

Impact of Technical Support and Individual Participation Efficacy on Willingness to Adopt E-Governance in Thailand – A Detailed Approach

¹Kojima Hirohito

^{1,2} Faculty of Science and Technology, King Mongkut's University of Technology Thonburi, Thailand.

¹ kojimahirohito@hotmail.com

ArticleInfo

Journal of Enterprise Business Management (<http://ijaict.com/jebm.html>)

<https://doi.org/10.46532/jebm.20200905>

Received 12 April 2020; Revised form 12 June 2020; Accepted 22 August 2020; Available online 05 September 2020.

©2020 The Authors. Published by IJAICT India Publications.

This is an open access article under the CC BY-NC-ND license. (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

Abstract - The aim of this study was to know the impact of technical support for E-governance (TSEG), individual participation efficacy (IPE) on willingness to adopt E-governance (WAG). The aim was also to know the mediating impact that economic benefits of E-governance (EBG), quality of service benefits of E-governance (QSBG) and quality of governance benefits of E-governance (QGBG) play between the independent and dependent variables. This study was conducted in Thailand. Out of the total 301 respondents of this research, one hundred and twenty-four respondents were male, and one hundred and seventy-seven respondents were females, which means that majority of the respondents were females. Out of the total 301 respondents of this research, twenty-three of the respondents had completed their graduation, one hundred and forty-six respondents had completed their post-graduation, one hundred and twenty-two respondents had completed their masters and ten respondents had other degrees. Out of 301 respondents, 185 were between the age of 21 to 30, 30 were lie between 31 to 40, 45 were between 41 to 50, 39 were more than 50. The results showed that TSEG have a significant and positive impact on WAG while impact of IPE is insignificant. Moreover, EBEG, QSBG play a significant role and QGBG play an insignificant role between TSEG and WAG, between IPE and WAG. Overall, the relation was positive and significant.

Keywords – Technical Support; Individual Participation; Efficacy; Willingness; E-Governance.

1. Introduction

ICT has invaded all fields of human life in today's world. Automation of minute to major daily tasks is a commonly seen practice in every sector. This modernism has seeped into our government sectors as well. E-governance is the fancy term used for computerizing all the data and information regarding different governmental services [1],[2] and [3]. [4] claims that E-governance provides effectiveness and transparency across different public sectors. [5] discuss how e-government enables the citizens to have easier access to information, improved quality of service delivery and in turn

provides an increased level of citizen involvement in government affairs.

The four pillars of a successful e-government, shown in figure no.1, are necessary for creating clear and open government processes that allow the people to adopt the changes in policies coming along with the implementation of e-government in a developing country. The application of e-governance techniques and technologies bring about many benefits to society for example improved efficiency of government processes, ease of data collection, storage and sharing, improved service quality, reduction in corruption due to openness which leads to the development of confidence in the government and building trust between citizens and their governments [6].

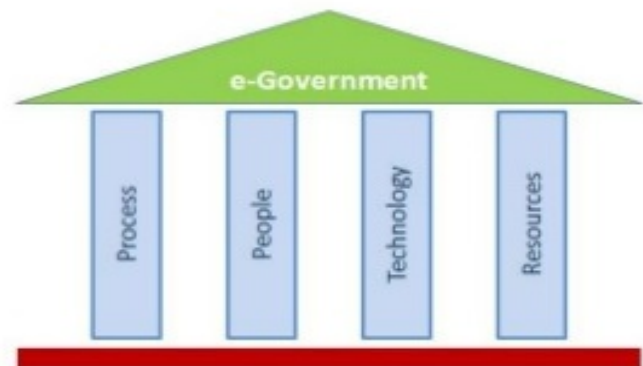


Fig 1: Pillars of e-government

Government sectors should have enough technical support resources for the maintenance of e-portals. Technical support means having a continuously available infrastructure of support at the backend of the e-government systems. In case of emergency failures, if the government does not have a reliable technical support, it may affect the continuous-use

intention of the citizens. Continuous-use intention is one of the major indicators of loyalty and adaptability of a user [7]. Individual participation efficacy depends on the user's perception of self-efficacy. [8] defines self-efficacy as the belief of a person that he has the abilities that are needed to produce the desired outcomes for particular actions. In the context of this research, if the citizens of Thailand are given the confidence that their participation in e-governance services will affect the overall betterment of society, then an increase in user adaptation will be seen.

