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Intention in using Green Information Technology: Theory of Reasoned Action Perspective

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Abstract:- This research to analyze the intention of accountants on apply green information technology (green IT-GIT) by using a conceptual framework based on behavioral intention model. Previous research has been conducted on IT professionals. This research was conducted in universities domiciled in Makassar City of South Sulawesi Indonesia. Data collection were done through the distribution of questionnaires to the accountants who were registered as lecturers. The questionnaire was completed by 106 accountants and analyzed by structural equation modeling (SEM) approach by using partial least square (PLS) Ver 3.0. The results found that the intention in using green IT influenced by the beliefs related green IT usage, attitudes toward green IT usage and subjective norms. Another results that environmental cost knowledge has no effect on attitudes toward green IT usage and the level of awareness also does not affect the intention in using green IT but the level of awareness is found to affect the attitude toward green IT usage. The research shows that accountants can contribute on the comprehensive efforts in reducing global warming through the use of green IT.

Keywords:- *Accountants, intention, belief, attitude, subjective norm, knowledge, environmental cost, level of awareness, green IT.*

I. INTRODUCTION

Green information technology (*Green IT - GIT*) is a new issue and still lack research was done on this field (Thomson and Belle, 2015; Mishra *et al*., 2014; Jenkin *et al*., 2011). However, this issue has become important to consider. Turban and Volonino (2011:421) reveals an analysis by an international management consulting agency (McKinsey & Company) listed on SMART 2020 reports found that: (1) IT sector has footprint 2% of global emissions that can double by 2020 due to increased demand for smartphones and hardware, software and services. (2) IT has the unique ability to monitor and maximize energy efficiency both within and outside of its industry sector and reduce emissions by 2020.

Any research related to green IT have been done (Bussel *et al*., 2015; Mishra *et al*., 2014; Renganayaki and Suresh, 2013; Capra *et al.*, 2012; Joumaa and Seifedine, 2012). Mishra et al. (2014) conducted a study related to the application of green IT using a conceptual framework based on behavioral intentions modeled on IT professionals and suggest further research on other professionals fields who also felt the impact of the application of green IT by IT professionals in the work. Today, accountants in doing their activities can not be separated with the utilization of information technology so that will be impacted from the application of green IT by IT professionals.

On the other hand, in terms of science, the field of accounting has grown wider with the emergence of social accounting and environmental accounting study. However, the improvement of this study will depend on the parties concerned in this field. This study can only grow further if accountants have social responsibility, and awareness of the environment (Gray *et al*., 1996:56).

Furthermore, the study in accounting field so far reviewing the linkages between accounting, social and environmental issues such as CSR reporting and environmental costing and environmental impacts of the company, (Shahib, 2015; Vahdati et al., 2015; Choi and Yanni, 2014 ; Afdal et al., 2014; Dinar et al., 2013; Trudel and Cotte, 2011; Ferreira et al., 2010). Nevertheless, research which takes accountants as the focus as an object of study related to social and environmental awareness is still lack. Based on the this research problem, the research questions are: (1) Do the beliefs related to the green IT usage affect on the intention in using green IT? (2) Do the beliefs related to the green IT usage affect on the attitude toward green IT usage? (3) Does the level of awareness affect on the attitude towards green IT usage? (4) Does the level of awareness affect on the intention in using green IT? (5) Does the knowledge affect on the attitudes toward green IT usage? (6) Do the attitudes towards green IT usage affect on the intention in using green IT? (7) Do the subjective norms affect on the intention in using green IT?

There are some theories of behavior commonly used in information technology research other than Theory of Reasoned action (TRA), among others: Theory of Planned Behavior (TPB), Theory Acceptance Model (TAM), and Unified Theory of Acceptance and Use of Technology (UTAUT). These theories are the extention of TRA by considering the influence, constraint of other factors. In other words, the theories are used to behavior with mandatory factors. However, for volitional behavioral studies, is more appropriate to use TRA (Armitage and Conner, 2001).

This study focuses on analyzing accountants intentions related to green IT voluntary usage. Therefore, the TRA framework was chosen to be applied in this study. As seen in previous studies that show the concept of TRA can be applied in behavioral research.

