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E-business Adoption amongst SMEs: A Structural Equation Modeling Approach

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Abstract

The adoption of e-business amongst small and medium sized enterprises in the state of Terengganu, Malaysia is still quite low. Hence, identifying the success factors that

contribute to e-business adoption is crucial. This article examines the factors that determine the e-business adoption amongst small and medium enterprises and its causal effects using a theoretical model based on the Innovation Diffusion Theory. The research model consists of five exogenous latent constructs, namely relative advantage, compatibility, complexity, trialability and observability. Data relating to the constructs were collected from 337 small and medium sized enterprises located in the state of Terengganu, Malaysia and subjected to Structural Equation Modeling analysis. Confirmatory Factor Analysis (CFA) was performed to examine the reliability, construct validity, convergent validity and goodness of fit of individual construct and measurement models. The hypothesized structural model fits the data well. Results indicate that the significant factor that leads to the adoption of e-business is compatibility. Finally, implications and suggestions of these findings are discussed.

INTRODUCTION

The role of technology is vital if an organization wants to compete in the global arena, especially in connecting to its stakeholders. There is a likelihood that one organization can pressure the e-business adoption practices of other organizations by benefits gained among the adopters (Roberts, 2009). With the emergence of electronic business, companies can reach potential customers all over the world. This type of companies will be more competitive and consequently competitive advantage can be created or sustained. However, not all companies try to grab these opportunities with their very own specific reasons.

Theoretically, e-business put forward diverse advantages for businesses and their stakeholders. Tan (2001) identifies potential for improvements in several areas arising from adoption of e-business which are cost performance (from improved productivity and lower input prices); customer service (service quality); process capability (quality consistency); and productivity and dependability (from increased control of material flows along the supply chain). Regardless of vast benefits, the adoption of advanced integration technologies that enable private organizations to seamlessly execute their business transactions electronically is still relatively low (Janner, Lampathaki, Hoyer, Mouzakitis, Charalabidis and Schroth, 2008). Understanding the blueprint of the current business practice is needed in order to increase the trend and finding the suitable approach for long term benefit.

According to Croom (2005), research relating to the impact of the Internet as a communication platform on business processes and management decision making is still very much in its infancy simply due to the lead times involved in undertaking and disseminating empirical analyses. As to date, the number of research that stresses on

SMEs in Malaysia are still limited (Law, Abu Bakar Hamed and Muhammad Sazri Khamis, 2008). Azyanee Luqman and Nurmuslimah Kamilah Abdullah (n.d.) point out that past researches solely focused on small and medium enterprises in the state of Terengganu, Malaysia regarding e-business adoption is not yet available. Thus, this study is essential in providing the current scenario of what really is happening in the local business world towards developing the pervasiveness of e-business adoption in the future.

This study is designed to achieve the following objectives:
- To assess the direct influence of relative advantage on e-business adoption amongst SMEs in Terengganu
- To examine the direct influence of compatibility on e-business adoption amongst SMEs in Terengganu
- To identify the direct influence of complexity on e-business adoption amongst SMEs in Terengganu
- To investigate the direct influence of trialability on e-business adoption amongst SMEs in Terengganu
- To inspect the direct influence of observability on e-business adoption amongst SMEs in Terengganu

LITERATURE REVIEW

Watson, Berthon, Pitt and Zinkhan (2000) and Reedy, Schullo and Zimmerman (2000) define e-business as any business carried out over an electronic network (exchanging data files, having a website, using other companies' websites or buying and selling goods and services online). While e-commerce focuses primarily on transactions with a firm's customers, e-business expands the connectivity of the organization to include its suppliers, employees and business partners (Rodgers, Yen and Chou, 2002; Martin and Matlay, 2001). This expanded connectivity makes e-business solutions much more prominent than the use of e-commerce (Pavic, Koh, Simpson and Padmore, 2007). On the other hand, Van Hooft, and Stegwee (2001) defines e-business as a secure, flexible and integrated approach to delivering differentiated business value by combining the systems and processes that run core business operations with the simplicity and reach made possible by the Internet technology. Croom (2005) views e-business simply as the use of systems and open communication channels for information exchange, commercial transactions and knowledge sharing between organizations. Evans and Wurster (2000) in Croom (2005) stated that the rise of the Internet as a communication channel (and its supporting systems and software) has changed the economics of information, gives rise to opportunities, new forms of affiliation between organizations, new forms of relationship between organizations and new forms of transaction between organizations.

According to Xu, Duan and Ravni Rohatgi (2007), e-business technologies allow small and medium enterprises (SMEs) to gain capabilities that were once the preserve of their larger competitors. These technologies offer the potential of creating entirely new ways of working, giving rise to a new breed of SMEs whose management and employees use a more flexible and more effective way of working, as well as opportunities in conducting the business across the globe. Nabeel (2007) stated that the SMEs would benefit

immensely from adopting different technological e-commerce solutions in order to bridge the technological gap between them and large enterprises. Moreover, IT adoption often requires close collaboration and coordination that can be easily achieved in small firms (Oliveira and Martins, 2010). Meckel (2004) said that it is likely that not using e-business will be a disadvantage in the future.

