

An Empirical Study on the Internet Usage among Young Creative Entrepreneurs in Malaysia: A Structural Equation Modelling Approach

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Abstract

The present study seeks to examine empirically the antecedents of internet intention and adoption of young creative entrepreneur by applying the conceptual theory of technology acceptance model (TAM). There were 237 respondents indicated as young entrepreneur in the creative industries in Malaysia. A close ended questionnaire was designed to tap into the owner's perception on perceived usefulness of the internet, perceived ease of use of the internet, and perceived credibility on the internet technology, intention to use the latest technology and adoption of the current internet for the business itself. Seven hypothesised relationships were tested in the structural model of internet adoption. Structural Equation Modelling (SEM) using AMOS 24.00 was conducted to establish and validate a hypothesised model. The data was analysed using path analysis of structural equation modelling (SEM) to test the causal and mediating effects amongst exogenous and endogenous variables. Based on the analysis and goodness of model fit, the hypothesised model and its findings supported the TAM theory extremely and all the hypothesised paths were asserted. The generated model found three significant positive and direct paths between perceived usefulness, perceived credibility and intention as well as between intention and adoption. The re-specified model produces two significant positive and direct significant paths (perceived usefulness to intention and intention to adoption) and also introduces three new paths (direct paths from perceived usefulness, perceived ease of use and perceived credibility to adoption). The fundamental of internet adoption models also manage to establish a mediating effects of intention on the said relationships between exogenous and endogenous of internet adoption among young creative entrepreneur. The finding is discussed in the context of entrepreneur intention and adoption of the internet in Malaysia.

Keywords: Young Creative Entrepreneur (YCE), Structural Equation Modelling (SEM), Internet Intention, Internet Adoption.

Introduction

Creative industries are becoming increasingly important components of modern post-industrial knowledge-based economies. They are thought to account for higher

than average growth and job creation, they are also vehicles of cultural to identity that play an important role in fostering cultural diversity. During the last decade, a number of governments around the world have recognised this fact and started to develop specific policies to promote these industries to the youth generations. This mainstreaming of the sector has led to a growing body of analysis, statistics and mapping exercises on the relationship between culture, creative industries and economic development to give officials the raw data they need to make a policy regarding these issues. However, the sector is still poorly understood and many governments need to be convinced of its potential, while trying to accurately measure economic activity in the sector poses considerable obstacles.

In Malaysia, the level of youth engagement in self-employment or entrepreneurship is not as high as one would imagine and expect. Nonetheless, youth entrepreneurial efforts are lauded by the government and society, especially in these current times of economic crisis. Prominent governmental actors such as the Ministry of Youth and Sports Malaysia and The Institute of Youth Development Research Malaysia (*Institute Penyelidikan Pembangunan Belia Malaysia/IPPBM*) organise various programmes, training, research and other activities pertaining to youth development, for example entrepreneurship. The government also organises entrepreneurship programme in schools, public universities and through various public youth organisations aim to cultivate entrepreneurship potentials among the young people (Ninth Malaysia Plan, 2006). About RM5.4 billion has been allocated in the Ninth Malaysia Plan (RMK 9) by the government for youth development through various youth skills training and leadership (Ninth Malaysia Plan, 2006).

Besides, the creative industries sector is fragmented in that it comprises a large number of small enterprises and a small number of large enterprises. Therefore, the characteristics of small enterprises apply to the creative sector are highly. Many people working within the creative industries are self-employed and work as a part-time sometimes in addition to full time salaried occupations and many are driven by quality of life imperatives. Therefore, their dedication to business management is low and they often lack time for business processes knowledge. There is also a strong sense that the creative industries are very much rooted at the local level, that they have a sense of place and that localities are important in fostering enterprise and synergies and in facilitating mutually supportive partnerships and networks (Jones *et al.*, 2004). Not only can this type of new education match the demands of the market and creative graduates, but also it can be a new direction in the development of entrepreneurship education (Rae, 2012).

Young creative entrepreneurs have been increasing rapidly in Malaysia. For the IT and ICT related YCEs, the challenge for survival is even greater. Much of the reasons for survival of YCE in this millennium depend on how information technology (IT) has been used in the daily operations of the YCE. Information communication technology (ICT) is something that must be learnt and practiced by YCE in order to be successful. IT literate YCEs owners are needed, especially in the usage of the internet for business enhancement. The numbers of internet users in Malaysia has increased tremendously in recent years. It has been indicated that there is almost 15 million users of internet in 2016, an increase of three folds as compared to internet users in the 2016 (www.internetworldstats.com). This could mean that there is a vast potential of internet marketing of products and services for the YCE in Malaysia alone. However, the scant empirical study and literature on YCE involvement in internet marketing and the like has impetus this study as deem necessary. With that in mind this study attempts to examine the empirical relationships between technology usage perception and credibility with internet adoption. Additionally, this study also investigates the mediating effect of intention on those relationships as hypothesised (Figure 1).