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II. METHODOLOGY

A. Conceptual Framework

This study aims to analyze the behavior of accountants in their intention to use green IT by using a conceptual framework based on behavioral intention model. The model of behavioral intention used refers to the TRA model by Ajzen and Fishbein (1970, 1975, 1980). TRA is one of theory that has been widely used by researchers in the field of behavioral research specifically to explain the causes of voluntary behavior (Yang et al., 2016; Saad and Haniffa, 2014; Walker, 2013; Casimir et al., 2012). The traditional TRA model framework uses four main variables: (1) Attitudes toward behavior, (2) Subjective norms (3) Behavioral intention and (4) Behavior. However, Fishbein and Ajzen (1975: 351) did not rule out the existence of external variables that also influence the existing variables. The external variable approach is based on the assumption that the attitude component is related to the behavior and is able to predict the behavior accurately. External variables in the TRA model can be included if there are studies that prove these variables can influence the two determinants of the model (Fishbein and Ajzen, 1980: 9).

This study evaluate the Accountant's intentions toward the green IT usage then the research variables adapted from the TRA model is Attitudes Toward Green IT Usage, Subjective Norms and Intention in Using Green IT. To obtain a more in-depth analysis result then the TRA model will be used by including the external variables. The external variables that will be used are (1) Belief related to then green IT Usage, (2) Knowledge and (3) Level of Awareness.

Fishbein and Ajzen (1975: 288) define intention as a position on a person's subjective probability dimension involving the relationship between himself and some actions. So, the intention in using Green IT will refer to a person's subjective probability that he/she will use green IT. Furthermore, attitudes toward the green IT usage is one of the decisive factors of Intention in using green IT. This factor is personal and is an evaluation of beliefs or feelings (affect) of the individual who must perform the behavior in accordance with what he/she wants, both positive and negative (Jogiyanto, 2007: 31-32). Some studies have provided empirical evidence related to the testing of attitudes toward behavior to behavioral intention (Yang et al., 2016; Zarzuela and Antón, 2015; Mishra et al., 2014; Yusof et al., 2014; Saad and Haniffa, 2014; Walker, 2013; Casimir et al., 2012; Belleau et al. 2007; Butler, 1999).

Another determinant factor of intention is the subjective norm. It is called subjective norms because it relates to perceptions of normative perceptions, perceptions or views of a person against social pressure (beliefs of others) that will affect the intention to perform or not to engage in the behavior under consideration (Jogiyanto, 2007:32). Subjective norm relation to intention has been tested in various studies (Yang et al., 2016; Mishra et al., 2014; Yusof et al., 2014).

The relation of external variables used in this study can be explained through the basic concept of TRA. Where the basic theory of TRA rests on the distinction of behavioral intention and actual behavior in relation to attitudes. This leads to a classification consisting of four general categories namely (1) Emotions that refer to the feelings and evaluation of a person to an object, person, problem, or event, (2) Cognition which is knowledge, opinion, belief, and experience of the object, (3) Conation as behavioral intention and (4) Behavior as the observed action (Fishbein and Ajzen, 1975: 12). Thus, Beliefs Related to the Green IT usage, Knowledge and Level of Awareness can be seen as a form of cognition.

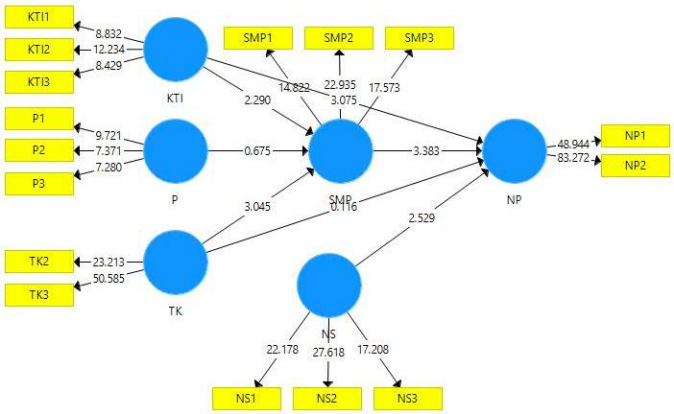

Fig 1:- PLS Structural Model with test results (KTI=Beliefs, P=Knowledge, TK=Level of Awareness, SMP=Attitudes, NS=Subjective Norm, and NP=Intention).

B. Hipotesis Development

- The Influence of Beliefs related to The Green IT Usage on Attitude toward Green IT Usage and Intention in Using Green IT.