There is an ongoing struggle in developing countries to increase the level of e-government adoption in their citizens. In developing countries like Thailand, that have a high tourism ratio, e-government technologies are a necessity for maintaining their international relationships but unfortunately, the lack of technical support and individual participation efficacy are creating difficulties in the path of ideal citizen adoption ratios. Many studies have been conducted in the past to measure the user adoption of e-governance in different contexts [9] but none of them have studied the impact of perceived benefits on adaptability ratio in developing countries. This study aims to find out how the perceived benefits of e-governance affect the willingness of the citizens to adapt to changes brought about by e-governance policies like technical support and individual participation efficacy. Some of the objectives of this paper include:

- Analysing the impact of technical support for e-governance and individual participation efficacy on the citizens' willingness to adopt e-governance in Thailand.
- Analysing the mediating role of economic, quality of service and quality of governance benefits of e-governance in the relationship between technical support and the citizens' willingness to adopt e-governance in Thailand.
- Analysing the mediating role of economic, quality of service and quality of governance benefits of e-governance in the relationship between individual participation efficacy and the citizens' willingness to adopt e-governance in Thailand.

The scope of this research is to study willingness to adapt to the changes that are being brought about by e-government in developing countries like Thailand. Previously conducted studies have had a positive impact by discovering some major hindrances in the path of adoption of e-services provided by the government in Thailand. Empirical and theoretical claims proved the major issues to be digital divide, incompetent hardware, and software knowledge, troubles of policymaking and content management [10] and [11]. Practically, these researches have enabled the governments of developing countries to improve their policies by trying to overcome these issues. The author of this paper will be discussing the theoretical frameworks in the context of the aforementioned research area and a research model and hypotheses will be presented accordingly.

2. Literature review

2.1 Theory of acceptance

Over the decades, many theories have been presented to explain the framework of acceptance of technology by the users; TAM, UTAUT, IS success model, theory of planned behaviour, etc. [12] have presented a modification of the UTAUT model that explains the acceptance factors very efficiently. They mention that the user acceptance and willingness to adopt the technological changes depend on social influence, performance and effort values, and other facilitating factors. These factors affect the attitude and behaviour intention of the users and thus indirectly affect the user behaviour of the e-government portals and services.

2.2 Technical support for e-governance, Individual Participation Efficacy and the willingness to adopt E-governance

[13] mentioned in their research paper that the success of e-governance policies does not only depend upon the hardware and software efficiency but also on the willingness of the citizens to adopt the services provided by e-governance portals as a normal form of service delivery. [14] mentioned that several studies have found a correlation in the success of e-government and the trust of citizens in technology. Users with higher levels of trust in technology will be more willing to accept and adopt e-governance systems. Another aspect is also the trust of the citizens in government bodies. If they consider the government as untrustworthy, the willingness to adopt e-governance drops even further.

Technical support for e-governance is an important factor for encouraging the adoption of e-governance in the citizens. The major attributes of technical support are reliability, security, quality and accessibility. System quality refers to ease of use, usefulness and a navigable website design [15] and [16], it ensures quality of service [17]. Reliability is the extent to which the system can handle any errors that come its way in a timely [18]. Security is the extent to which the systems can protect its data from unauthorized attacks and hackers. Accessibility is the term that describes the degree of availability and variety of government service functions on their web portals. Government websites should make sure that no sector of the public services is left out to ensure user willingness to adopt them. The failure to provide accurate technical support can cause the willingness of adoption of e-governance in the citizens to drop drastically due to the loss of trust in the e-portals.

H1: Technical support for e-governance has a significant impact on the willingness to adopt e-governance.

The willingness to adopt e-government systems can also be improved by adding value to individual participation efficacy. [19] claims that the decline of citizen participation in e-governance systems can be linked to the decreased confidence in public and government institutions. Trust in government makes the citizens more willing to adapt to the changes introduced by e-government policies [20]. If the citizens are made to feel that their participation in e-government is vital,

then their willingness and intention to use e-government will increase.

H2: Individual participation efficacy has a significant impact on the willingness to adopt e-governance.

2.3 Mediating role of Perceived Benefits of E-Governance

Citizens gain many benefits by using e-government that lays the foundation for their satisfaction and adaptability behaviour [21]. Economic benefits can be achieved by using e-government portals. Reduction in the cost of service delivery and reduced transactions in administrative processes has a major impact on the government's budget.

Technical support availability makes the government portals reliable and provide additional economic benefits for the government by creating a satisfied user who returns for continued-usage instead of being exhausted and giving up on the e-services. Individual participation efficacy also encourages continued usage which generates economic benefits for the government since the citizens will be willing to use e-services over physically available services. From the citizens' point of view, the availability of public services on online portals makes it easy for them to use these services anywhere and at a fixed cost. This results in reduction of cost of commute to and from the government sectors [22]. Also, perception of importance induced in the citizens by adding value to individual participation keeps the users excited to use. Thus, the technical support availability and individual efficacy affect the economic benefits and they, in turn, affect the citizens' willingness to adopt.

H3: Economic benefits of using e-governance systems play a mediating role between technical support and willingness to adopt e-governance.

H4: Economic benefits of using e-governance systems play a mediating role between individual participation efficacy and willingness to adopt e-governance.

