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**THE INFLUENCE OF PERCEIVED CHARACTERISTICS OF INNOVATING ON  
E-GOVERNMENT ADOPTION TO THE STUDENTS ON PUBLIC HIGHER  
EDUCATION IN BANYUMAS REGENCY**

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*Abstract*

This research entitled "**The Influence of Perceived Characteristics of Innovating On E-Government Adoption To The Students On Public Higher Education In Banyumas Regency**".

The objective of this research is to find out the influence of perceive characteristics of innovating to intention to use of e-Government adoption. The measurement of intention to use of e-Government is perceived characteristics of innovating (PCI).

The research sample determined by *purposive sampling* from 150 representative population from students on public higher education in Banyumas Regency. The research sample is 50 social students, 50 science students and 50 magister students. Method of analysis in this research used multiple linear regression analysis and one-way anova. The results show that higher level of perceived relative advantage, image and ease of use has significant effect on higher level of intention to use state e-Government services. There is different perception between the groups of students towards intention to use state e-Government services.

The implications of research is state government agencies should identify and communicate to citizens through socialization by holding seminar and workshop about e-Government and also they should update their web service and make it to be better serve, appearance and information completely in order to enhance citizen's intention to use state e-Government services.

**Keywords:** *e-Government, perceived characteristics on innovating (PCI), relative advantage, image,*



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*compatibility, ease of use, intention to use state e-Government services.*

**INTRODUCTION**

E-government is a new culture for the Indonesian nation, brought about by the development of information, communication and technology. It was seen as a challenge and an opportunity for the Indonesia government and it was hoped that the application of e-Government helps services become better, more efficient, transparent and accountable. E-government was perceived by respondent as providing an opportunity to improve the quality of public services which was seen as being of a low standard in need of improvement (Rokhman and Collier, 2011).

The development of e-Government in Indonesia began in 2003 with the release of the president's instruction: the national policy and strategy development of e-government. Through the Directive of President (Inpres) No. 3, year 2003, the government has issued policy on a national strategy for developing e-government organization. The development of e-government is an effort to develop government organization through electronic means to improve



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public services quality and quantity (Rokhman and Collier, 2011).

Gefen et al. (2003) and Van Slyke et al. (2004) in Carter and Belanger (2005) have found that PCI factors play a role in user acceptance of electronic commerce in the private sector (Gefen et al, 2003; Van Slyke et al, 2004 in Carter and Belanger, 2005). In public sector, citizen adoption of e-Government should be subject to similar factors (Warkentin et al, 2002 in Carter and Belanger, 2005). The factors that influence citizen adoption of e-Government initiatives using perceived characteristic of innovating construct are relative advantage, compatibility, ease of use and image on citizen intention to use a state e-Government service (Carter and Belanger, 2005).

This research will take sample of the student respondents of public university in Banyumas Regency. This research use PCI based on Carter and Belanger (2005) research as give big contribution in this research. The PCI's are the effect of higher level of perceived relative advantage, compatibility, image and ease of use and also the comparison between Magister, Social and Science students on public higher education in Banyumas Regency on



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higher level of intention to use a state e-Government service.

**LITERATUR REVIEW AND HYPOTHESIS DEVELOPMENT**

**E-Government**

The purposes of public sector accounting are provide information needed to manage appropriately, efficiently and economically on an operation and allocation of resources entrusted to the organization; provide information that allows for manager to report on implementation responsibilities properly and effectively manage the program and use of resources upon which its authority and make it possible for government officials to report to the public on the results of government operations and the use of public funds (Mahsun, 2007).

One of the essences of good governance was the realization of integration of websites with local information system that will give effect to the creation of information services to the public accurately, transparent, accountable, up to date and provide various services to the community better, providing access to public information more broadly (Eddy Satriya, 2006). E-Government to help the



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enforcement of good governance practices in various public services (Eddy Satriya, 2007). Sosiawan (2007) explain that e-Government is the use of information technology as a tool to help run a more efficient system of government.

E-Government is the use of information technology as a tool to help run a more efficient system of government (Sosiawan, 2007). Electronic Government (e-Government) as the use of Information and Communication (ICT) and in particular the Internet to deliver government information and services and to involve citizens in the democratic process and real-time government decision making in a much more convenient, customer-oriented (citizen-centric), cost effective and potentially altogether different and better way. The ultimate goal is the transformation of government to be truly citizen-centric.