Belief related to green IT usage is a form of the individual's belief in the benefits that can be gained from the use of green information technology. TRA explained that there is an intention before a person complete their behavior. Intention is determined by two factors, Attitudes Towards Behavior and Subjective Norms. Attitudes toward Behavior and Subjective Norms are determined by beliefs (Fishbein and Ajzen, 1980: 62). The belief in an object, automatically and simultaneously becomes an attitude toward the object (Fishbein and Ajzen, 1975: 216).

The relation between beliefs in information technology by individuals with attitudes and intentions can be seen in several empirically studies. Salleh (2016) examines how the direct and indirect factors in relation to the teacher's intentions and the use of technology in teaching. The results found that teachers' intentions to use technology received strong influence from the field of attitudes toward technology (beliefs about outcomes and beliefs about their importance). Mishra et al. (2014) analyzed the application of green information technology issues by using a conceptual framework based on behavioral intention models. The study found that individual beliefs have a direct impact on the attitudes and intentions of using green information technology. Molla et al. (2014) analyzed the belief and attitude factors that influenced the pro-environment behavior of information technology (IT) professionals in using private personal computers. The results found a strong correlation between the beliefs in green information technology with attitudes towards the belief in green information technology. Saadeghvaziri et al. (2013) regarding beliefs about Web advertising and attitudes toward

Web advertising among Iranian consumers and the relationship between beliefs factors, attitudes toward Web advertising, consumer behavior of Web advertising, and purchase intentions. The results found that Attitude significantly and positively influenced by product information, hedonis, and social role. Negative irritation affects attitudes toward web advertising. Based on this descriptions and previous studies, this research hypothesized:

H1: Beliefs related to the green IT usage has an effect on the Intention in using green IT.

H2: Beliefs related to the green IT usage has an effect on the attitude toward green IT usage.

- The Influence of Knowledge on Attitudes toward Green IT Usage.

Fishbein and Ajzen (1975: 11-12) suggest that in order to understand the field of Attitude, a distinction between Attitudes, Beliefs, Behavioral Intention and Behavior is required. One form of distinction that has long been used is the classical trilogy between emotion or feeling, cognition and conation. Emotions that refer to a person's feelings and evaluation of an object, person, problem, or event. Cognition is a knowledge, opinion, belief, and experience of the object. Knowledge of something is a representation of the aspect of cognition so that knowledge of accountants related to environmental costs in the field of environmental accounting in theory has an effect on attitudes toward behavior.

Empirically, there are several studies that examine the relationship between of knowledge and attitude. Paco and Lavrador (2017) examine the relationship between individuals with a higher general environmental knowledge level with a positive attitude toward energy-related environments. The study found that there was no significant difference in mean between the two groups with different levels of knowledge (greater and less knowledgeable about the environment). Taufique et al. (2016) conducted a study examining the relationship of general knowledge about the environment with attitudes toward the environment. The results showed a positive relationship between the two.

The development of accounting studies now included accounting, accountant and accountability and bring accountants into a new scientific treasure that is environmental accounting. In environmental accounting, we recognize the environmental costs. Knowledge of accountants about environmental costs will have an effect on attitudes toward the use of green information technology. Based on this descriptions and previous studies, this research hypothesized:

H3: Knowledge has an effect on attitude toward green IT usage.

- The Influence of Level of Awareness on Attitudes Towards Green IT Usage

The influences of level of awareness on attitudes toward behavior and behavioral intention can be seen from any research that has been done. Zarzuela and Antón (2015) examine the level of individual awareness of social issues in relation to attitudes toward social problems. The results show that the greater level of individual social concerns, the more positive their attitudes toward social problems. Mishra et al. (2014) examines the effect of level of awareness on attitudes toward behavior and behavior intention. The results show that the level of awareness has a direct significant effect on attitudes toward behavior and behavioral intention. Rahab and Hartono (2012) examine the relationship of a leader's knowledge of his tendency to adopt IT. The study show that with greater knowledge, the level of uncertainty involved in IT adoption will decrease, so IT adoption is less risky. This is consistent with other research findings. Lack of knowledge about the IT adoption process and lack of awareness of potential benefits may hamper efforts from adopting IT. Based on this previous studies, this research hypothesized:

H4: The level of awareness has an effect on the attitudes toward green IT Usage.

H5: The level of awareness has an effect on the intention in using green IT.

- The Influence of Attitudes toward Green IT Usage and Subjective Norms on the Intention in Using Green IT.