Even though adopting e-business will create a lot of opportunities in getting and sustaining competitive advantage, there are lots of challenges towards it. It would be tougher for SMEs since the nature of the business is tight to so many constraints such as small capital and workforce. Blili and Raymond (1993) quoted that small firms are often weak in terms of financing, control, training, planning and information, due to a chronic lack of human and financial resources.

Several studies had been done in other countries regarding the e-business adoption. For instance, Nabeel (2007) conducted a study on e-commerce adoption in New Zealand whereas Bang, Kyeong and Myung (2006) conducted their studies on e-business adoption in Korea.

In Malaysia, the most widely adopted definition for small and medium enterprises (SMEs) is that of being defined by SME Corp. Malaysia and Central Bank of Malaysia (Bank Negara Malaysia) whereby SMEs can be grouped into three categories: micro, small or medium as shown in Table 1 below. These groupings are decided based on either the number of people a business employs or on the total sales revenue generated by a business in a year. The definition of SMEs for this study was based on SME Corp. Malaysia.

TABLE 1
CHARACTERISTICS OF SMALL AND MEDIUM INDUSTRY

Sector	Category	Definition	
		Sales Turnover (RM)	Employees
Manufacturing	Micro	Less than 250,000	< 5
	Small	250,000 – less than 10 million	5 – 50
	Medium	10,000,000 – 25 million	51 – 150
Services	Micro	Less than 200,000	< 5
	Small	200,000 – less than 1 million	5 – 19
	Medium	1 million – 5 million	20 – 50

Source: SME Corp. Malaysia (2011)

Rogers (1995) defines the innovation diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social

system. According to Cheng and Kao (2004), Innovation Diffusion Theory (IDT) is a theory of communication which has been studied extensively in the literature from the viewpoint of various disciplines and with respects to different types of products, services and ideas. Cheng and Kao also stated that Rogers (2003) is one of the three mainstream types of research in the diffusion of innovation theory school of thought.

The theoretical framework developed by Rogers (2003) has five variables in determining the rate of adoption of innovations. The variables are perceived attributes of innovations, type of innovation-decision, communication channels, nature of the social system and extent of change agents' promotion efforts. The perceived attributes of innovations itself consist of five factors; relative advantage, compatibility, complexity, trialability and observability. Wu and Wang (2005) stated that these characteristics are used to explain the user adoption and decision making process. They are also used to predict the implementation of new technological innovations and clarify how these variables interact with one another. (p. 721)

Relative advantage
Rogers (2003) defines relative advantage as "the degree to which an innovation is perceived as being better than the idea it supersedes" (p. 229). In other words, it is similar to perceived usefulness (Wu and Wang, 2005). Rogers (1983) as in Malek and Nik Kamariah (2011) highlights "relative advantage requires the adopter to analyze the costs and benefits of using an innovation, which can be expressed economically, socially or in other ways" (p. 3).

Compatibility
According to Rogers (2003), "compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters" (p. 240). Sonnenwald, Maglaughlin and Whitton (2001) in Wu and Wang (2005) stated that compatibility is the degree to which the innovation is perceived to be tally with the prospective users' existing values, previous experiences and needs. They added that high compatibility will lead to preferable adoption.
Malek and Nik Kamariah (2011) identified several researchers showed that compatibility is one of the main characteristics for the innovation circulation process with the high compatibility perceived by the individuals leading to the speedy adoption of any new ideas or technologies in general.

Complexity
Rogers (2003) defines complexity as "the degree to which an innovation is perceived as relatively difficult to understand and used" (p. 257). Therefore it is akin to perceived ease of use (Wu and Wang, 2005) and reflects the level of physical or mental efforts essential for an innovation (Malek and Nik Kamariah, 2011). Complexity is assumed to be negatively related to innovation adoption and implementation (Tornatzky and Klein, 1982).

Trialability
Rogers (2003) identifies trialability as the degree to which an innovation may be tested with on a limited basis. In Malek and Nik Kamariah (2011), Rogers (1983) suggests that the trialability contributes to achieving some sort of comfort among the customers and the users who may later become more willing to adopt this innovation. That is why Malek

and Nik Kamariah used a phrase of "test drive" before it is being adopted in expressing the trialability.

Theoretically, "innovations that can be tried on the installment plan (Rogers and Shoemaker, 1971 in Tornatzky and Klein, 1982) will be adopted and implemented more often and more quickly than less trialable innovations (Tornatzky and Klein, 1982)" (p. 38).