Literature Review

Technology acceptance model (Davies 1989) or TAM as it is commonly known, was adapted from the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and theory of planned behaviour (Ajzen, 1985; Ajzen, 1991). TAM proposes specifically to explain the determinants of information technology end-user's behaviour towards information technology (Saade, Nebebe & Tan, 2007). In TAM, Davis (1989) proposes that the influence of external variables on intention is mediated by perceived ease of use (PEU) and perceived usefulness (PU). TAM also suggests that intention is directly related to actual usage behaviour (Davis, Bagozzi & Warshaw, 1989). Trust and perceived risks have also been examined in TAM previous studies but have shown mixed findings (Kim et al. 2001; Liao et al, 1999; and Pavlou, 2001). Perceived credibility is the first dimension of trust and will be used interchangeably as defined by Lindsfold, (1978). Behavioural intentions may be defined as a measure of the strength of one's intention to perform a specific behaviour such as the use of an information system (IS) (Fishbein & Ajzen, 1975). In general, prior research has suggested a positive impact or influence between experience with computing technology and a variety of outcomes such as an affect towards computers and computer usage (Levin and Gordon, 1989; Harrison and Rainer, 1992; Agarwal and Prasad, 1999).

Perceived Usefulness and Intention

Perceived usefulness is defined as the extent to which a person believes that using a particular system will enhance his or her job performance. There has been extensive research in the information systems (IS) community that provides evidence of the significant effect of perceived usefulness on usage intention (Petty, Cacioppo & Schumann, 1983; Taylor & Todd, 1995; Venkatesh & Davis, 2000). Davis's (1989) found that perceived usefulness has a stronger influence on usage. Davis's study shows that users are driven to adopt a technology primarily because of the functions it provides them, and secondarily because of the easiness of benefiting from those functions. Customers are often willing to overlook some difficulties of usage if the service provides critically needed functions.

Perceived Ease of Use and Intention

Extensive research over the past decade provides evidence of the significant effect of perceived ease of use on usage intention, either directly or indirectly through its effect on perceived usefulness (Agarwal and Prasad, 1999; Davis et al., 1989; Hu et al., 1999; Jackson et al., 1997; Venkatesh, 1999, 2000; Venkatesh and Davis, 1996, 2000; Venkatesh and Morris, 2000). In order to prevent the "under-used" useful system problem, information systems need to be both easy to learn and easy to use. If the system was easy to use, it will be less threatening to the individual (Moon and Kim, 2001). This implies that perceived ease of use is expected to have a positive influence on users' perception of credibility and intention of using internet banking systems.

Perceived Credibility and Intention

Perceived credibility of the internet banking will also contribute to the increase in usage of internet banking. Perceived credibility is defined as to which one partner believes that the other partner has the required expertise to perform the job effectively and reliably (Ganesan, 1994). This is to say that trust based on a partner's expertise and reliability focuses on the objective credibility of an exchange partner, i.e. expectancy that the word or written statement of the partner can be relied on (Lindsfold, 1978). According to Morgan and Hunt (1994), confidence stems in a part from the belief that the trustworthy party is reliable and has high integrity. An effective customer-company relationship requires trust (Morgan and Hunt, 1994), and for the company, such relationships are crucial to managing trust, because a customer typically must buy a service before experiencing it (Berry & Parasuraman,

1986). The importance of including trust has been pointed out by Polatoglu and Ekin (2001) in their qualitative study, and also by Kardaras and Papathanassiou (2001), who researched corporate customers. Perceived credibility also refers to two important dimensions which are security and privacy. Security is defined as the protection of information or systems from unsanctioned intrusions or outflows, while privacy is the protection of various types of data that are collected (with or without the knowledge of the users) during users' interactions with the internet (Hoffman et al., 1999).