Fishbein and Ajzen (1975: 12) formulated TRA on four main variables: (1) Attitude, is the amount of affection felt by a person to accept or reject an object or behavior and is measured by a procedure that places the individual on one side between two choices such as right or wrong. (2) Belief, is the information held about the object, specifically, the belief of connecting an object to several attributes. (3) Behavioral intention refers to a person's intention to perform a variety of behaviors, (4) Behavior refers to the actual behavior or activity performed.

Jogiyanto (2007: 31-32) explains that intentions as referred to in TRA are a function of two basic determinants. The first determinant is the Attitudes towards Behaviors of individuals associated with personal factors. This attitude is a positive or negative belief evaluation of a person in relation to a desired behavior. The second factor is Subjective Norms related to social influences.

Furthermore, there are some of empirical evidences showing the effect of attitudes and subjective norms to intention (Yang et al., 2016; Souiden and Jabeur, 2015; Zarzuela and Antón, 2015; Mishra et al., 2014; Haniffa, 2014; Greaves et al., 2013). The results show the support for the theory of behavioral attitudes and subjective norms is a good determinant of behavioral intentions. Based on theory and previous studies, this research hypothesized:

H6: Attitudes toward green IT usage has an effect on the intention in using green IT.
H7: Subjective norms has an effect on the intention in using green IT.

C. Research Object Description

This study uses a quantitative research approach on the profession of accountant educator in the college who is domiciled in Makassar City South Sulawesi Province of Indonesia. This study uses three types of variables namely independent variables, intervening and dependent variables. The independent variables used are Beliefs related of Green IT

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Usage, Knowledge, Level of Awareness and Subjective Norms. Intervening variable is Attitudes toward Green IT Usage. Dependent variable used is Intention in Using Green IT.

The population is 178 of accountants who are registered as lecturers in the accounting department at universities located in Makassar City South Sulawesi Province of Indonesia. The number of research samples are taken in accordance with the number of population returning the questionnaire by using sampling judgment method (Marshall, 1996). This study uses questionnaires in data collection. The distribution and collection of questionnaires was done directly to the respondents.

D. Data Analysis

Hypothesis testing by structural equation modeling approach (SEM) using partial least square (PLS) Ver 3.0. PLS as a prediction model does not assume a particular distribution to estimate parameters and predict causality relationships.

- *Measurement Model*

The measurement model is used to test the validity of the construct and the reliability of the instrument. The validity test consists of external validity and internal validity.

Validity Test	Parameters	Rule of Thumbs
Convergent	loading factor	More than 0.7
	AVE	More than 0.5
	Communality	More than 0.5
Discriminant	Root of AVE and laten variable correlation	Root of AVE > laten variable correlation
	Cross loading	More than 0.7 each variable

Table 1. Parameters of validity tests in the pls measurement model

Source: Adapted from Chin in Jogiyanto and Abdillah (2009:61)

- *Inner Model*

The score of the path coefficient or inner model shows the level of significance in the hypothesis testing. The score of the path coefficient or inner model indicated by the T-statistic value, should be above 1.96 for the two-tailed hypothesis and above 1.64 for the one-tailed hypothesis for hypothesis testing at alpha 5 percent and power 80 percent (Hair et al. in Jogiyanto and Abdillah, 2009: 63).

III. REVIEW OF LITERATURE

A. Green Information Tehcnology (Green IT)

Green information technology refers to energy and waste consumption associated with the use of hardware and software that tends to have a direct impact on the environment (Jenkin et al., 2011). Another study proposes a more detailed definition of green information technology as a form of managing all activities and steps of the IT department, aiming to reduce the consumption of resources by IT (eg, in terms of energy, materials, or paper).

Murugesan (2008) defines green information technologies as the study and practice of designing, manufacturing, using, and managing compatible computers, servers, and subsystems such as monitors, printers, storage devices, and networks and communications systems efficiently and effectively with minimal or no impact on the environment. Thus, environmentally friendly information technology can be defined as individual and organizational efforts in order to reduce environmental impact through the utilization of various forms of information technology.

Bose and Luo (2012) argue that the concept of green information technology is the application of environmentally friendly standards through the use of IT that refers to four general purposes: (1) Maintaining the environment using natural resource and renewable (2) Recycling and reusing IT products (3) Reduce waste and pollution by altering patterns of production and consumption (4) Sustainable innovation of standards to utilize resources that do not harm public health or the environment.