E-Government can be applied to such diverse services and agencies as city planning, social services administration, physical or information infrastructure management, emergency management, public record and archives, community or economic development, health care, education, and property assessment. The benefits of e-Government usually include improved: quality of citizen



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services, internal efficiencies, law enforcement, education and information, promotion and outreach activities, safety and security, health care services and management, and involvement of citizens in the democratic process (Carbo, Williams and Emeritus, 2004).

The regulation of e-Government in Indonesia have arranged on President Instruction (Inpres) No. 3, year 2003 that issued a policy on a national strategy for developing e-Government. The development of e-Government is an effort to develop government organization through electronic means to improve public service quality and efficiency (Rokhman and Collier, 2011).

According to Rokhman (2008) in Rokhman and Collier (2011), e-Government in Indonesia is in the first phase of e-Government development of what has been termed the *publish* phase and only a small part of e-Government has entered into the second phase, known as the *interaction* phase. Even though e-Government development in Indonesia has only reached the initial phase, it is still necessary to evaluate how well e-Government functions at present and assess the level of responsiveness of e-Government operators in serving their community.



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Implementation of e-government in Indonesia is more dominated by government ministry, province and district websites. But, the site of society services doesn't have good quality and quantity yet in serving society's problem. It means that there are a lot of barrier for the government to create an ideal e-government implementation (Sosiawan, 2007).

In 2006, the government established the council of National Information and Communication Technology through the Decree of President No. 20, year 2006; one of its tasks is to accelerate the e-government implementation process (Detiknas, 2010 in Rokhman and Collier, 2011). Based on the data in Communication and Information Ministry, the amount of local government websites is about 472. Almost all of the government province have websites and can be accessed easily, only 16% of them that can't be accessed. It show that government province have a high commitment in e-government implementation (Sosiawan, 2007).

**Intention to Use**

Individuals are usually quite rational and make systematic use of information available to them. People consider the implication of their actions before they



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decide to engage or not engage in a given behavior (Ajzen and Fishbein, 1980 in Ajzen, 1991). Social and personality psychologist have tended to focus on an intermediate level, the fully functioning individual whose processing of available information mediates the effects of biological and environmental factors on behavior. Concept referring to behavior dispositions, such as social attitudes and personality trait have played an important role in these attempts to predict and explain human behavior. General attitudes and personality traits are implicate in human behavior, but that their influence can be discerned only by looking at broad, aggregated, valid samples of behavior. Their influence on specific actions in specific situations is greatly attenuated by the presence of the other, more immediate factors.