Service quality is the traditional influencer of user satisfaction and an increase in user satisfaction in general will, in turn, affect the willingness to adapt as a whole [23]. The absence of technical support availability hinders the service quality of e-governance systems thus it is a contributing factor for service quality and the economic benefits gained from it. These economic factors play a vital role in citizen willingness to adopt. Individual participation efficacy also contributes to service quality as the need for adding value encourages a user-oriented design of portals. This participation value adds to the willingness of citizens to adopt e-government portals.

H5: QoS benefits of using e-governance systems play a mediating role between technical support and willingness to adopt e-governance.

H6: QoS benefits of using e-governance systems play a mediating role between individual participation efficacy and willingness to adopt e-governance.

[24] discussed that the services that are provided by e-government systems have enabled the sectors of the government to effectively manage both internal and external information in addition to providing a high service quality. Such advances make it easier to manage data and thus, become a more organized body as a whole. Technical support makes it easier for a well-managed governance system and the benefits encourage citizen adoption of the systems. Individual participation efficacy affects the accountability and openness of a government. The citizens thus become more involved in the governance system as a whole and it makes them more willing to adopt the technology changes.

H7: Quality of governance benefits of using e-governance systems play a mediating role between technical support and willingness to adopt e-governance.

H8: Quality of governance benefits of using e-governance systems play a mediating role between individual participation efficacy and willingness to adopt e-governance.

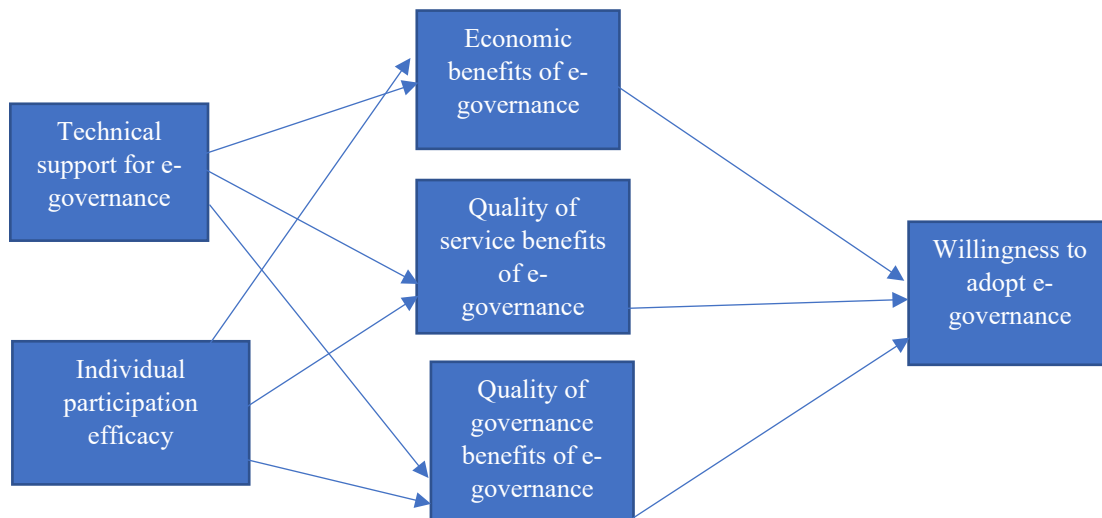


Fig 2: Research model

3. Research Methodology

3.1 Population and Sample

This proposed study has been examined to observed the impact of technical support and individual participation on willingness to adopt E-Governance, in mediating role of perceived E-Governance benefits as shown in Figure 2. Researcher selects the Thailand as the population of study because Thailand have invested much resources for the development of the E-Governance policies for ensuring the greater transparency, improving the service delivery and easier public participation. Sampling frame constitutes of 4 major cities of Thailand such as Bangkok, Phuket, Chiang Mai and Udon Thani. Researcher select sample respondents from these cities through simple random sampling technique in order to maintain the balance in data. Coming towards sample size, it has been calculated on the bases of [25] idea which states that number of questions*10 provides exact sample size. As in proposed study number of questions is 32 that's why sample size is $32*10=320$. Researcher distributes 320 questionnaires but only 250 valid responses have been collected.

3.2 Data Collection Procedure

As researcher required to collect the numeric data that's why researcher considered the survey questionnaire as the best suitable option for data collection. Survey questionnaire has to be composed of closed ended questions because researcher desired to collect quantitative data not the subjective opinions. As the researcher adapt the survey items from research works of other authors that's why questionnaire originally is in English language. Researcher has to translate the questionnaire into native language such as Thai language before collecting the data. After data collection, researcher again translated into English because statistical analysis can be performed more easily when the data is in English. Researcher also conduct the pilot study for verifying the survey questions in regard of understandability. Further, researcher administered the questionnaires through self-administered technique because it helps to resolve the queries of respondents regarding the specific terms.

