tax return is based on compliance

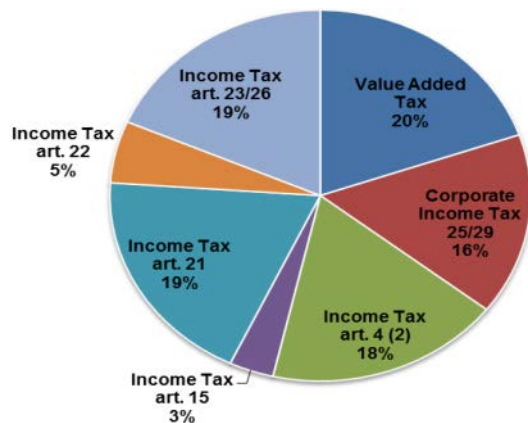


Fig. 1: Types of electronic tax return used by participants

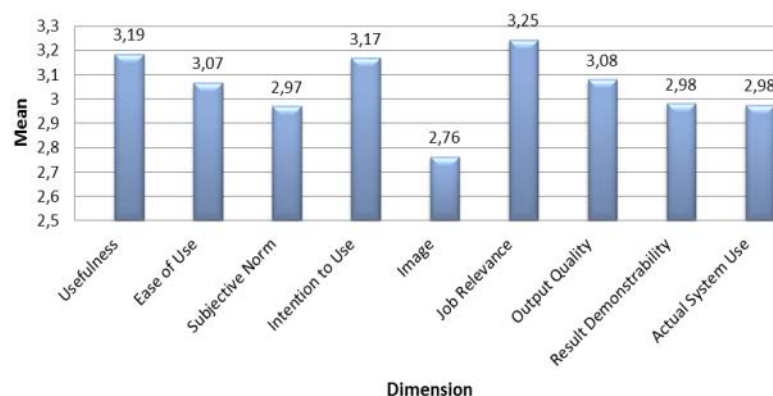


Fig. 2: The average value per dimension obtained; e-SPT used by participations

with the field of occupation and its benefits or usefulness of e-Tax return. While the dimensions of which have a low mean is dimensional image. In the image dimension concluded that the respondent did not consider the use of e-Tax return will affect their status within the work environment. The nine dimensions of TAM2 theory used in this study has between one-dimensional linkages with other dimensions. Perceptions of the usefulness of the system (perceived usefulness) of e-Tax return depends on five factors, namely social influence in the working environment taxpayer (subjective norm), the image obtained as a result of use (image), suitability to the job (job relevance), quality good results (output quality), the results of which can be disseminated to other users (result demonstrability) and perceived ease of use of a system (perceived ease of use). Social influence itself is influenced by the frequency of taxpayers using e-Tax return (experience) and the use of voluntary (voluntariness). While the interest of taxpayers to use e-Tax return depends on three factors, namely the perception of the usefulness of the system (perceived usefulness), perceived ease of use of a system (perceived ease of use) and social influence in the working environment taxpayer (subjective norm). Interest in the taxpayer will affect the real conditions (actual system use) the use of e-Tax return which is actually a behavioral response, measured by the actions of individuals in real life.

Subjective Norm and have a mean image is not too large indicating that the use of e-Tax return by the taxpayer is not affected by the condition of the taxpayer and the working environment is not something to be proud if the taxpayer is able to use e-Tax return. Job had a mean high relevance relating to output quality for every taxpayer must meet tax regulations in reporting the tax payable is filling tax return correctly, completely and clearly as listed in Article 3 paragraph of the general provisions and procedures of taxation in Indonesia. Correctly according to the type of taxes that will be reported, complete meet all the elements related to taxes and other objects that should be reported as well as clear reporting the origin of the source object in the notification letter. The process of filling tax return correctly and complete the appropriate tax laws is an important step in tax administration, since the onset of the sanctions fiscal either administrative or criminal can be started from charging tax return improper and incomplete.

Perceived usefulness and perceived ease of use based on research results, will affect the interest required (intention to use) tax in the use of e-Tax return. Taxpayers who already know or feel the direct benefit of the use of e-Tax return in its work will continue using the application

in the future. Tax payer interests (intention to use) will affect the actual conditions of use of the system (actual system use). The survey shows that as many as 98 respondents stated that they will always use e-Tax return whenever they would report the tax, 78 respondents are satisfied with the system of e-Tax return and 73 respondents stated that they would deliver the satisfaction to other users. The satisfaction felt by the taxpayer in the use of e-Tax return application must show that the taxpayer has believed the application is easy to use and useful as reflected in real conditions of use of e-Tax return.

Davis *et al.* (1989) suggest that the perception of usefulness is defined as the extent to which a person believes that using a particular system would improve their performance at work. Perception of usefulness in the use of e-Tax return assess the extent to which the taxpayer believes that by using e-Tax return then work to become more effective and efficient in accordance with the benefits of e-Government. e-Tax return itself has benefits, among others: may administer tax return data electronically and tax return reporting more efficient and secure as the data stored in electronic form and encrypted.