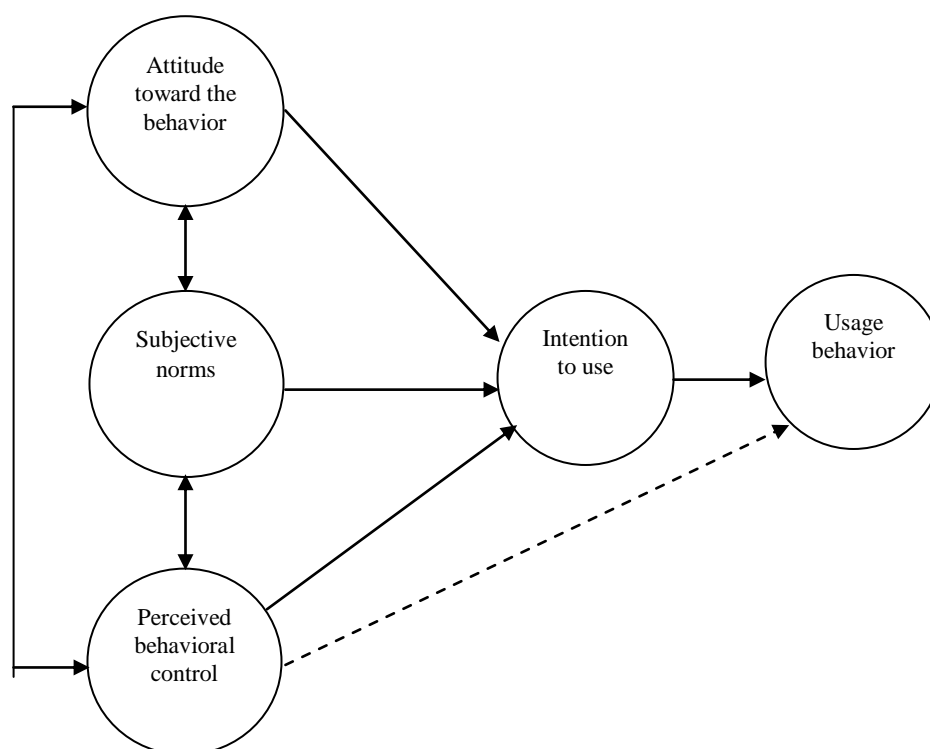


Figure 1. Theory of Planned Behavior

A central factor in the theory of planned behavior is the individual's intention to perform a given behavior. Intention are assumed to capture the motivational factors that influence a behavior, they are indications of how hard people are willing to try. Of how much of an effort they are planning to exert, in order to perform the behavior. As a general rule, the stronger the intention to engage in behavior, the more likely should be its performance. It should be clear, however, that a behavioral intention can find expression in behavior only if the behavior in



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question is under volitional control. Intentions would be expected to influence performance to the extent that the person has behavioral control and performance should increase with behavioral control to the extent that the person is motivated to try.

Perceived behavioral control refers to people's perception of the ease or difficulty of performing the behavior of interest. Perceived behavioral control indicates that a person's motivation is influenced by how difficult the behavior are perceived to be, as well as the perception of how successfully the individual can, or can not, perform the activity. If a person holds strong control beliefs about the existence of factors that will facilitate a behavior, then the individual will have high perceived control over a behavior. Conversely, the person will have a low perception of control if they hold strong control beliefs that impede the behavior.

Human beings are rational and make systematic use of information available to them. People consider the implications of their actions before they decide to engage or not engage in certain behaviors. The Theory of Reasoned Action or Theory of Planned Behavior began with looking at



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Behavior Intentions as being the immediate antecedents to behavior. Behavioral intentions is an indication of how hard people are willing to try and of how much an effort they are planning to exert, in order to perform the behavior. It is believed that the stronger a person's intention to perform a particular behavior, the most successful they are expected to be. Intentions are a function of salient beliefs and/or information about the likelihood that performing a particular behavior will lead to a specific outcome. Intentions can also change over time. The longer the time period between intention and behavior, the greater likelihood that unforeseen events will produce changes in intentions.

Behavioral intention influenced by three components, they are:

a. Person's attitude toward performing the behavior.

It is the first determinant of behavioral intention. It is an individual's positive or negative belief about performing a specific behavior. These beliefs are called *behavioral beliefs*. Attitude is degree to which the person has a favorable or unfavorable evaluation of the behavior in question. An individual will intend to



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perform a certain behavior when they evaluate it positively. Attitudes are determined by the individual's beliefs about the consequences of performing the behavior (behavioral beliefs), weighted by their evaluation of those consequences (outcome evaluations). Those attitudes are believed to have a direct effect on *behavioral intention* and are linked with *subjective norm* and *perceived behavioral control*.

b. The perceived social pressure, called subjective norm

Subjective norms are also assumed to be a function of beliefs that specific individuals approve or disapprove of performing the behavior. Beliefs that underlie subjective norms are termed normative beliefs. An individual will intend to perform a certain behavior when they perceive that important others think they should. It is considered the second predictor of behavioral intention. This is the influence of social pressure that is perceived by the individual (*normative beliefs*) to perform or not perform a certain behavior. This weighted by the individual's motivation to comply with those perceived expectations (*motivation to comply*).



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c. Perceived behavioral control

It is the third antecedent of behavioral intention. Perceived behavioral control refers to the degree to which an individual feels that performance of nonperformance of behavior in question is under their volitional control. People are not likely to form a strong intention to perform a behavior if they believe that they do not have any resources or opportunities to do so even if they hold positive *attitudes* toward the behavior and believe that important others would approve of the behavior (*subjective norm*). Perceived behavioral control can influence behavior directly or indirectly through *behavior intentions*. This construct is defined as the individual's belief concerning how easy or difficult performing the behavior will be. It often reflects actual behavioral control (Ajzen, 1991).

To improve the intention to use a state e-Government service, they have to improve the quality of citizen service, because citizenship implies a certain model of relationship between citizens and their government (Michel, 2005). The other of e-Government improved are internal efficiencies, law enforcement, education and information,



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promotion and outreach activities safety and security, health care services and management, and involvement of citizens in the democratic process (Carbo et. al, 2005).