Observability
According to Rogers (2003), "observability is the degree to which the results of an innovation are visible to others" (Rogers, 2003, p. 259). The more visible the results of an innovation, the more likely the innovation will be rapidly adopted and implemented (Tornatzky and Klein, 1982). They recognize one of the difficulties concerning the characteristic of observability is its obvious potential for confounding with other perceived attributes. It is unclear whether observability *per se* is being assessed, or observability of cost, compatibility, effects, etc.

RESEARCH METHODOLOGY

This paper is based on an exploratory study. The theoretical framework developed by Rogers (2003) has five variables in determining the rate of adoption of innovations. The variables are perceived attributes of innovations, type of innovation-decision, communication channels, nature of the social system and extent of change agents' promotion efforts. The perceived attributes of innovations itself consist of five factors; relative advantage, compatibility, complexity, trialability and observability. The five factors of the perceived attribute lead to the schematic diagram of the model (see Figure 1) and the conversion of the diagram into AMOS graphic (see Figure 2).
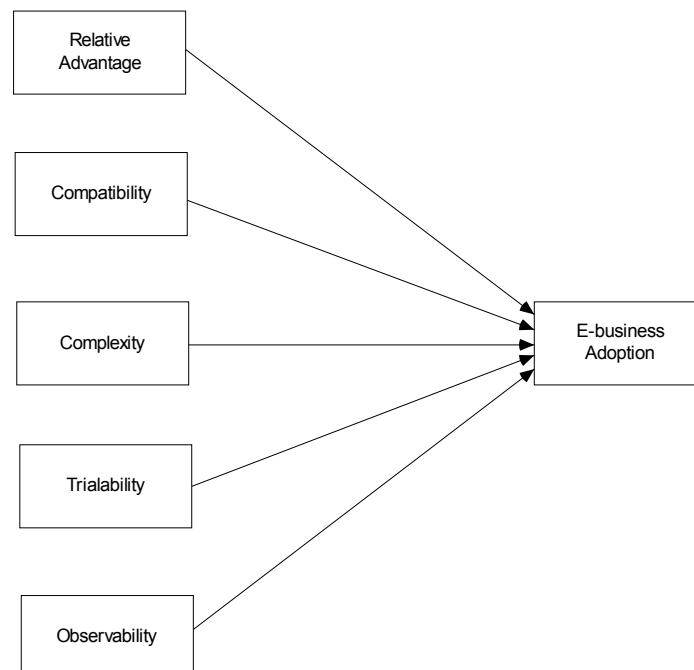
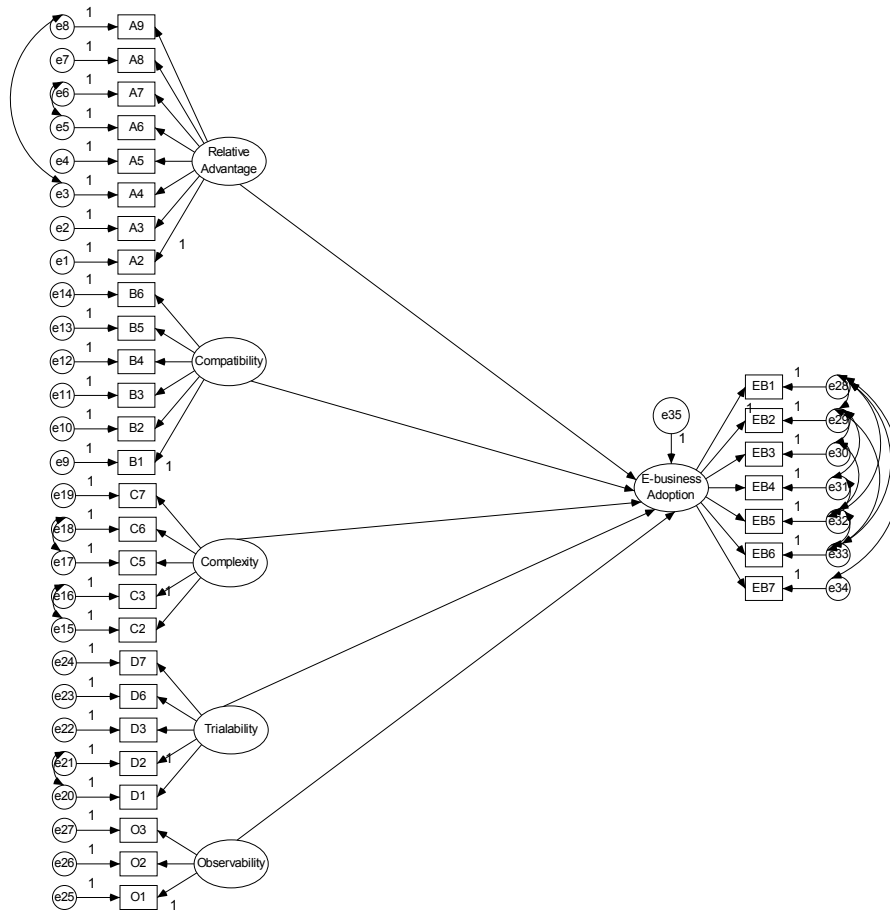Figure 1: The schematic diagram of the model