Intention and Adoption of IT

Intention is an indication of a person's readiness to perform a given behaviour, and it is considered to be the immediate antecedent of behaviour (Salim, et al., 2017). Adoption or behaviour is the manifest, observable response in a given situation with respect to a given target. Single behavioural observations can be aggregated across contexts and times to produce a more broadly representative measure of behaviour. In practice, intentions and perceptions of behavioural control are often found to have main effects on behaviour, but no significant interaction. Several studies have found significant relationship between intention and IT adoption (Limayem et al., 2000; Lin 2007).

Methodology

Based on the theory of TAM, research framework (Figure 1) consisting of three exogenous variables were hypothesised to have a direct influence on intention to use information technology (IT). Intention is then hypothesized to have a direct impact on adoption of internet technology. Intention is also assumed to be a mediator between the three exogenous and internet adoption (endogenous). Young creative entrepreneurs (YCE) who operated their businesses in an eastern state of Malaysia were the main respondents. A total of 305 owners from various products were requested to complete a questionnaire that contained measures of the constructs of concern. The questionnaires were distributed to the respondents by using simple random sampling method. Out of the desired sample size of 305, 245 were returned. This gives a response rate of 80.32%. As such, the response rate for this study is adequate for structural equation modelling (SEM) analysis, whereby after outliers' deletion, 237 questionnaires were subsequently used for analysis (Rengiah & Sentosa, 2017). A total of 31 observed variables made up the measurement of exogenous independent variables such as perceived usefulness (6 items), perceived ease of use (6 items), perceived credibility (8 items), internet intention (5 items) and internet adoption (8 items) adapted and modified from Wang et al., (2003). The scaling used in this research is the 7-point Likert scale of 1-strongly disagree, 2-disagree, 3-slightly disagree, 4-neutral, 5- slightly agree, 6-agree and 7-strongly agree. The demographic variables asked are gender, race, age, education and monthly income of the respondent.

Results and Discussion

From the confirmatory factor analysis result in Table 1, we observed that the factor loadings of all observed variables or items are adequate ranging from 0.392 to 0.873. The factor loadings or regression estimates of latent to observed variable should be above 0.50 (Rengiah and Sentosa, 2015; Hair et al., 2006). This indicates that most of the constructs conform to the convergent validity test. The remaining numbers of items for each construct are as follows: Perceived Usefulness (4 items), Perceived ease of use (5 items), perceived credibility (5 items), and internet intention (5 items), and internet adoption (6 items).

Table 1. Confirmatory factor analysis results of construct variables.

Variable	Code	Measurements	Std. Regression Weight
Perceived Usefulness (4 items)	PU2	Using internet would improve my job performance	0.723
	PU3	Using internet would increase my productivity	0.873
	PU4	Using internet would enhance my effectiveness on the job	0.754
	PU5	Using internet would make it easier to do my job	0.756
Perceived Ease of Use (5 items)	EOU2	I would find it easy to use internet to obtain decision-making information	0.764
	EOU3		0.787
	EOU4	My interaction with the internet was clear and understandable	0.763
	EOU5	I found the internet to be flexible to interact with	0.788
	EOU6	It would be easy for me to become skilful at using internet. I found the internet easy to use	0.785
Perceived Credibility (5 items)	CRE1	Internet has privacy	0.467
	CRE2	I feel confident in my activities with internet	0.511
	CRE3	When using internet, I am sure that certain managerial and technical procedures exist to secure all the data on this system	0.727
	CRE4	Internet has a good security system	0.525
	CRE6	When using internet, I am sure of the consistency of information processing on this system.	0.392
Internet Intention (5 items)	INT1	I think it would be very good to use the Internet for my company activities in addition to traditional methods	0.495
	INT2	In my opinion it would be very desirable to use the Internet for my company activities in addition to traditional methods	0.425
	INT3	It would be much better for me to use the Internet for my company activities in addition to traditional methods	0.506
	INT4	Using the Internet for my company activities is a good idea	0.422
	INT5	Overall, I like using the Internet for my company activities	0.588
Internet Adoption (6 items)	IA1	The internet now day is prominent strategy	0.795
	IA2	The internet is safe	0.650
	IA3	The internet saving cost and time	0.686
	IA4	The internet applications supporting the company business processes	0.824
	IA5	How much would you say your profit/earn of your business through internet each month?	0.793
	IA6	I have been using internet.	0.495
TOTAL		25 Items	