**Perceived Characteristics of Innovating (PCI)**

The adoption of information technologies by individuals and organizations has been an area of substantial research interest since the early days of computerization (Moore and Benbasat, 1991). Measuring potential adopters' perceptions of innovations has been termed a "classic issue in the innovation literature" and a "potential key" for integrating various findings within diffusion research (Tornatzky and Klein, 1982).

One of the most often cited reviews of the perceived characteristics literature is that of Roger (1983), who in a survey of several thousand innovation studies, identified five characteristics of an innovation which affect the rate of diffusion of an innovation. They are relative advantage, compatibility, complexity, observability and trialability. Roger (1983) also add image and voluntariness of use to identified beyond classification which were thought



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important in the decision to adopt an innovation (Moore and Benbasat, 1991).

Perceptions have traditionally been defined with respect to the innovation itself, as evidenced by Rogers' definitions. Nevertheless, the perceived characteristics of innovations can easily be recast in terms of using the innovation (Moore and Benbasat, 1991). All characteristics will be defined in terms of the potential adopters' use, trial of observation of the innovation and labeled the Perceived Characteristics of Innovating (PCI) (Moore and Benbasat, 1991).

Perceived Characteristics of Innovating (PCI) are based on Rogers' (1995) Diffusion of Innovation Theory (DOI), which is used frequently in information systems research to explain user adoption of technological innovations. Diffusion refers to the process by which an innovation is communicated through certain channels over time among the members of a social society. An innovation is perceived as a new by an individual or other unit of adoption (Roger, 1995 in Carter and Belanger, 2005).



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Carter and Belanger (2005) used five Perceived Characteristics of Innovating for their research, they are relative advantage, image, compatibility and ease of use.

**a. Relative Advantage**

Relative advantage is the degree of to which an innovation is seen as being superior to its predecessor (Tornatzky and Klein, 1982). According to Rogers and Shoemaker (1971) in Tornatzky and Klein (1982), relative advantage may be expressed in economic profitability, but the relative advantage dimension may also be measured in other ways.

The majority of relative advantage studies inferred the relative advantage of the innovation. The relative advantage of an innovation was more adequately measured as adopters' of judges' ratings of the innovations (Tornatzky and Klein, 1982).

The definition of relative advantage needs only simple rewording to be defined as the degree to which using the innovating is perceived as being better than using its precursor (Moore and Benbasat, 1991).



Higher level of perceived relative advantage increase citizens' intentions to use state e-Government services. State government agencies should identify and communicate to citizens the advantages of using online services as opposed to other means of retrieving information from and completing transactions with state government agencies (Carter and Belanger, 2005). As a result of e-Government services, citizens receive faster, more convenient services from a more responsive and informed government (Trinkle, 2001).

*H<sub>1</sub>: Higher level of perceived relative advantage has significant effect on higher level of intention to use a state e-Government service.*

**b. Image**

Image define as the degree to which use of an innovation is perceived to enhance one's image of status in one's social system (Moore and Benbasat, 1991). According to the Van Slyke et. al (2004) in Carter and Belanger (2005), image refers to the degree to which the use of the innovation is sen as enhancing to an individuals image of social status.

Higher level of perceived image enhancing value of e-Government increase citizens' intention to use state government services online. In other words, those who regard the use of state e-Government services as prestigious will have higher intention to use state e-Government services than those who do not (Carter and Belanger, 2005).

*H<sub>2</sub>: Higher level of perceived image has significant effect on higher levels of intention to use a state e-Government service.*

### **c. Compatibility**

Compatibility refers to the degree which an innovation is seen to be compatible with existing values, beliefs, experiences and needs of adopters (Carter and Belanger, 2005). The compatibility of an innovation to the potential adopter is theoretically, positively related to adoption and implementation of the innovation. Both of these definitions of compatibility are used in the innovation characteristic literature, though it is sometimes difficult to differentiate between the two.



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A majority of the compatibility studies did not actually measured compatibility in any direct way, but simply inferred that the innovation was compatible to the potential user group. Duchesneau, Cohn and Dutton (1980) in Tornatzky and Klein (1982) also inferred the practical compatibility of an innovation by operationally defining an innovation as compatible to the adopting firm if the application of the innovation in some of the compatibility references, the compatibility of an innovation was actually rated by innovating decision makers.