Figure 2: The conversion of the schematic diagram into AMOS graphic

A.   Hypothesis development

This study has put forward five hypotheses to be examined empirically:

H_1:   Relative advantage has a positive and direct influence on e-business adoption
H_2:   Compatibility has a positive and direct influence on e-business adoption
H_3:   Complexity has a positive and direct influence on e-business adoption
H_4:   Trialability has a positive and direct influence on e-business adoption
H_5:   Observability has a positive and direct influence on e-business adoption

B.   Population and sample

The population of businesses in Kuala Terengganu and Kemaman registered under Companies Commission of Malaysia as for the year 2010 is 101,405. The numbers of samples taken were 337. This procedure is in accordance with the rule of thumb developed by Roscoe (1975) as cited by Sekaran (2003) which stated that sample sizes larger than 30 and less than 500 are appropriate for most research.

The sampling method used was cluster sampling. According to Zikmund (2003), cluster sampling is classified as a probability sampling technique either because of the random selection of clusters or because of the random selection of elements within each cluster.

Out of seven districts in Terengganu, the former approach was utilized for this study that ended up with Kuala Terengganu and Kemaman as cluster 1 and cluster 2 respectively. Moreover, the similar characteristic between these two districts is that both of them are categorized as developed districts in the state of Terengganu. According to Norehan Muslim (personal communication, December 23, 2008), Town and Regional Planning Officer in Terengganu, Kuala Terengganu is categorized as a developed district due to its functions as the state government administrative and tourism centre, whereas Kemaman is the centre for oil and gas industry as well as it is geographically located nearby Kuantan, Pahang.

Sampling for only 2 clusters by considering the time and cost constraints were considered appropriate since it was an exploratory study. Therefore, the specific district of each cluster was randomly chosen and the elements in each selected district were drawn by researchers' own judgment as below:

> Cluster 1: 169 samples
> Cluster 2: 168 samples

C.   Data Collection Method and Instrumentation

Given the choice of collecting the information, the survey procedure through personally administered questionnaires was heavily used and monitored in motivating the sample to respond. The questionnaire was adapted from a previous study done by Syed Shah Alam, Ali Khatibi, Mohd. Ismail Sayyed Ahmad and Hishamuddin Ismail (2007). It consists of three sections namely; Section I: Demographic Profile, Section II: E-business Adoption and Section III: Perceptions of E-business Adoption.

Section II that covered the endogenous latent construct (e-business adoption) employed the itemized rating scale that tapped to 5-point with anchors; current user, within 1 year, more than 1 year but less than 3 years, more than 3 years but less than 5 years, 5 years and above. Section III which covered the exogenous latent constructs employed the Likert scale that examine how strong the subjects agree or disagree with particular statements on a 5-point scale with anchors ranging from 1 (strongly disagree) to 5 (strongly agree).

The personally administered questionnaire was utilized by distributing 337 sets of questionnaires as a mean of collecting data. Four fieldworkers were assigned in getting the data in a one-month fieldwork activity.

The 337 dataset were coded and saved into SPSS Statistics version 17.0 and analyzed using AMOS version 17.0. The data were carefully examined for blank responses. The blank responses or the missing cases were treated by assigning the midpoint in the scale as the response to that particular item. This method is considered to be viable by Sekaran (2003). Next, inspection of Mahalanobis distance (D2) was conducted to identify outlier cases. Outlier result shows that all dataset were remained due to D2 values are lesser than χ2 value. Apart from that, skewness scores are within the range of -1.0 to +1.0. Thus, each item is considered to be normal data (Coakes and Steed, 2007). Subsequently, several statistical validity tests were then conducted such as descriptive analysis, reliability test, confirmatory factor analysis (CFA) for construct convergent validity, discriminant validity for multicollinearity treatment and correlation. Finally, Structural Equation Modeling (SEM) analysis using AMOS 17.0 was conducted.

RESULTS AND FINDINGS

A. Frequency Distribution
Table 2 indicates that most of the respondents involved in service related sector which were 81.1% in Kuala Terengganu and 81.5% in Kemaman. This clearly shows that out of 337 respondents, only 63 involved in manufacturing related business.

TABLE 2
BACKGROUND OF BUSINESS

District	Sector		Total
	Manufacturing	Service	
Kuala Terengganu	32	137	169
	18.9%	81.1%	100.0%
Kemaman	31	137	168
	18.5%	81.5%	100.0%
Total	63	274	337
	18.7%	81.3%	100.0%

Table 3 represents the ownership of the businesses for both districts. Sole-proprietorship dominated the types of ownership with 103 and 109 respondents from Kuala Terengganu and Kemaman respectively.