B. Environmental Cost

Environmental costs are one of the scopes of environmental accounting (Gray and Bebbington, 2001: 16). Letmathe and Doost (2000) describe environmental cost accounting as the development of cost accounting which is cost-oriented and decision-making. In general, the allocation of the corporation's economic resources for environmental costs, among others (lako, 2011: 125):

(1) Allocations to prevent, reduce or recycle waste, emissions or sewerage.
(2) The cost of producing more environmentally friendly products.
(3) Costs by the company in accordance with the principles of polluter pays principles.
(4) Costs used for the restoration or remediation of water, or soil caused by the activity of the corporation.
(5) Costs for cleaning of pollution due to a particular incident.
(6) Costs for research and development, assessment and preparation of reporting of environmental impacts, and investigation and assessment of the impact of the company's operations on the environment.
(7) Costs for environmental administration, development policies, management structures, information systems and environmental audits.
(8) The cost of helping to recycle resources, using, substituting, or increasing the efficiency of resource use.
(9) The cost of recycling, reusing or reducing wasteful production.
(10) Costs to support wildlife conservation, forestation or otherwise.
(11) Investing in pollution-friendly and environmentally friendly technologies.

Based on the descriptions, the environmental costs can be defined as the costs used in order to prevent, reduce or restore the environmental damage impacts arising as a result of both corporate activity and the consumption of a product.

C. Teory of Reasoned Action (TRA)

TRA is a derivation of research conducted by Ajzen and Fishbein (1970, 1975, 1980) which starts from the theory of

attitude that examines attitude and behavior. The intention of a person to do (or not) a behavior is a direct determinant of action or behavior. This theory assumes that human behave in a conscious way, that they consider the information available, and implicitly and explicitly also consider the implications of the actions taken (Jogiyanto, 2007: 31).

TRA is built on four main variables: (1) Attitude is the amount of affection (feeling) that a person feels to accept or reject an object or behavior are measured by a procedure that places the individual on one side between two choices eg true or wrong. (2) Belief, is the information held about the object, specifically, the trust of connecting an object to several attributes. (3) Behavioral intention refers to a person's intention to perform various behaviors, (4) Behavior refers to the actual action or activity performed (Fishbein and Ajzen, 1975: 12).

The use of the Theory of Reasoned Action framework in behavioral research enables the use of external variables (Fishbein and Ajzen, 1975: 351). The use of a variable as an external variable within the TRA framework is based on empirical studies that have been done before (Fishbein and Ajzen, 1980: 9). TRA has been used in behavioral studies in areas such as marketing, accounting, management and information systems (Casimir et al., 2012; Walker, 2013; Saad and Haniffa, 2014; Yang et al., 2016).

IV. RESULT AND DISCUSSION

The data obtained in the field is the data that will be used to test the hypothesis of 106 observations. Before performing tests on the data, first tested the validity and reliability test of the data and will be described as follows.

A. Construct Validity Test

The validity test of variables based on the collected data (fig 2) shows the structural model using PLS Alghorithm. The test results show the existence of two indicators with a value that < 0.7 (NP3 and NP4) so that the indicator must be removed from the next test. Test validity through PLS Alghorithm will be done up to the value obtained on each indicator > = 0.7.

The second test result found that the TK1 indicator in the TK variable is 0.696 which means smaller than 0.7 so the indicator must be removed from the model and then re-tested. The third test after the TK1 indicator is released shows the result that> = 0.7 which means that the test can be continued to the hypothesis testing.

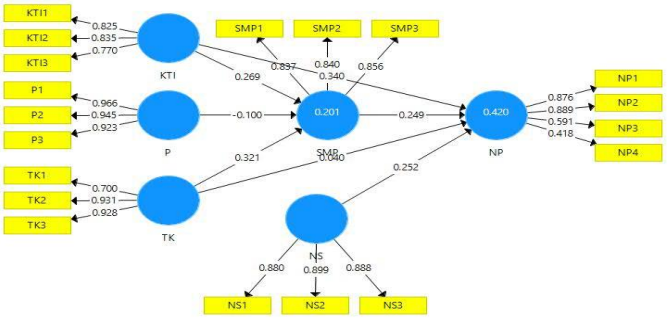

Fig 2:- PLS Alghorithm results.