Perceived ease of use or the perception of ease of use is defined as a person's level of confidence about the ease of use of a particular system or how far a person issuing a minimum effort. Perceived ease of use, in contrast, refers to "a level in which a person believes that using the system need not bother". It follows the definition of "easily" ("ease"): "freedom from difficulty or great effort" or "no difficulty or effort or hard". e-Tax return is made user friendly. User friendly itself has definition is the capabilities a software or an application program that is easy to operate and has a number of other capabilities so that users feel at ease in operating the program, even for a novice user. Therefore, there are some criteria that is user friendly has a great view, easy to operate, easy to learn and users always feel happy every time you use the software. In relation to the application of e-Tax return, perceived ease means the extent to which taxpayers are sure to ease the use of e-Tax return. Currently the application of e-Tax return made by the DGT has developed e-Government in the tax service among other things makes it easy for taxpayers to conduct tax administration.

Subjective norm is a person's perception of the social pressure to perform or not perform the behavior (Ajzen, 1991). Ramdhani (2009) in her article entitled "A Mathematical Model to Predict Behavior" explained that subjective norm is a feeling or a person's allegations against the expectations of the people in the life of the

commission or omission of certain behaviors. As attitudes toward behavior, subjective norms also affected by the conviction. The difference is that if the attitude toward the behavior is a function of confidence in the behavior to be performed (behavioral belief), the subjective norm is a function of the confidence this person earned on the views of others associated with it (normative belief). In everyday life, relationships forged one can be categorized into a relationship that is both vertical and horizontal. Vertical relationship is between a superior-subordinate relationship; student-teacher; professor-student or parent-child. Horizontal relationship occurs between a person with friends or others who are the same level. The pattern of this relationship can be a source of differences in perception. In the relationship that is vertical, hope can be perceived as demands (injunctive) so that the formation of the subjective norm will be colored by the motivation to comply with the demands to perform or not perform a behavior. On the contrary, the expectations that are horizontal relationships formed descriptively so, consequently was the desire to imitate or follow (identification) behavior of others in the vicinity (Ramdhani, 2009). In this case, when a lot of people around the taxpayer advised to use e-Tax return, then the taxpayer will use the application.

Behavioral intention to use is the behavioral tendency to continue to use a technology. The level of use of a computer technology to someone can be predicted from the attitude of attention to technology, such as motivation to keep using. Blau, Kiesler and Kiesler and Pfeffer in TAM2 theorized that if an important member of a social group using an information technology will provide a positive image and it will also improve its position in the group. Or in other words, the extent to which use of an innovation may improve one's image or status in the social system. In this case, if the taxpayer uses the application of e-Tax return environment where they work, they will be seen as someone who has more value because they understand how to use e-Tax return especially if the work environment is not all uses of e-Tax return.

Job relevance or suitability of work is defined as the individual's perception of the extent to which the system is to meet the target in accordance with the job or job. In other words, the relevance of the work is an important function in the work of someone from the set of tasks able to be supported this system. Research in human-computer interaction has postulated a hierarchical model of the same purpose, although operating at a more micro level analysis where the higher level goals include tasks such as writing documents, and action a lower rate on the level of keystrokes and mouse clicks (Venkantes and Davis,

2000). Job relevance in relation to e-Tax return taxpayer is defined as the perception of the extent to which the use of e-Tax return is able to meet the target or the suitability of the job.

TAM2 found on the consideration of a particular system is able to perform tasks in accordance with the purpose of one's job, then people will consider how well the output produced which is referred to as the perception of the quality of the output. The intent of this is that if the taxpayer to consider that using e-Tax return can meet the goal of his work then he would imagine the results obtained from the application of e-Tax return is in accordance with expectations or not. Result demonstrability can be defined as the results that can be proven or can be shown as a result of the use of a system. Moore and Benbasat defines demonstrability result as "a manifestation of the results using innovation" (Venkantes and Davis, 2000). In this case the taxpayer will show a result of the use of e-Tax return. Actual system use is the real conditions of use of the system. Someone will be satisfied using the system if they believe that the system is easy to use and will increase their productivity, which is reflected in real conditions of use.

Driving and inhibiting factors taxpayers using e-Tax

return in LTO 4: Factors that encourage or cause the individual to use a technology information system is more influenced by the knowledge and experience of the individual in the use of information systems technology. At TAM2, experience with regard to the subjective norm, where subjective norms related to the perceived usefulness that may directly or indirectly be related to intention to use in using a particular system. Intention to use is what will determine how the actual use of the system by users (actual system use).

Results obtained from questionnaires collected, it is known as much as 15 respondents stated that they encourage the use of e-Tax return because of the command (mandatory) either from superiors in the office or DGT policy implemented by LTO 4 where the respondent is registered as a taxpayer. Other respondents, which can be seen through the open questions in the questionnaire, revealed that encourages them to use e-Tax return is the result of a neat, reduce the use of paper because the data can be stored on a CD or device other storage, simplify work and time is used more efficiently.