TABLE 3
BUSINESS OWNERSHIP

District	Ownership		Total
	Sole-proprietorship	Company	
Kuala Terengganu	103	66	169
	60.9%	39.1%	100.0%
Kemaman	109	59	168
	64.9%	35.1%	100.0%
Total	212	125	337
	62.9%	37.1%	100.0%

B. Confirmatory Factor Analysis and Reliability Analysis

In this study, the cut-off point chosen for significant factor loading is 0.60. After removing the items having a factor loading lower than 0.60, Cronbach's Alpha reliability of all the multiple-item scales, convergent validity and discriminant validity were analyzed. The measurement properties are reported in Table 4. Reliabilities in the measurement model ranged from 0.730 to 0.946 (see Table 4), above the recommended cut-off of 0.70 (Nunnally and Bernstein, 1994). Convergent validity was assessed in terms of factor loadings and it requires a factor loading greater than 0.50 (Hair, Black, Babin, Anderson and Tatham, 2006). As shown in Table 4, all remained items had factor loadings higher than 0.60 except for O3. Even though the loading is 0.55, O3 is retained as the construct only has three measurement items.

TABLE 4
RELIABILITY AND FACTOR LOADINGS

Constructs / Measurement Items	Standardized Loadings	Cronbach's Alpha	Initial Number of Items	Items Remained
Relative Advantage		0.904	9	8
A2	0.79			
A3	0.79			
A4	0.82			
A5	0.64			
A6	0.76			
A7	0.73			
A8	0.66			
A9	0.72			
Compatibility		0.874	7	6
B1	0.70			
B2	0.77			
B3	0.78			
B4	0.81			
B5	0.75			
B6	0.60			
Complexity		0.827	9	5
C2	0.64			
C3	0.65			
C5	0.65			
C6	0.70			
C7	0.72			
Trialability		0.832	7	5
D1	0.62			
D2	0.67			
D3	0.76			
D6	0.62			
D7	0.78			
Observability		0.730	3	3
O1	0.69			
O2	0.83			

O3	0.55			
E-business Adoption		0.946	7	7
EB1	0.77			
EB2	0.77			
EB3	0.86			
EB4	0.85			
EB5	0.92			
EB6	0.89			
EB7	0.85			

Discriminant validity was assessed by examining the correlation between the factors which should not be greater than 0.85 (Kline, 2005). The correlation between two exogenous constructs higher than 0.85 shows lack of discriminant validity. As for this study, all constructs have discriminant validity with low strength of correlations, ranging from 0.04 to 0.70. Therefore, the researcher needs to apply constraints on these constructs in order to remedy the effects of multicollinearity (Zainudin Awang, 2011) as in Figure 3.
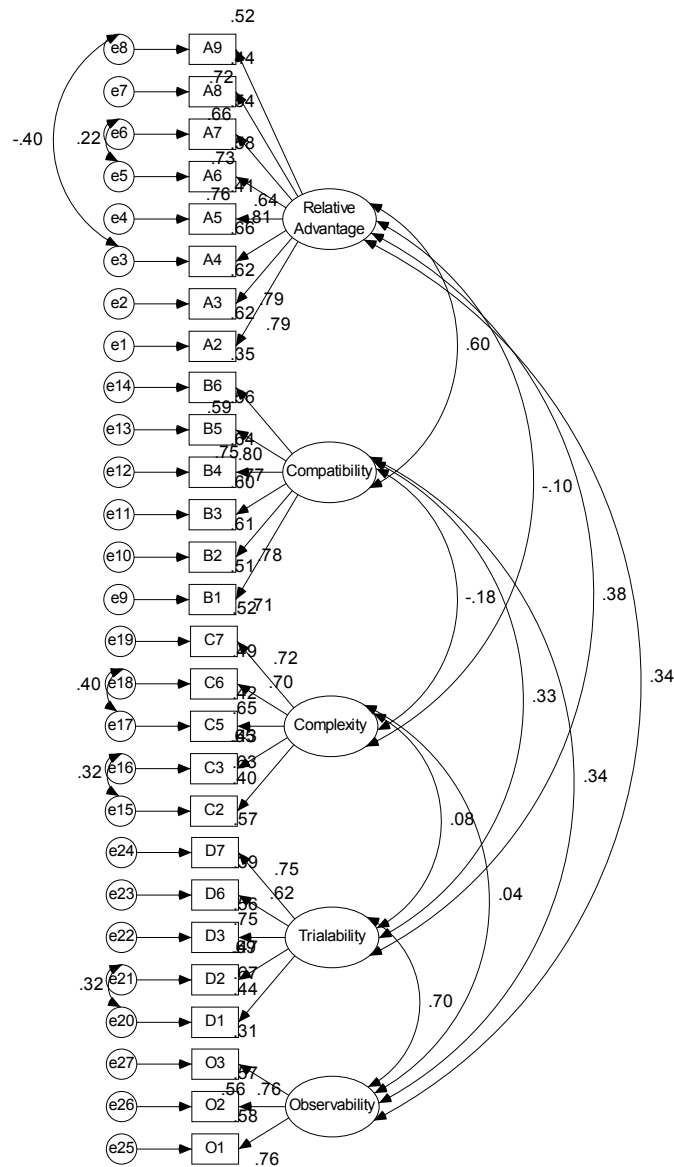
Figure 3: The measurement model shows how the constraints are drawn in AMOS