- *Convergent Validity Test*

Convergent test output results with Partial Least Square using SmartPLS 3 software can be seen in table 2 below.

Variabel	AVE	*Communality*
Belief related to the green IT	0.655	0.655
Intention in using green IT	0.918	0.918
Subjective norms	0.790	0.790
Knowledge	0.893	0.893
Attitude toward green IT usage	0.713	0.713
Level of awareness	0.868	0.868

Table 2. Average Variance Extracted (AVE) and Communality

Beliefs related to the green IT usage were measured by using 3 indicators. All indicators have a loading score above 0.7 with AVE and communality value> 0.5. This mean that all the indicators used to measure this variable are valid to use in next analysis. Variable intentions in using green IT is measured by using 4 indicators. Of all these indicators, the NP3 indicator has a loading score of 0.618 and the NP4 indicator has a loading score of 0.440 whose value is <0.7 with the value of AVE and communality> 0.5. This indicator is not valid so it is not used in next analysis. Subjective norm variable is measured by using 3 indicators. All indicators have a loading score above 0.7 with AVE and communality value> 0.5. This means that all indicators used to measure this variable are valid to use in next analyzes. Knowledge variable are measured by using 3 indicators. All indicators have a loading score above 0.7 with AVE and communality value> 0.5. This means that all indicators used to measure this variabel are valid to use in next analyzes. The attitude toward green IT usage is measured by using 3 indicators. All indicators have a loading score above 0.7 with AVE and communality value> 0.5. This means that all indicators used to this variable are valid to use in next analyzes. The level of awareness variable is measured by using 3 indicators. The TK1 indicator has a loading score of 0.666 whose value is <0.7 with the value of AVE and communality> 0.5. This indicator is not valid so it is not used in next analysis.

- *Discriminant Validity Test*

Discriminant validity is tested by comparing roots of AVE to each variable with the correlation between variables with other variables in the model. Table 3 shows the AVE and the higher roots of AVE as compared to the coefficients between the variables.

Variables	AVE	Roots of AVE
Belief related to the green IT	0.655	0.810
Intention in using green IT	0.918	0.958
Subjective norms	0.790	0.889
Knowledge	0.893	0.945
Attitude toward green IT usage	0.713	0.845
Level of awareness	0.868	0.932

Table 3. Average Variance Extracted (AVE) and roots of AVE

Source: data test result, 2017 (appendix A)

Based on the comparison of roots of AVE values in Table 3 with the correlation coefficient between variables in Appendix A, it can be concluded that the indicator used in this study has met the criteria of discriminant validity because the roots of AVE values are all greater than the correlation of latent variables.

B. Reliability Test

Jogiyanto (2011: 83), "reliability test can be seen from the value of Cronbach's alpha and Composite reliability". Reliable variables value of Cronbach's alpha should be> 0.6 and the value of Composite reliability should be> 0.7. The results of test reliablitas on each variable in this study can be seen on the results test in table 4.

Variables	*Composite*	*Cronbachs Alpha*	Explanation
Belief related to the green IT usage	0.851	0.738	Reliable
Intention in using green IT	0.957	0.910	Reliable
Subjective norms	0.919	0.868	Reliable
Knowledge	0.961	0.940	Reliable
Attitude toward green IT usage	0.882	0.799	Reliable
Level of awareness	0.929	0.848	Reliable

Table 4. Uji Reliabilitas Variabel

Source: data test result, 2017 (appendix A)

C. Inner Model Test

The structural model is evaluated by using R^2 for the dependent variable, the path coefficient value or t-values of each path for significance tests among variables or between variables in a structural model. Table 5 shows the results of R^2 estimates of this study using SmartPLS 3.

Variables	R-Square
Intention in using green IT	0.384
Attitude toward green IT usage	0.212

Table 5. R-Square values

Source: data test result, 2017 (appendix A)

Intention in using green IT variable has an R-square value of 0.384 or 38.4%, which means that the beliefs related to green IT usage, level of awareness, attitudes toward green IT usage, and subjective norms affect the intention in using green IT variable by 38.4%, while the rest of 61.6% is influenced by other variables outside of this research model. The attitude toward green IT usage variable has R-square value of 0.212 or 21.2% which means that the beliefs related green IT usage, knowledge, and level of awareness influence to attitude toward green IT usage of 21.2%, while the rest equal to 78.8% influenced by other variables in outside of this research model.