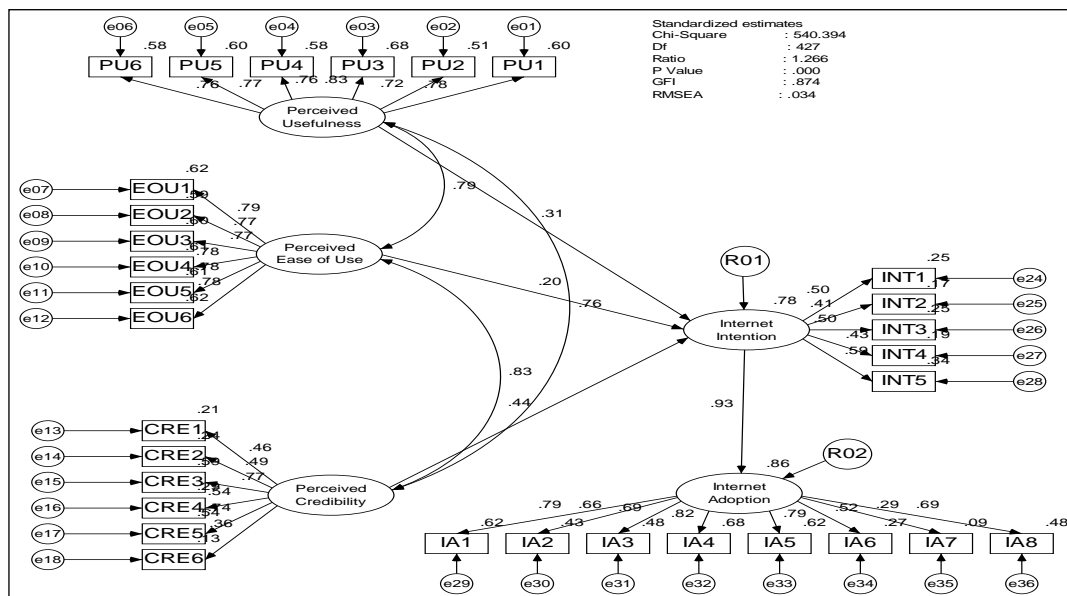


Figure 1. Hypothesized model.

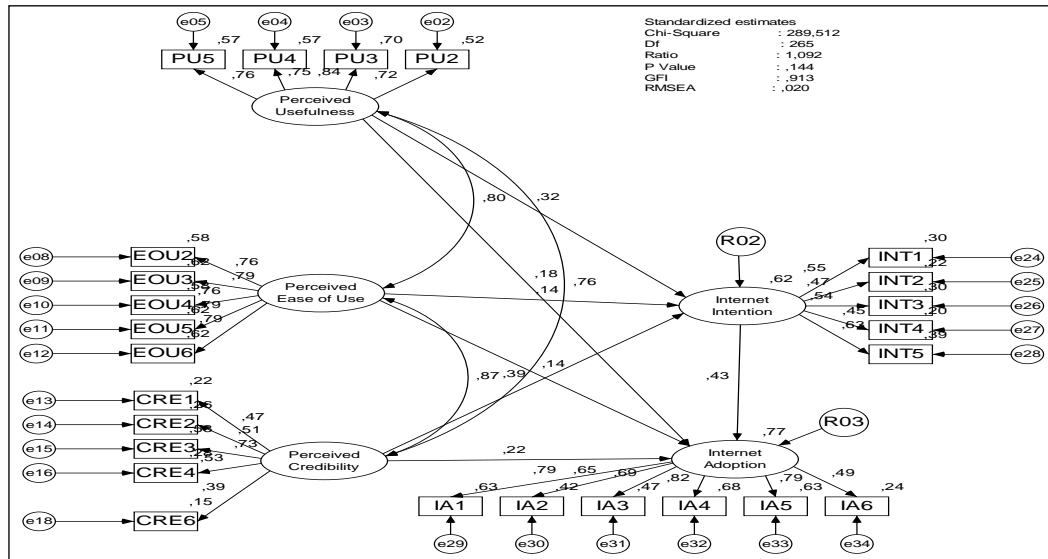


Figure 2. Re-specified model.

Direct influences of the exogenous to the respective endogenous variables of the two structural models are shown in Table 1, Figure 1 and Figure 2. Based on Standardized Beta estimates and critical ration ($CR=t$ -values) values of >1.96 , H1, H3 and H4 are asserted in all generated and re-specified models. Therefore H1: Perceived usefulness is significantly and positively related to intention; H3: Perceived credibility is significantly and positively related to intention and H4: Intention is significantly and positively related to internet adoption. Only H2 is not significantly related, thus it fails to be asserted i.e. perceived ease of use is insignificantly but positively related to intention. In the re-specified model, we also found three new paths as suggested by modification index results. These three new paths are assigned as H1a, H2a & H3a respectively as in Table 10b. However, these three paths do not show any significant impact on internet adoption. Thus, H1a, H2a and H3a are not supported.