C. Goodness of Fit Indices

All confirmatory factor analysis (CFAs) of constructs, except for observability, produced relatively good fit as indicated by the goodness of fit indices such as Goodness of Fit Index (GFI) of more than 0.90 and Root Mean Square Error of Approximation (RMSEA) values of less than 0.08 (Hair, Black, Babin, Anderson and Tatham 2006; Bagozzi and Yi, 1988). Even though the RMSEA value for observability is above 0.08, the GFI is already 1.00. This problem led the researcher to use the Baseline Comparison Indices for the construct. As a result, all fitness indexes namely the Normal Fit Index (NFI), Incremental Fit Index (IFI) and the Comparative Fit Index (CFI) are above 0.90 which indicate that the model employed in the study is a good fit to the data (Bentler and Bonet, 1980; Bollen, 1989). Thus, the measurement model for construct observability is validated and

accepted. Table 5 shows the goodness of fit of the measurement model whereas Table 6 presents the Baseline Comparison Indices for observability.

TABLE 5
GOODNESS OF FIT ANALYSIS OF THE MEASUREMENT MODEL

Constructs	GFI	RMSEA
Relative Advantage	0.957	0.081
Compatibility	0.978	0.064
Complexity	0.997	0.000
Trialability	0.992	0.045
Observability	1.000	0.470
E-business Adoption	0.994	0.050

TABLE 6
THE BASELINE COMPARISON INDICES FOR CONSTRUCT OBSERVABILITY

Model	NFI Delta1	IFI Delta2	CFI
Default model	1.000	1.000	1.000

Consequently, the goodness of fit indices for the hypothesized structural model was done and the results are shown in Table 7.

TABLE 7
GOODNESS OF FIT ANALYSIS OF THE HYPOTHESIZED STRUCTURAL MODEL

Goodness of Fit Indicators	Hypothesized Structural Model
GFI (Goodness of Fit Index)	0.884
NFI (Normal Fit Index)	0.893
RFI (Relative Fit Index)	0.879
IFI (Incremental Fit Index)	0.960
TLI (Tucker Lewis Index)	0.954
CFI (Comparative Fit Index)	0.959
RMSEA (Root Mean Square Error of Approximation)	0.040

Chi-square (χ2)	763.529
Degrees of freedom	497
Probability level	0.000

From Table 7, all fitness indices are close to one and the RMSEA value is 0.040. Therefore, the hypothesized structural model for this study is validated and accepted. Figure 4 shows the hypothesized structural model of the study.
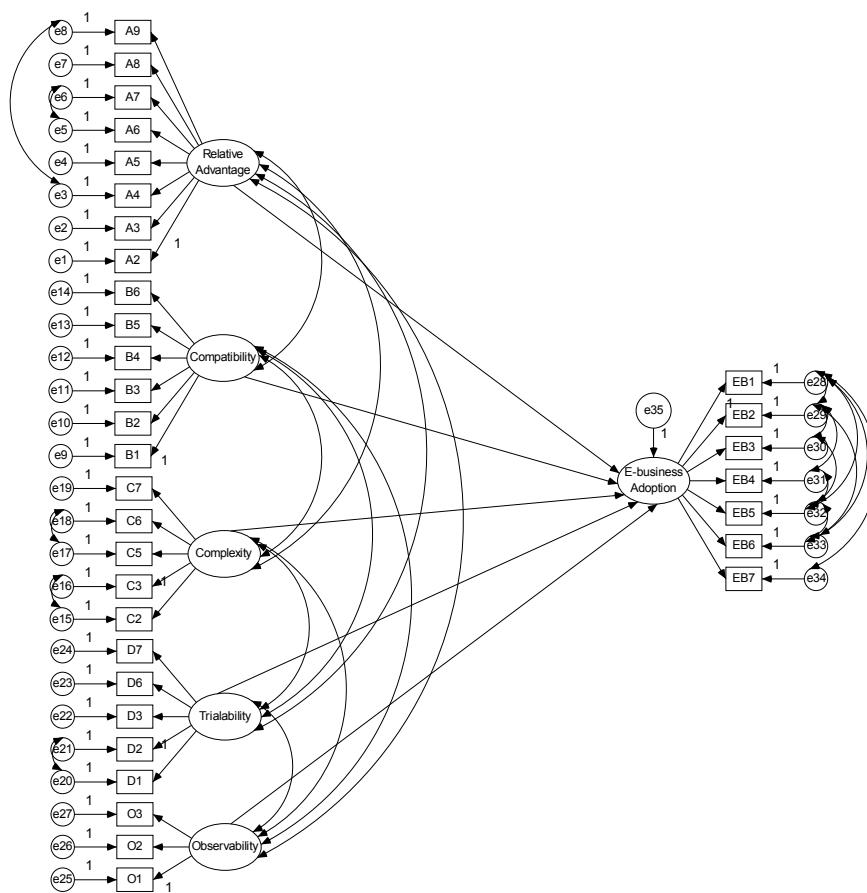