D. Hypotesis Test

The significance test of prediction model in model structure testing can be seen from T-statistic value between independent variable to dependent variable based on SmartPLS 3 output in appendix B. Based on beta coefficient value and T-statistic value, the test result for each hypothesis is as follows:

- *H1: Beliefs related to the green IT usage has an effect on the Intention in using green IT.*

SmartPLS 3 result show that the relationship between the beliefs related to the green IT usage with the intention in using green IT is significant with a T-statistic value of 3.050> t-table 1.96. The original sample estimate is positive for 0.246 which indicates that the direction of the relationship between the beliefs related to the green TI usage and the intention in using green IT is positive. Thus H1 which states that beliefs related to the green IT usage has an effect on the intention in using green IT is accepted.

The significance test result that beliefs related green IT usage affects the Intention in using green IT. The positive direction shown through the path coefficient means that the greater of accountant beliefs will be the greater their intention to use green IT. This is an indication that beliefs related green IT usage are one of the decisive factors for an accountant who can influence their intention to use green IT. These findings support the results of previous research (Salleh, 2016; Mishra et al., 2014).

- *H2: Beliefs related to the green IT usage has an effect on the attitude toward green IT usage.*

SmartPLS 3 results show that the relation between beliefs related to the green IT usage and attitude toward green IT usage is significant with T-statistic value of 2,319> t-table 1.96. The value of original sample estimate is positive that is 0.262 indicating that the direction of relationship between beliefs related to the green IT usage with attitude toward green IT usage is positive. Thus H2 states that the beliefs related to the green IT usage has an effect on the attitudes toward green IT usage are accepted.

The significance test result that the beliefs related to the green IT usage affect the attitude toward green IT usage. The positive direction shown through the path coefficient means that the stronger the accountant's beliefs will be the stronger than the attitudes toward green IT usage. This is an indication that beliefs related green IT usage are one of the decisive factors that can affect attitudes toward green IT usage for an accountant. This results support several previous studies (Mishra et al., 2014; Molla et al., 2014; Saadeghvaziri et al., 2013).

- *H3: Knowledge has an effect on attitude toward green IT usage.*

SmartPLS 3 results show that the relationship between knowledge with attitude toward green IT usage is not significant with T-statistic value of 0.678 <t-table 1.96. The original sample estimate is negative value of -0.099 indicating that the direction of the relationship between knowledge and attitude toward green IT usage is negative. Thus H3 which states that knowledge has an effect on the attitude toward green IT usage is rejected.

The significance test results indicate that knowledge of environmental costs by accountants does not affect the attitudes toward green IT usage. Knowledge of the environmental costs of an accountant is not a decisive factor

that can affect their attitudes toward green IT usage. Empirical facts show that the level of knowledge related to the environmental costs of accountants involved in this study is still limited to recognizing the terms of environmental costs. This can be due to the accounting profession involved in this research is the accountant educators who are not directly involved in the technical budgeting of environmental cost in the industries. The results of this study support research by Paco and Lavrador (2017). On the other hand, the results of the study contradict with the research by Taufique et al. (2016). Different results in the study is a sign that the research on this topic is still very necessary to do.

- *H4: The level of awareness has an effect on the attitudes toward green IT Usage.*

The result of SmartPLS 3 shows that the relationship between level of awareness and attitude toward green IT usage is significant with T-statistic value of 3.117> t-table 1.96. The original sample estimate is positive for 0.337 indicating that the direction of the relationship between level of awareness and attitude toward green IT usage is positive. Thus H4 which states that the level of awareness has an effect on the attitude toward green IT usage is accepted.

The significance test show that the level of awareness influences attitudes toward green IT usage. The positive direction shown through the path coefficient means that the higher the level of awareness then the stronger the attitude toward green IT usage. The results support several previous studies (Zarzuela and Antón, 2015, Mishra et al., 2014).

- *H5: The level of awareness has an effect on the intention in using green IT.*

SmartPLS 3 software results show that the relationship between level of awareness and intention in using green IT usage is not significant with T-statistic of 0.119 <t-table 1.96. The original sample estimate value is positive that is equal to 0.011 indicating that the direction of relationship between levels of awareness with intention in using green IT is positive. Thus H5 which states that the level of awareness has an effect on the intention in using green IT is rejected.