3.3 Measurement Model

Researcher evaluate the reliability and validity of measurement model through SPSS and AMOS respectively. Reliability has been assessed by examining two criteria's such as Cronbach's α and Composite reliability, its values have to be greater than threshold range 0.70 because internal consistency and items reliability of model can only be ensured at value greater than 0.70. Coming towards assessment of validity of model, criteria to assessed the convergent validity are (1) item loadings λ its values have to exceed the threshold range 0.70, (2) average variance extracted, its values have to exceed the 0.50 value because its values were stronger at above 0.50. As far as the discriminant validity is concerned, it has been assessed on the bases of criterion which states that Square root of AVE has to be greater than other inter related coefficients.

Researcher has to be careful while identifying the existence of common bias method in the proposed study because outcomes of study get contaminated due to the corruption of measures in same direction. Harman's single factor test has been taken into account for checking the existence of CMB. Variables of proposed study have been evaluated on the bases of criterion which entails that not more than 50% of variance accounted by single factor. According to test results, 15% of variance accounted by single factor and 87% of variance accounted by multiple factors. Eventually, it proves that risk of CMB is not present in proposed study.

3.4 Measures

In the proposed study, researcher measured the variables of the study on the basis of measures which he or she has been adapted from earlier studies of different authors because these measures are more reliable and acceptable. For the evaluation of variables, researcher adapt the measures from research work of different authors such as for technical support for E-Governance items adapted from [26]. For individual participation efficacy, items adapted from scale of [27] for economic benefit of E-Gov. items adapted from [28], for quality of service benefits of E-Gov. items adapted from [29], for quality of governance benefits items adapted for the willingness to adopt E-Governance items adapted from scale of [30]. Respondents responses regarding the all these variable scale items have been evaluated on the ground of 5-point Likert scale, in which responses are categorized from 1 strongly disagree to 5 strongly agree.

3.5 Hypothesis Testing

Hypothesis testing has been performed for reporting that which hypotheses will be accepted or which get rejected. Researcher considered the structural equation modelling as the best suitable option, which runs on AMOS. Moreover, researcher used the covariance-based approach under AMOS for operating the diagnostics of SEM. On the bases of direct, indirect and total effect and relative significance and t-statistics values, researcher reports that which hypothesis is positively related or which is negatively related because acceptance or rejection status can only be evaluated on the basis of this criterion.

4. Data analysis and interpretation

4.1 Demographical details of the respondents

The aim of this study was to know the impact of technical support for E-governance on willingness to adopt E-governance, the impact of individual participation efficacy on willingness to adopt E-governance. This paper also aimed to know the mediating role of economic benefits of E-governance between technical support for E-governance and willingness to adopt E-governance, to know the mediating role of quality of service benefits of E-governance between technical support for E-governance and willingness to adopt E-governance, to know about the mediating role of quality of governance benefits of E-governance between technical support for E-governance and willingness to adopt E-

governance. This paper also aimed to know the mediating role of economic benefits of E-governance between individual participation efficacy and willingness to adopt E-governance, to know the mediating role of quality of service benefits of E-governance between individual participation efficacy and willingness to adopt E-governance, to know about the mediating role of quality of governance benefits of E-governance between individual participation efficacy and willingness to adopt E-governance. This study was conducted in Thailand. Out of the total 301 respondents of this research, one hundred and twenty-four respondents were male, and one hundred and seventy-seven respondents were females, which

means that majority of the respondents were females. Out of the total 301 respondents of this research, twenty-three of the respondents had completed their graduation, one hundred and forty-six respondents had completed their post-graduation, one hundred and twenty-two respondents had completed their masters and ten respondents had other degrees. Out of the total 301 respondents of this research, 185 of the respondents were between the age of 21 to 30 years, 30 of the respondents were in the age range of 31 to 40 years, 47 of the respondents were between the age of 41 to 50 years, and lastly 39 of the respondents were more than 50 years old in age, which means that 61% of the respondents were young in age.

4.2 Descriptive statistics

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
TecSupEG	301	1.00	5.00	3.5807	1.09448	-.854	.140
IndParEffic	301	1.00	5.00	3.5548	1.13170	-.756	.140
EcoBenEG	301	1.00	5.00	3.5872	1.10796	-.831	.140
QusBenEG	301	1.00	5.00	3.5900	1.06422	-.879	.140
QugovGEG	301	1.00	6.33	3.4064	1.08620	-.237	.140
WiAdopEG	301	1.00	5.00	3.4585	1.12796	-.566	.140
Valid N (listwise)	301						

The above table 1. is showing the descriptive statistics of the study. The descriptive statistics are a detailed description about the variables and they show descriptive coefficients that give a summary. This set of given data represents the entire sample of the population. The data is showing that

there is no outlier in given data because maximum values are in the threshold range of 5-point Likert scale and skewness value is between -1 to +1, which is the threshold range of normality so, the data is normal and valid. The data is valid to go for further testing.