Figure 4: The hypothesized structural model in AMOS

D. Structural Equation Modeling (SEM)
The test of structural model was performed by using SEM. The test of the structural model includes estimating the path coefficients, which indicate the strengths of the relationships between the exogenous constructs and the endogenous construct and the R-square value, which represents the amount of variance explained by the exogenous construct (predictors). The path coefficients in the SEM model represent the unstandardized regression coefficients. The structural model reflecting the assumed linear, causal relationships among the constructs was tested with the data collected from

the validated measures. Figure 5 shows the results of the analysis. Properties of the causal paths (unstandardized path coefficients (β), standard error of regression weight, probability values and hypotheses result) are shown in Table 8 and 9 respectively.
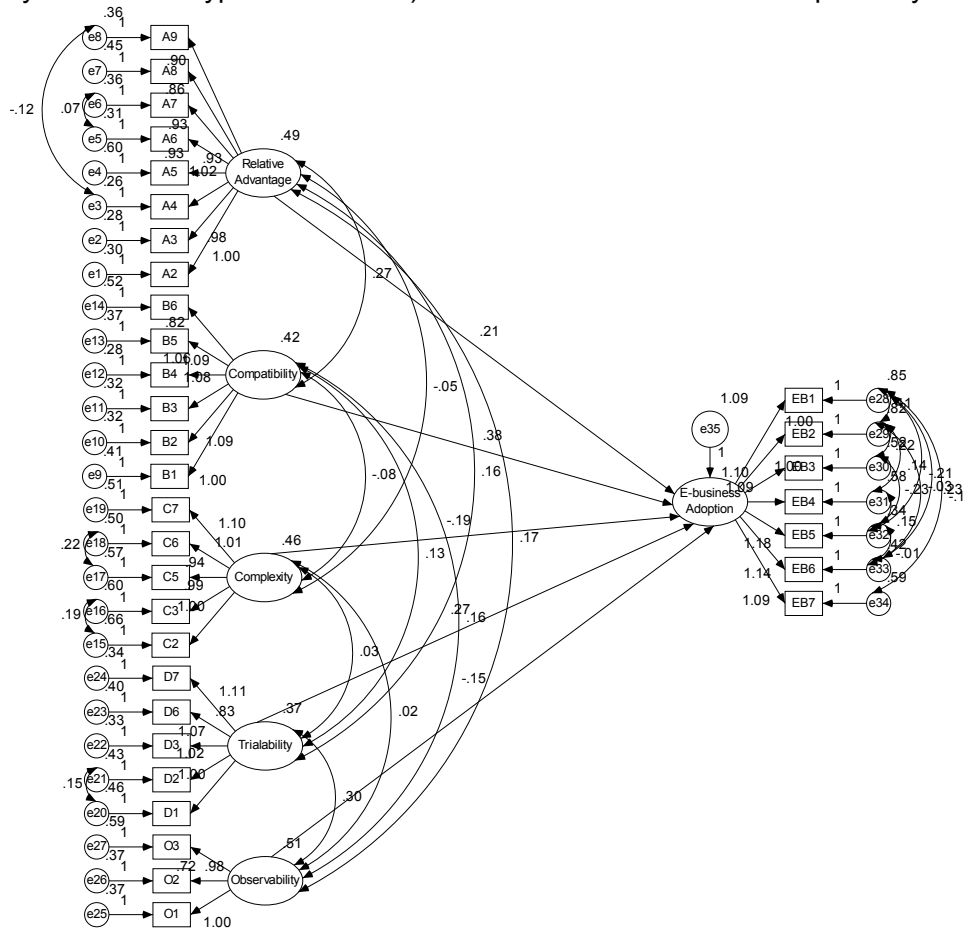