Higher level of perceived compatibility are associated with increased intentions to adopt state e-Government initiatives. Many cultures now embrace internet technology in business (e-Commerce and e-Business) and leisure (instant messaging and virtual communities). Citizens who've adopted these internet supported initiatives are likely to adopt state e-Government services as well. Citizens who have adopted e-Commerce initiatives can be expected to view e-Government initiatives as compatible with their lifestyle.



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*H<sub>3</sub>: Higher levels of perceived compatibility has significant effect on higher levels of intention to use a state e-Government service.*

**d. Ease of Use**

Ease of use is the degree to which a person believes that using a particular system would be free of physical and mental effort (Davis, 1991). Perceived ease of use has a causal effect of perceived usefulness. System design features have an indirect effect on attitude toward using and actual usage behavior through their direct effect on perceived usefulness and perceived ease of use (Davis, 1991).

Davis (1989) explain that the perceived of ease of use is the degree to which a person believes that using a particular system would be free of effort. According to Technology Acceptance Model (TAM) (Davis, 1989; Davis et.al, 1989 in Gefen, 2000), perceived ease of use is important perceptions determining Information Technology (IT) adoption, because ease of use is instrumental in making a new IT more useful.



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Perceived ease of use was primary determinant of users acceptance and that perceived ease of use indirectly effects intentions to use. Knowing this can allow the developer to focus their primary resources on system usefulness and a lesser amount on system ease of use. For example the citizens interactions with the digital imaging system has been clear and understandable (Cowen, 2009).

Hence, the performance impacts concerning ease of use are a logical subset of those comprising usefulness. Making a system easier to use, all else held constant, should make the system more useful. Academics and practitioners alike aim to better understand how to choose from among the multitude of possibilities that will contribute most to user acceptance and performance (Davis, 1991).

*H<sub>4</sub>: Higher levels of perceived ease of use has significant effect on higher levels of intention to use a state e-Government service.*

The most of e-Government user are students in public higher education. They divided into three parts and levels of students, they are: Magister students, Social students



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and Science students. Each of them needs different information from government because they have different study program also. Novius and Sabeni (2008) give the reason of three groups of sample are chooses to see each of program study have different perception, because they have different degree of education. Their research about the differences perception between S1 accounting student, magister accounting student and PPAk student about moral intensity of accounting student in moral decision making process. The research is done at Diponegoro University in Semarang.

This research is do to know the difference perception among three groups of student, they are: Magister student, Social student and Science student towards the intention to use e-Government services.

*H<sub>5</sub>: There is different perception among the group of students on public higher education in Banyumas regency towards intention to use e-Government services.*

## RESEARCH METHOD

### Population and Sample of Research

Population of this research is the e-Government services' users. Sample of this research are using purposive sampling method as the representative of the population with certain criteria according to research needs. They are divided into three groups of students and each of them chosen 50 students as respondents. They are magister students, social students and science students.

### The Operational Definition and Variable Measurement

**Table 1. Variable Indicators**

No.	Indicators
1.	I would use the Web for gathering state government information.
2.	I would use state government services provided over the Web.
3.	Interacting with the state government over the Web is something that I would do.
4.	I would use the Web to inquire about state government services.
5.	Using the Web would enhance my efficiency in gathering information from state government agencies.
6.	Using the Web would enhance my efficiency in interacting with state government agencies.
7.	Using the Web would make it easier to interact with state government agencies.
8.	Using the Web would give me greater control over my interaction with state government agencies.

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No.	Indicators
9.	People who use the Web to gather information from state government agencies have a high profile.
10.	People who use state government services on the Web have a high profile.
11.	People who use the Web to gather information from state government agencies have more prestige than those who do not.
12.	Interacting with state government agencies over the Web enhances a person's social status.
13.	I think using the Web would fit well with the way that I like to gather information from state government agencies.
14.	I think using the Web would fit well with the way that I like to interact with state government agencies.
15.	Using the Web interact with state government agencies would fit into my lifestyle.
16.	Using the Web to interact with state government agencies would be incompatible with how I like to do things.
17.	Learning to interact with a state government Website would be easy for me.
18.	I believe interacting with a state government Website would be a clear and understandable process.
19.	I would find most state government Websites to be flexible to interact with.
20.	It would be easy for me to become skillful at using a state government Website.