4.3 Rotated Component Matrix

Table 2: Rotated Component Matrix

	Component					
	1	2	3	4	5	6
TS1			.725			
TS2			.777			
TS3			.842			
TS4			.824			
TS5			.804			
IP1					.782	
IP2					.827	
IP3					.825	
IP4					.814	
EB1				.808		
EB2				.840		
EB3				.873		
EB4				.800		
SB1		.775				
SB2		.801				
SB3		.801				
SB4		.819				
SB5		.800				
GB1						.731
GB2						.765
GB3						.802
WA1	.793					
WA2	.823					
WA3	.869					
WA4	.871					
WA5	.888					

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Above table 2. of rotated components matrix is showing that almost all of the indicators are having factor loading more

than 0.7, it means that all the indicators are eligible to be exposed to further hypothesis testing techniques, because all the factors are in suitable threshold level and all are in suitable and valid sequence and range, this data is good to go for further testing techniques, there is no cross loading in the data shown in the RCM. So, the data is reliable.

4.4 Convergent and discriminant validity

Table 3: Convergent and discriminant validity

	CR	AVE	MSV	MaxR(H)	TS	IP	EB	SB	WA	GB
TS	0.938	0.751	0.360	0.941	0.867					
IP	0.938	0.792	0.372	0.969	0.600	0.890				
EB	0.937	0.788	0.354	0.979	0.533	0.595	0.888			
SB	0.933	0.735	0.372	0.984	0.577	0.610	0.524	0.857		
WA	0.952	0.800	0.464	0.989	0.483	0.374	0.424	0.474	0.894	
GB	0.869	0.689	0.464	0.990	0.556	0.387	0.441	0.505	0.681	0.830

Validity master sheet was used to confirm the convergent and discriminant validity of the research model variables. Discriminate validity provided the discrimination between variables while the convergent validity was measured with the help of composite reliability and average variance extracted. The results of the validities are shown in the table 3. The results and convergent and discriminant validity show

that the overall model is a good fit because the composite reliability of each variable is more than 70% and average variances extracted is more than 50% while the discriminant validity showed that loading of each variable discriminates from others. Every variable has maximum loading with itself as compared with others so, these validities prove the authenticity of the collected data.

4.5 Confirmatory Factor Analysis

Table 4: CFA

Indicators	Threshold range	Current values
CMIN/DF	Less or equal 3	1.812
GFI	Equal or greater .80	.887
CFI	Equal or greater .90	.969
IFI	Equal or greater .90	.969
RMSEA	Less or equal .08	.052

Table 4. is of CFA. Confirmatory factor analysis, is used to confirm the fitness of hypothetical model before structural equation modelling. Current results are showing that CMIN is less than 3, GFI is more than 0.80, CFI is greater than 0.90, IFI is greater than 0.950, and RMSEA is less than 0.061. so, the data is in a valid range and is good to go for further testing.

Following is the screenshot of CFA in Figure. 3.