Figure 5: The structural equation modelling results

TABLE 8
THE UNSTANDARDIZED REGRESSION WEIGHTS AND THE CORRESPONDING
PROBABILITY VALUES

Construct	Path	Construct	Unstandardized Path Coefficients (β)	Standard Error of Regression Weight	Probability	Hypothesis Result
E-business Adoption	<---	Relative Advantage	0.210	0.119	0.077	Fail to reject H$_o$ at α = 0.05
E-business	**<---**	**Compatibility**	**0.384**	**0.133**	**0.004**	**Reject H$_o$ at α = 0.01**

Adoption						
E-business Adoption	<---	Complexity	-0.193	0.102	0.059	Fail to reject H_o at $\alpha = 0.05$
E-business Adoption	<---	Trialability	0.271	0.181	0.135	Fail to reject H_o at $\alpha = 0.05$
E-business Adoption	<---	Observability	-0.149	0.154	0.335	Fail to reject H_o at $\alpha = 0.05$

TABLE 9
THE RESULT OF HYPOTHESIS TESTING

Hypothesis	Hypothesis Statement	Result
H_1	Relative advantage has a positive and direct influence on e-business adoption.	Not supported
H_2	**Compatibility has a positive and direct influence on e-business adoption.**	**Supported**
H_3	Complexity has a positive and direct influence on e-business adoption.	Not supported
H_4	Trialability has a positive and direct influence on e-business adoption.	Not supported
H_5	Observability has a positive and direct influence on e-business adoption.	Not supported

Table 10 indicates that the five exogenous constructs (relative advantage, compatibility, complexity, trialability and observability) jointly explained 14.7% variance in e-business adoption.

TABLE 10
SQUARED MULTIPLE CORRELATION RESULTS

Endogenous Variable	Squared Multiple Correlation (SMC) = R^2
E-business Adoption	14.7%

DISCUSSION AND CONCLUSION

This study is concerned with an empirical investigation of factors that could affect e-business adoption in the state of Terengganu, Malaysia through applications of Innovation Diffusion Theory (IDT). The hypothesized structural model indicates that the IDT has accomplished model fit but supports only one direct path which is for a construct named compatibility.

As hypothesized in H_2, compatibility was found to have a positive and direct influence on e-business adoption. A large unstandardized coefficient, $\beta = 0.384$, as compared to other factors suggests its larger contribution in influencing the e-business adoption. This result was supported by several studies which adapted IDT (Malek and Nik Kamariah, 2011; Tanakinjal, Deans and Gray, 2010). On the other hand, relative advantage ($\beta = 0.210$; $p = 0.077$) and trialability ($\beta = 0.271$; $p = 0.135$) were found to have positive and no direct influence on e-business adoption, whereas, complexity ($\beta = -0.193$; $p = 0.059$) and observability ($\beta = -0.149$; $p = 0.335$) were reported to have negative and no direct influence on e-business adoption. Even though the results were of contrast to the researcher's expectation, several past studies were found to support this as the studies produced inconsistent results for relative advantage, complexity and trialability in terms of the significant effects (Malek and Nik Kamariah, 2011). As for observability, Tanakinjal, Deans and Gray (2010) stated that the original construct for observability was defined in a complex manner by Rogers (1983) and it was unclear whether observability refers to cost or compatibility (Tornatzky and Klein, 1982). Due to this, several past studies did not include observability as one of the predictors in adopting an innovation (Malek and Nik Kamariah, 2011; Tanakinjal et. al., 2010; Slyke, 2005).

It is essential to note that the strength of predictors in explaining the variance in e-business adoption is only 14.7%. Due to this, it is recommended for future researchers to extend the study for the same population by adapting IDT with other underpinning theories such as Technology Acceptance Model (TAM) or Theory of Planned Behavior (TPB). Several studies adopted this approach. Malek and Nik Kamariah (2011) combined four constructs of IDT (relative advantage, compatibility, complexity and trialability) with two other constructs which are perceived trust and awareness. Apart from that, Tanakinjal, Deans and Gray (2010) chose to adapt relative advantage, compatibility, complexity and trialability with trustworthiness and perceived risk in their study.

Compatibility is the only significant predictor which influences the e-business adoption in this study. Therefore, software technology makers and vendors must focus on producing software that can be easily integrated and compatible with the companies' legacy systems. Easy integration is the key to determine whether a company will adopt the new technology or vice versa. As for the remaining constructs, they are not the significant predictors in this study. This is due to the fact that the nature of the population itself, which were SMEs, might influence the result of the study. Moreover, it is acceptable that the definition of SMEs is dynamic due to SMEs are not a homogeneous set of businesses. They vary significantly by size, age, sector, motivation, mode of organization, ethnic background, location, knowledge base, power and control of resources, innovative capacity and so on (Taylor and Murphy, 2004). In spite of that, the attitude of the respondents at the time of answering the questionnaire reflected their e-

business adoption level. In this case, respondents who were not concern on adopting e-business might further influence the result. As a recommendation, a detailed descriptive research should be done in order to assess the adoption level of the respondents before identifying the predictors of the e-business adoption.

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