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**Independent Variable (X)**

1) Relative Advantage

The perceived relative advantage of intention to use state e-Government service measured by use questionnaire that will be develop from Carter and Belangers' (2005) questionnaire. To indicate perceived relative advantage are can be seen in table 1 on number 5 until 8. There are four questions that can be answer by respondents and each of them given scale 1 - 4.

2) Image

The perceived images of intention to use state e-Government service measured by use questionnaire that will be develop from Carter and Belangers' (2005) questionnaire. To indicate perceived image are can be seen in table 1 on number 8 until 12. There are four questions that can be answer by respondents and each of them given scale 1 - 4.

3) Compatibility

The perceived compatibility of intention to use state e-Government service measured by use questionnaire that will be develop from Carter and

Belangers' (2005). To indicate the compatibility of users to use e-Government service can be seen in table 1 on number 13 until 16. There are four questions that can be answer by respondents and each of them given scale 1 - 4.

#### 4) Ease of Use

The perceived ease of use of intention to use state e-Government service measured by use questionnaire that will be develop from Carter and Belangers' (2005) questionnaire. To indicate ease of use e-Government service are can be seen in table 1 on number 17 until 20. There are four questions that can be answer by respondents and each of them given scale 1 - 4.

#### **Dependent Variable (Y)**

Intention to use a state e-Government service

To indicate the intention use of state e-Government service, it can be done with appreciate the user in using the Web for gathering state government information, services provided over the Web, the user interacting with the state government over the Web and how the user inquire

about state government services. The intention use of state e-Government service measured by instrument which is developed by (Carter and Belanger, 2005)'s questionnaire such as the user will use e-Government service to interact and getting the government information. It can be seen in table 1 on number 1 until 5. There are four questions that can be answered by respondents and each of them given scale 1 - 4.

### **Data Analysis**

#### Multiple Linear Regression

The influence of relative advantage, image, compatibility and ease of use can be analyzed with regression analysis technique. Regression analysis technique used in this research is multiple linear regression technique because the independent variable used is more than two variables. The formulation model is as follow:

$$Y = a + b_1RA + b_2IM + b_3CT + b_4EOU + e$$

Description:

Y = Intention to Use

a = Constanta, price Y when X = 0

RA = Relative Advantage

IM = Image



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CT = Compatibility

EOU = Ease of Use

$b_1$  = Relative Advantage coefficient regression

$b_2$  = Image coefficient regression

$b_3$  = Compatibility coefficient regression

$b_4$  = Ease of Use coefficient regression

e = Error

#### Hypothesis Testing

##### t Test

To examine first, second, third and fourth hypothesis, t test is used as follow:

Ho:  $H_{2a} = 0$ , means that there is no significant effect of higher level of perceived relative advantage on higher level of intention to use a state e-Government service.

Ha:  $H_{2a} \neq 0$ , means that there is significant effect of higher level of perceived relative advantage on higher level of intention to use a state e-Government service.



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Ho:  $H_{2b} = 0$ , means that there is no significant effect of higher level of perceived image on higher level of intention to use a state e-Government service.

Ha:  $H_{2b} \neq 0$ , means that there is significant effect of higher level of perceived image on higher level of intention to use a state e-Government service.

Ho:  $H_{2c} = 0$ , means that there is no significant effect of higher level of perceived compatibility on higher level of intention to use a state e-Government service.

Ha:  $H_{2c} \neq 0$ , means that there is significant effect of higher level of perceived compatibility on higher level of intention to use a state e-Government service.

Ho:  $H_{2d} = 0$ , means that there is no significant effect of higher level of perceived ease of use on higher level of intention to use a state e-Government service.

Ha:  $H_{2d} \neq 0$ , means that there is significant effect of higher level of perceived ease of use on higher level of intention to use a state e-Government service.

If  $t_{\text{count}} > t_{\text{table}}$  or  $t_{\text{count}} < -t_{\text{table}}$ , so  $H_0$  is rejected

If  $-t_{\text{table}} \leq t_{\text{count}} \leq t_{\text{table}}$ , so  $H_0$  is accepted

#### Paired Test

To examine fifth hypothesis, paired test is used; means that to compare Magister students, Social students and Science students' perception towards intention to use e-Government services by using ANOVA.

##### i. Hypothesis formulating

$H_0: H_{2e} = 0$ , means that there is no different perception among the group of students on public higher education in Banyumas Regency on intention to use state e-Government services.