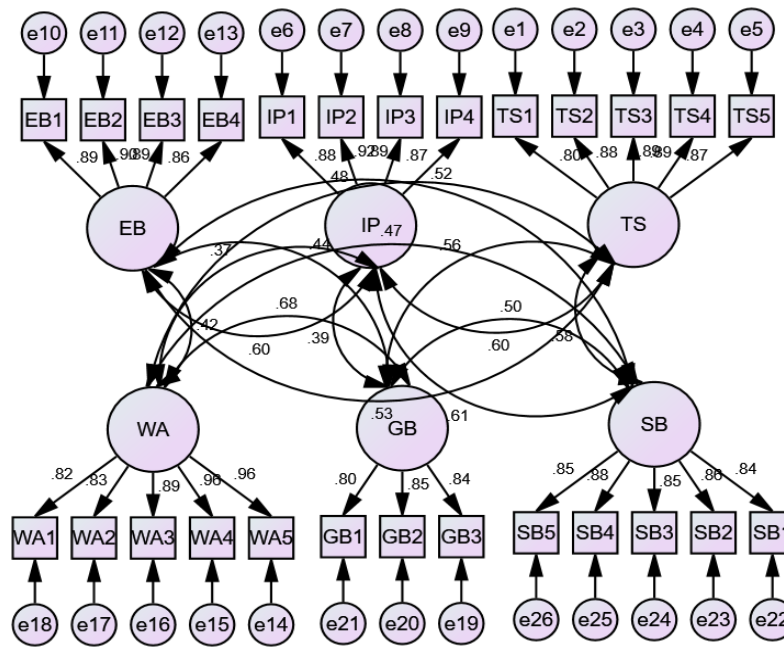


Fig 3: CFA

4.6 Structural equation modeling

Table 5: SEM

Total	IndParEffic	TecSupEG	QugovGEG	QusBenEG	EcoBenEG
QugovGEG	.089	.456***	.000	.000	.000
QusBenEG	.392***	.314***	.000	.000	.000
EcoBenEG	.406***	.271***	.000	.000	.000
WiAdopEG	.136**	.399***	.486***	.143***	.103***
Direct	IndParEffic	TecSupEG	QugovGEG	QusBenEG	EcoBenEG
QugovGEG	.089	.456***	.000	.000	.000
QusBenEG	.392***	.314***	.000	.000	.000
EcoBenEG	.406***	.271***	.000	.000	.000
WiAdopEG	-.005	.104**	.486***	.143**	.103
Indirect	IndParEffic	TecSupEG	QugovGEG	QusBenEG	EcoBenEG
QugovGEG	.000	.000	.000	.000	.000
QusBenEG	.000	.000	.000	.000	.000
EcoBenEG	.000	.000	.000	.000	.000
WiAdopEG	.141***	.294***	.000	.000	.000

The results of structural equation modeling in table 5. These are showing the impacts and relationships of different

variables. The total impact of IPE on EBG is significant and positive as it is equal to 40%, impact on QSBEG is positive

and significant as well as it is 39%, the impact on QGBEG is insignificant and the impact on WAG is significant and positive and is equal to 13%.

Following is the screenshot of SEM in Figure. 4.

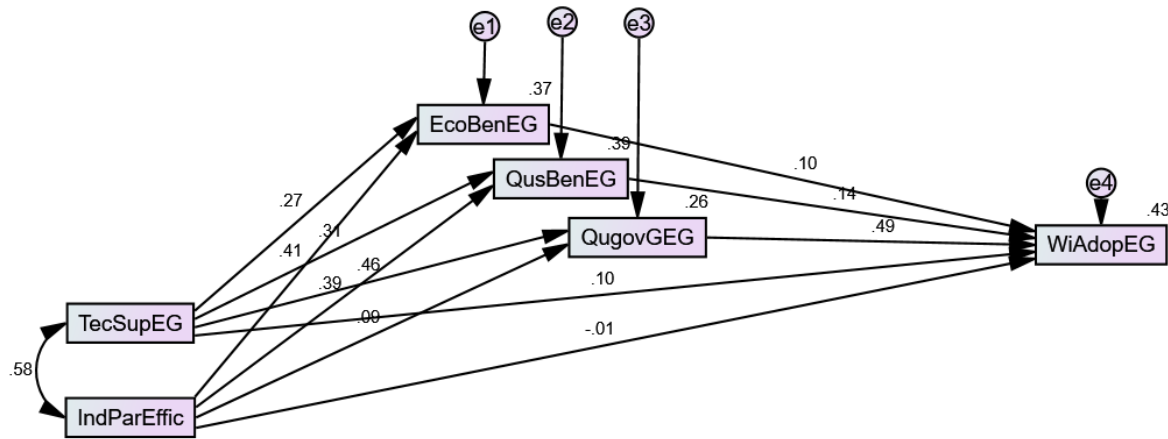


Fig 4: SEM

The total impact of TSG on EBG is significant and positive as it is equal to 27%, impact on QSBEG is positive and significant as well as it is 31%, the impact on QGBEG is positive and significant as it is equal to 46% and the impact on WAG is significant and positive and is equal to 40%. The total mediating impact of quality of governance, benefits of E-governance, between the independent and the dependent variables is positive and significant and is equal to 49%, the mediating impact of quality of service benefits of E-governance is positive and significant and is equal to 14.3%. Moreover, the mediating impact of economic benefits of E-governance is positive and significant between the independent and dependent variables and is equal to 10.3%.

5. Discussion and conclusion

5.1 Discussion

The aim of this study was to know the impact of technical support for E-governance (TSEG), individual participation efficacy (IPE) on willingness to adopt E-governance (WAG). The aim was also to know the mediating impact that economic benefits of E-governance (EBG), quality of service benefits of E-governance (QSBG) and quality of governance benefits of E-governance (QGBG) play between the independent and dependent variables. The first hypothesis proposed by this study was that, "The impact of TSEG on WAG is significant." This hypothesis is accepted, according to [31], when proper support material and assistance is provided, the implementation of E-governance system becomes easy which promotes the willingness to adopt E-governance practices. The second hypothesis proposed by this study as that, "IPE has a significant impact on WAG." According to [32], one's own will to participate in the E-governance activities for increasing the efficiency of the organization and gaining valuable and supposed outcomes does not enhance the willingness to adopt the E-governance system, so no