In line with the understanding of administration is a process of implementation of tax collection be managed in such a way so as to achieve the objectives outlined in tax policy, by means of the law determined by the tax laws efficiently, e-Tax return systems used by taxpayers to report taxes owed to the Tax Office where they are

registered is one part of the process of the tax collection system with self-assessment, the use of which is felt more efficiently than when still using manual systems.

Electronic tax return (e-Tax return) is an application (software) made by the tax authorities for use by the taxpayer to ease in the tax return. Charging tax return initially compiled manually ultimately modified and adapted to allow the passage of electronic systems optimally so that it can be done more quickly, effectively and efficiently. e-Tax return system has been considered in accordance with the benefits of e-Government as stated in the Indonesian Presidential Instruction No. 3 of 2003 on national policy and strategy development of e-Government, namely efficiency, effectiveness, transparency, innovation and participation in the administration of government.

Based on the principles of efficiency of the taxpayer is said to be efficient if the costs to be incurred to meet their tax obligations can be minimized or in other words costnya compliance is low. Compliance cost consists of the cost of the intangible one of which is a time cost. Time costs are costs such as the time required to carry out the obligations and rights of taxation, including the time required to fill out tax forms and the time to fill out and submit tax return. Therefore, the use of e-Tax return considered capable of reducing the cost of the intangible that time cost that taxpayers can fill out and submit tax returns quickly with a low compliance cost.

Factors that hinder the use of e-Tax return can be seen from two sides, namely the taxpayer as a user and the application of e-Tax return itself. If the e-Tax return were not socialized will cause the taxpayer can not use the system and socialization short time can be an obstacle. The taxpayer less to learn about e-Tax return are used so that their capabilities are limited. This will decrease the company's performance. Although the system of e-Tax return has the advantage but there are some weaknesses which, if not anticipated could potentially be the failure of the implementation of e-Government in the Ministry of Finance. Results obtained from questionnaires collected, respondents revealed that prevents them from using e-Tax return is an error that often occurs during an operation such as loading process that takes a long time, database error without cause and disruption of the system is slow or offline. Some respondents also suggested that the format of e-Tax return imports in complicated so difficult in the import process data such as data import company employees on the application of e-Tax return Income Tax Article 21/26.

In addition, the CSV file are also often not readable by the system in LTO 4. CSV is a continuation of (comma separated value) which is a

standard ASCII format that uses a comma (,) or semicolon (;) as a boundary or barrier between one element to another. Benefits can be obtained if the save file with the extension .csv is because the level of compatibility CSV almost can be opened by various spreadsheets or word such as Microsoft Excel, Notepad, MySQL, Oracle, VIM and others. CSV is often used so that files can be exchanged for a lot of people who do not use Excel or for export/import data into the software database. In terms of tax administration, the system created by the DGT can be said to be successful as proposed Tanzi quoted Bird and Jantscher, tax administration plays a crucial role in determining the success or failure of a system and taxation policies taken by a country.

CONCLUSION

Results of the study in terms of the theory TAM2 which has nine dimensions of perceived usefulness, perceived ease of use, subjective norm, intention to use, image, job relevance, output quality, result demonstrability and actual system use, suggesting that the taxpayer in LTO 4 accept the use of e-Tax return seen from the dimensions of job relevance has the highest mean score, followed by the dimensions of usefulness, intention to use and ease of use. This indicates the interest of taxpayers to use e-Tax return is based on conformity with the purpose of their jobs, benefits or usefulness of e-Tax return and ease of operation of the application of e-Tax return. In general, the above indicates that the e-Government community as a public service users can enjoy better service because the service can be done more quickly and easily.

REFERENCES

- Ajzen, I., 1991. The theory of planned behavior. *Organiz. Behav. Hum. Decision Process.*, 50: 179-211.
- Davis, F.D., 1993. User acceptance of information technology-system characteristics, user perceptions and behavioral impacts. *Int. J. Man-Machine Stud.*, 38: 475-487.
- Davis, F.D., R.P. Bagozzi and P.R. Warshaw, 1989. User acceptance of computer technology: A comparison of two theoretical models. *Manage. Sci.*, 35: 982-1003.
- Newman, L.W., 2000. *Social Research Method: Qualitative and Quantitative Approach*. 4th Edn., Allyn and Bacon, Boston.
- Raisch, S., 2004. *Dynamic strategic analysis: Demystifying simple success strategies*. Deutscher Universitäts-Verlag, Wiesbaden.

- Ramdhani, N., 2009. A mathematical model to predict behavior. <http://neila.staff.ugm.ac.id/wordpress/?p=147>.
- Sarker, S., 2000. Toward a methodology for managing information systems implementation: A social constructivist perspective. *Inform. Sci.*, 3: 195-206.
- Venkatesh, V. and F.D. Davis, 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Manage. Sci.*, 46: 186-204.
- Venkatesh, V., M.G. Morris, G.B. Davis and F.D. Davis, 2003. User acceptance of information technology: Toward a unified view. *MIS Q.*, 27: 425-478.