$H_a: H_{2e} \neq 0$ , means that there is different perception among the group of students on public higher education in Banyumas Regency on intention to use state e-Government service.

ii. Level of significant ( $\alpha$ ) = 0.05

##### iii. Hypothesis testing criteria

$H_0$  is accepted if :  $F_{\text{count}} \leq F_{\text{table}}$

$H_0$  is rejected if :  $F_{\text{count}} > F_{\text{table}}$



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**DISCUSSION AND CONCLUSION**

From the estimation results of the research model used, it is obtained multiple linear regression calculation with the help of *SPSS* 16.0 software for windows

From the multiple regression test results, they can be formed regression equation as follows:

$$Y = 2.090 + 0.341RA + 0.247IM + 0.121CT + 0.161EOU + e$$

The statistical regression equations above can be stated as follows:

- a. Constanta value of 2.090 means intention to use of e-Government services decrease for 2.090 with the assumption relative advantage (RA), image (IM), compatibility (CT) and ease of use (EOU) have constant value.
- b. Coefficient regression of relative advantage (RA) shows significant value of 0.341. It shows that every increase of relative advantage for 1 unit will increase intention to use state e-Government services for 0.341. In other words, relative advantage has significant effect on intention to use, means the higher of relative advantage the higher level of intention to use.



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- c. Coefficient regression proportion of image (IM) shows significant value of 0.247. It shows that every increase of image for 1 unit will increase intention to use state e-Government services for 0.247. In other words, image has significant effect on intention to use, that means the higher of proportion of image the higher level of intention to use.
- d. Coefficient regression compatibility (CT) shows significant value of 0.121. It shows that every increase of compatibility for 1 unit will increase intention to use state e-Government services for 0.121. In other words, compatibility has significant effect on intention to use, that means the higher of compatibility the higher level of intention to use.
- e. Coefficient ease of use (EOU) shows significant value of 0.161. It shows that every increase of ease of use for 1 unit will increase intention to use state e-Government services for 0.161. In other words, ease of use has significant effect on intention to use, that means the higher of ease of use the higher level of intention to use.



Coefficient of determination shows the ability of the model in the series of variable changes in the next variation. From the results of regression analysis, coefficient of determination is 0.409, which means that intention to use (USE) can be explained by relative advantage (RA), image (IM), compatibility (CT) and ease of use (EOU) for 40.9%. While the remaining 59.1% is explained by other variables not examined.

### **Hypothesis Testing**

#### a. First Hypothesis Testing

By using degree of freedom (150-5) and alpha 0.05/2 = 0.025, it is obtained for  $t_{table}$  of 1.976 while the regression test result obtained  $t_{count}$  value of 7.190 and the Sig. t of 0.000. Thus,  $t_{count}$  is higher than  $t_{table}$ , and the Sig. t is lower than its alpha (0.05), so the hypotheses mentions that higher level of perceived relative advantage has a significant effect on higher level of intention to use e-Government services is accepted.

b. Second Hypothesis Testing

By using degree of freedom (150-5) and alpha  $0.05/2 = 0.025$ , it is obtained for  $t_{table}$  of 1.976 while the regression test result obtained  $t_{count}$  value of 2.962 and the Sig. t of 0.004. Thus,  $t_{count}$  is lower than  $t_{table}$ , and the Sig. t is lower than its alpha (0.05), so the hypotheses mentions that higher level of perceived image has a significant effect on higher level intention to use e-Government services is accepted.

c. Third Hypothesis Testing

By using degree of freedom (150-5) and alpha  $0.05/2 = 0.025$ , it is obtained for  $t_{table}$  of 1.976 while the regression test result obtained  $t_{count}$  value of 1.381 and the Sig. t of 0.169. Thus,  $t_{count}$  is lower than  $t_{table}$ , and the Sig. t is higher than its alpha (0.05), so the hypotheses mentions that higher level of perceived compatibility has a significant effect on higher level of intention to use e-Government services is rejected.

d. Fourth Hypothesis Testing

By using degree of freedom (150-5) and alpha 0.05/2 = 0.025, it is obtained for  $t_{table}$  of 1.976 while the regression test result obtained  $t_{count}$  value of 2.630 and the Sig. t of 0.009. Thus,  $t_{count}$  is lower than  $t_{table}$ , and the Sig. t is lower than its alpha (0.05), so the hypotheses mentions that higher level of perceived image has a significant effect on higher level of intention to use of e-Government services is accepted.

e. Fifth Hypothesis Testing

Based on ANOVA testing result shows the value of F test for 8.702 with a significant value of 0,001. This result means that  $H_0$  is rejected and  $H_5$  is accepted. So, it can be taken a conclusion that there is different perception among three groups of student towards intention to use e-Government services.