significant and positive experience exists. The third hypothesis was that, "EBG play as significant mediating role between TSEG and WAG." This hypothesis is accepted, according to the analysis which shows that the impact of EBG is significant and positive between TSEG and WAG. Fourth hypothesis was that, "QSBG has a significant mediating role between TSEG and WAG." Which is accepted according to [33], according to which QSBG enhances the impact of TSEG on WAG. The fifth hypothesis proposed by this study was that, "QGBG has a significant mediating role between TSEG and WAG" this hypothesis is accepted as [34], said that the implementation of any system depends on the benefits and advantages of any system which promotes the willingness to adopt that system, moreover, this study proposed in the sixth and seventh hypothesis that "EBG and QSBG significantly mediate between IPE and WAG," both of the hypothesis are accepted, because according to [35], with regard to the innovation, in order to increase the quality of services and In order to have economic benefits as well. Individuals are more likely to participate in the implementation of E-governance practices in order to improve the outcomes and gain valuable results. The last hypothesis proposed was that, "QGBG has a significant mediating role between IPE and WAG." This hypothesis is rejected according to [36], in which it is stated that IPE's impact cannot be enhanced by the positive results of QGBG and it does not enhance it.

5.2 Conclusion

The aim of this study was to know the impact of technical support for E-governance (TSEG), individual participation efficacy (IPE) on willingness to adopt E-governance (WAG). The aim was also to know the mediating impact that economic benefits of E-governance (EBG), quality of service benefits of E-governance (QSBG) and quality of governance benefits of E-governance (QGBG) play between the independent and dependent variables. This study was conducted in Thailand

and the total number of respondents was 301. Most of the respondents were young in age and were females. In order to check the reliability of data, CFA and SEM was run, convergent and discriminant validity was also used. The results showed that TSEG have a significant and positive impact on WAG while impact of IPE is insignificant. Moreover, EBEG, QSBG play a significant role and QGBG play an insignificant role between TSEG and WAG, between IPE and WAG. Overall, the relation was positive and significant.

5.2.1 Implications of this study

After this study the data regarding, TSEG has enhanced up to a great extent. Moreover, the factors influencing WAG elaborated to a great extent, which means that this study has significantly contributes to the literature material. In the organizations other than Thailand as well, the top management can decide whether or not they should implement E-governance practices by making an estimate of its advantages and disadvantages through this study, also policies can be devised in order to improve the already existing E-governance practices, and it can be decided whether or not E-governance practices are economically beneficial for the organizations or not.

5.2.2 Limitations and future research indications

This kind of study needs comparisons between performances, for future researchers' cross sectionals studies are recommended. So, that once a year the results can be compared. The size of the sample taken was small, the sample size should be large enough so that the results can be generalized on the whole population.