The significance test results that the level of awareness by the accountant does not affect their intention in using green IT. Empirical facts found that the level of awareness of accountants does not affect their intention to use GIT is caused by the level of awareness of accountants about the effect of green IT on the environment tends to be greater than their awareness in using green IT. In other words, it is possible that accountants have been using green information technology without their realizing it. These findings support the results of research by Zarzuela and Antón (2015). However, several studies have examined the effect of the level of awareness on the intention found different results (Rahab and Hartono, 2012; Mishra et al., 2014).

- *H6: Attitudes toward green IT usage has an effect on the intention in using green IT.*

The results of SmartPLS 3 software show that the relationship between attitudes toward green IT Usage and the intention in using green IT is significant with T-statistic value of 3.327> t-table 1.96. The value of the original sample estimate is positive that is 0.280 indicating that the direction of the relationship between attitude toward green IT usage and the intention in using green IT is positive. Thus H6 states that attitudes toward green IT usage has an effect on the intention in using green IT is accepted.

The significance test results indicate that attitudes toward green IT usage affect the intention in using green IT. The positive direction shown through the path coefficient means that the stronger of the attitudes toward green IT usage then the stronger their intention in using green IT. The findings of this study support some previous studies (Yang et al., 2016; Souiden and Jabeur, 2015; Zarzuela and Antón, 2015; Mishra et al., 2014).

- *H7: Subjective norms has an effect on the intention in using green IT.*

The results of SmartPLS 3 software show that the relationship between subjective norms with the intention in using green IT is significant with T-statistic value of 2.551> t-table 1.96. The original sample estimate is positive for 0.291 indicating that the direction of the relationship between subjective norms and the intention in using green IT is positive. Thus H7 states that subjective norms has an effect on the intention in using green IT is accepted.

The significance test results indicate that subjective norms influences the intention of accountant in using green IT. The positive direction shown through the path coefficient means that the stronger of the subjective norms of the accountant then the stronger the intention in using green IT. The findings of this study support some previous studies (Yang et al., 2016; Mishra et al., 2014; Saad and Haniffa, 2014).

V. CONCLUSION, LIMITATION, AND NEXT RESEARCH

The results found that accountants intend to use green IT is influenced by the beliefs in green IT, attitudes toward green IT, and subjective norms. However, the study found that accountant knowledge about environmental costs did not affect their attitude toward green IT and their level of awareness did not affect their intention to use green IT. The sample used in this study is an accountant with the category of educators so there is a possibility of different ways to answer with an accountant in different categories. Based on the conclusions and limitations of the study, here are some recommendations for further research: (1) the benefits of global warming from the use of GIT by accountants are very small when compared to the use of GIT by industry. Further research can continue this research by selecting industry as the object of research. (2) This study only examines the external variables on attitude toward behavior. Future research may consider model testing using external variables through subjective norms. (3) The result of statistic test shows that the value of R-square variable of intention in using green IT is 38.4% and attitude toward green IT usage is 21.2%. This means that there are other variables that can influence both variables. Further research can examine in depth the factors that are likely to influence both variables such as system characteristics, systems development approach, user participation, education level, experiences in using information technology, cognitive style, attitudes toward the system.

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APPENDIX

A. *Laten Variable Correlations*

Overview

Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Root of AVE	R Square	Communality
KTI	0.738	0.851	0.655	0.810		0.655
NP	0.910	0.957	0.918	0.958	0.384	0.918
NS	0.868	0.919	0.790	0.889		0.790
P	0.940	0.961	0.893	0.945		0.893
SMP	0.799	0.882	0.713	0.845	0.212	0.713
TK	0.848	0.929	0.868	0.932		0.868

Laten Variable Correlations

	KTI	NP	NS	P	SMP	TK
KTI	1.000					
NP	0.409	1.000				
NS	0.207	0.475	1.000			
P	0.437	0.316	0.092	1.000		
SMP	0.351	0.504	0.455	0.152	1.000	
TK	0.394	0.349	0.443	0.404	0.400	1.000

B. *Path Coefficients*

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
KTI -> NP	0.246	0.080	3,075	0.002
KTI -> SMP	0.262	0.114	2,290	0.022
NS -> NP	0.291	0.115	2,529	0.012
P -> SMP	-0.099	0.146	0.675	0.500
SMP -> NP	0.280	0.083	3,383	0.001
TK -> NP	0.011	0.096	0.116	0.908
TK -> SMP	0.337	0.111	3,045	0.002