**Discussion**

a. First Hypothesis Discussion

The first hypothesis testing result shows that higher level of perceived relative advantage has significant effect on the higher level of intention to use a state e-Government services. This result shows that



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more relative advantages of e-Government service it will increase the intention to use by the citizens. These test result is consistent with Carter and Belanger (2005).

State government should identify and communicate to citizens the advantages of using online services as opposed to other means of retrieving information from and completing transactions with state government agencies (Carter and Belanger, 2005). As a result of e-Government services, citizens receive faster, more convenient services from a more responsive and informed government (Trinkle, 2001).

b. Second Hypothesis Discussion

Hypotheses testing result shows that higher level of perceived image has significant effect on the higher level of intention to use a state e-Government services. It is consistent with Carter and Belanger (2005) states that higher level of perceived image enhancing value of e-Government increase citizens' intention to use state government services online.

In other words, those who regard the use of state e-Government services as prestigious will have higher intention to use state e-Government services than those



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who do not. For example, citizens who view the adoption of e-Government services as a way to appear technically and/or politically progressive will demonstrate a higher intention to use e-Governments services (Carter and Belanger, 2005).

c. Third Hypothesis Discussion

Significant value of compatibility for 0.169 is higher than 0.05 with regression coefficient for 0.121. It means that higher level of compatibility does not have significant effect on higher level of intention to use e-Government services. This insignificant can be seen from the respondent answer distribution on the appendix. This result is inconsistent with Carter and Belanger (2005) states that higher level of perceived compatibility are associated with increased intentions to adopt are state e-Government initiatives, but it is consistent with

Citizens who have adopted e-Commerce initiatives can not be expected to view e-Government initiatives as compatible with their lifestyles. Most of respondent have answer disagree, because they feel incompatibles in getting information and interact with state government.



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The respondents aren't comfortable searching for information and services, providing personal information and conducting transactions electronically. These citizens will not have higher intentions to use e-Government services that those who view these services as compatible with their lifestyle.

d. Fourth Hypothesis Discussion

The fourth hypothesis testing result shows that higher level of perceived ease of use has significant effect on the higher level of intention to use of e-Government services. This result shows that more ease of use of e-Government service will increase the intention to use by the citizens. These result is inconsistent with Carter and Belanger (2005), but consistent with Gefen (2000) and Cowen (2009) which explained that the perceived ease of use is a significant effect on people's intention to use an Information Technology (IT).

e. Fifth Hypothesis Discussion

The fifth hypothesis testing result shows that there is different perception among the group of students on public higher education in Banyumas regency



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towards intention to use e-Government services. Because of their different levels and courses, so the need of information from the government is also different and it will affect their intention to use e-Government services. This result show that every degree of education has different need of information from government, so the intention to use a state e-Government service also different. This result is consistent with Novius and Sabeni (2008).

**IMPLICATION**

Based on the results of the analysis and discussion, it can be implicated matters as follows:

1. State government agencies should identify and communicate to citizens through socialization by holding seminar and workshop about e-Government and also about the advantages of using online service compared to other means of retrieving information from and completing transactions with state government agencies.
2. State government agencies should update their web service and make it to be better serve, appearance and

information completely in order to enhance citizens' intention to use state e-Government services.

3. For academics, they have to be better in utilizing e-Government services and always share to others such as their students and administrative staff in their office about e-Government services. This research also can be use as reference for the next researches and increase knowledge for the development of science in the similar topic, especially PCI's additional for the next research.

#### **LIMITATION**

1. The scope of this study is only students on public higher education in Banyumas Regency. To get general conclusion, it needs adding the respondents by adding broader scope not only student but also citizens like legislative body, tax payers and administrative staff. Development of research model and technique of sampling method also necessary such as purposive sampling for better next researches.
2. The R square of this research is 41%, it means that there are several independent variables that influence intention to use state e-Government services that have





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not been operated in this research. For further research, it is expected to add other independent variables such as perceived usefulness, perceived complexity, perceived trialability and perceived visibility.

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