References

- [1]. Agrawal, A., Shah, P., & Wadhwa, V. EGOSQ-users' assessment of e-governance online-services: A quality measurement instrumentation. Paper presented at the International Conference on E-governance,2007.
- [2]. Al Athmay, A. A. A. R. A. Demographic factors as determinants of e-governance adoption: a field study in the United Arab Emirates (UAE). *Transforming Government: People, Process and Policy*, 9(2), 159-180,2015.
- [3]. Al Salmi, M., & Hasnan, N. E-government analysis: sultanate of Oman case. *Open Journal of Social Sciences*, 4(03), 35,2016.
- [4]. AlAwadhi, S. A Proposed Model of Trust Factors for E-government Adoption and Civic Engagement. . Hawaii International Conference on System Sciences,2019.
- [5]. Alcaide-Muñoz, L., Rodríguez-Bolívar, M. P., Cobo, M. J., & Herrera-Viedma, E. Analysing the scientific evolution of e-Government using a science mapping approach. *Government Information Quarterly*, 34(3), 545-555,2017.
- [6]. Aldridge, S., & Rowley, J. Measuring customer satisfaction in higher education. *Quality assurance in education*, 6(4), 197-204,1998.
- [7]. Bannister, F., & Connolly, R. Defining e-governance. *e-Service Journal: A Journal of Electronic Services in the Public and Private Sectors*, 8(2), 3-25,2012.
- [8]. Barua, M. E-governance adoption in government organization of India. *International Journal of Managing Public Sector Information and Communication Technologies*, 3(1), 1,2012.
- [9]. Belwal, R., & Al-Zoubi, K. Public centric e-governance in Jordan: A field study of people's perception of e-governance awareness, corruption, and trust. *Journal of Information, Communication and Ethics in Society*, 6(4), 317-333,2008.
- [10]. Bhuiyan, S. H. Modernizing Bangladesh public administration through e-governance: Benefits and challenges. *Government Information Quarterly*, 28(1), 54-65,2011.
- [11]. Cacciolatti, L., & Lee, S. H. Revisiting the relationship between marketing capabilities and firm performance: The moderating role of market orientation, marketing strategy and organisational power. *Journal of Business Research*, 69(12), 5597-5610,2016.
- [12]. Chen, L., & Aklikokou, A. K. Network administration: Benchmarking e-government in Togo. . Springer,2018.
- [13]. Chen, L., & Aklikokou, A. K. Determinants of E-government Adoption: Testing the Mediating Effects of Perceived Usefulness and Perceived Ease of Use. *International Journal of Public Administration*, 1-16,2019.
- [14]. D'agostino, M. J., Schwester, R., Carrizales, T., & Melitski, J. A study of e-government and e-governance: An empirical examination of municipal websites. *Public Administration Quarterly*, 3-25,2011.
- [15]. Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a Revised Theoretical Model. *Information Systems Frontiers*, 21(3), 719-734. doi: 10.1007/s10796-017-9774-y,2019.
- [16]. Fajar, A., & Shofi, I. Service Oriented Design for Indonesian E-Government System Using SOA. Paper presented at the IOP Conference Series: Materials Science and Engineering,2019.
- [17]. Glassey, O., & Glassey, O. F. A proximity indicator for e-government. 1(4), 5-20,2004.
- [18]. Iranmanesh, H., Keramati, A., & Behmanesh, I. The Effect of Service Innovation on E-government Performance: The Role of Stakeholders and Their Perceived Value of Innovation. *International Journal of Information Systems and Social Change (IJSSC)*, 10(1), 1-22,2019.
- [19]. Jareonsubphayanont, N., & Narot, P. K. The E-government Situation in Thai Local Government: Municipalities in Khon Kaen Province. *Journal of Mekong Societies*, 12(1), 61-76,2016.
- [20]. K. Omar, H. S., R. Stockdale,. E-government service quality assessed through the public value lens. *springer*,2011.
- [21]. Komito, L. e-Participation and Governance: Widening the net. *Electronic Journal of E-government*, 3(1), 39-48,2005.
- [22]. Lee, S., & Kim, B. G. The impact of qualities of social network service on the continuance usage intention. 701-729,2017.
- [23]. Lindgren, I., & Jansson, G. Electronic services in the public sector: a conceptual framework,2013 .
- [24]. Ma, L., & Zheng, Y. National e-government performance and citizen satisfaction: a multilevel analysis across European countries. *International Review of Administrative Sciences*, 0020852317703691,2017.
- [25]. Maddux, J. E. Self-efficacy. In *Interpersonal and intrapersonal expectancies* Routledge, (pp. 41-46),2016.
- [26]. Malisuwan, S., Kaewphanuekrungsri, W., & Milindavanij, D. DIGITAL DIVIDE IN THAILAND: ANALYSIS AND RECOMMENDATIONS,2016.
- [27]. Meijer, A. E-governance innovation: Barriers and strategies. *Government Information Quarterly*, 32(2), 198-206,2015.
- [28]. Mensah, I. K., Jianing, M., & Durrani, D. K. Factors Influencing Citizens' Intention to Use E-Government Services: A Case Study of South Korean Students in China. *International Journal of Electronic Government Research (IJEGR)*, 13(1), 14-32,2017.
- [29]. Papadomichelaki, X., & Mentzas, G. A multiple-item scale for assessing e-government service quality,. M.A. Wimmer, H.J. Scholl, M.J.R. Traunmüller (Eds.), 163-175,2009.

- [30]. Patrutiu-Baltes, L. Inbound Marketing-the most important digital marketing strategy. Bulletin of the Transilvania University of Brasov. Economic Sciences. Series V, 9(2), 61,2016.
- [31]. Putra, D. A., Jasmi, K. A., Basiron, B., Huda, M., Maselena, A., Shankar, K., & Aminudin, N. Tactical steps for e-government development. International Journal of pure and applied mathematics. (119(15)), 2251-2258,2018.
- [32]. Santa, R., MacDonald, J. B., & Ferrer, M. The role of trust in e-Government effectiveness, operational effectiveness and user satisfaction: Lessons from Saudi Arabia in e-G2B. Government Information Quarterly, 36(1), 39-50,2019.
- [33]. Santhanamery, T., & Ramayah, T. Trust in the system: The mediating effect of perceived usefulness of the e-filing system User Centric E-Government (pp. 89-103): Springer,2018.
- [34]. Shan, S., Wang, L., Wang, J., Hao, Y., & Hua, F. Research on e-government evaluation model based on the principal component analysis. Information Technology and Management, 12(2), 173-185,2011.
- [35]. Stefanie, A., & Claudio, C. The Economic and Social Impacts of E-government,2011
- [36]. Veeramootoo, N., Nunkoo, R., & Dwivedi, Y. K. What determines success of an e-government service? Validation of an integrative model of e-filing continuance usage. Government Information Quarterly, 35(2), 161-174,2018.