This study attempts to examine the empirical relationships between technology usage perception and credibility with internet adoption among YCE. Additionally, this study also investigates the mediating effect of intention on those relationships as hypothesized based on the conceptual underpinning of Technology Acceptance Model (TAM) (Salim, et al., 2017). The finding indicates that perceived usefulness is significantly and positively related to internet intention. Besides Davis's (1989), extensive research in the information systems (IS) community provides evidence of the significant effect of perceived usefulness on internet intention (Petty, Cacioppo & Schumann, 1983; Taylor & Todd, 1995; Venkatesh & Davis, 2000). This implies that YCE have the intention to use internet for increasing their productivity, enhancing effectiveness and improving the YCE business. Perceived credibility is also found to be significantly and positively related to intention. This finding is supported by previous studies (Kardaras & Papathanassiou, 2001; Polatoglu and Ekin (2001). Those YCE owners who feel that the internet has high security, privacy and trustworthiness of information would definitely have high intention of using the internet. Lastly, intention is found to be significantly and positively related to internet adoption. Previous studies have found similar findings (Limayem et al., 2000; Lin 2007).

Direct path from intention to adoption is the most consistent finding across all models thus, it can be deduced that those YCEs who have the intention to use internet would definitely adopt the internet in the future (Figure 8). The present study found perceived ease of use is insignificantly but positively related to

intention. Polatoglu and Ekin (2001) found similar insignificant relationship between perceived ease of use and intention. They argue that ease of use may not be used if it is not perceived as useful, thus we conclude that the perceived usefulness of internet intention of YCE is the key construct for adoption among entrepreneurs (as we found above). Contrastingly, numerous researches had found positive and significant linkages (Agarwal and Prasad, 1999; Davis et al., 1989; Hu et al., 1999; Jackson et al., 1997; Venkatesh, 1999, 2000; Venkatesh and Davis, 1996, 2000; Venkatesh and Morris, 2000; Moon & Kim, 2001). The probable reason for this difference could be that most of the YCE still find internet technology difficult to understand. Most likely, the YCE need to have more training and exposure to internet knowledge to improve this situation.

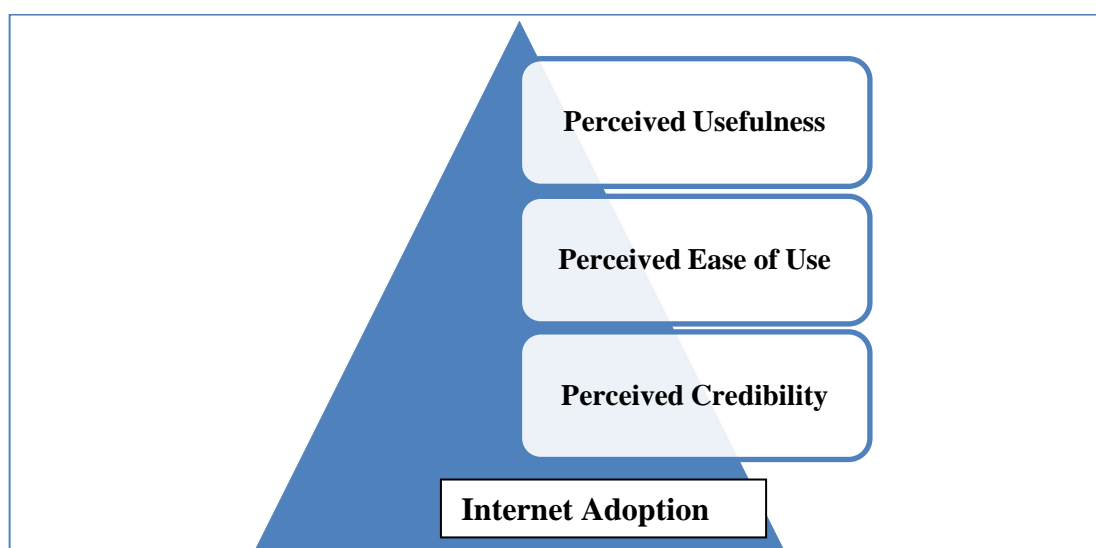


Figure 3. Internet adoption model of Young Creative Entrepreneurs (YCE).

This study also found partial mediating effects of intention on linkages between perceived usefulness, perceived credibility and perceived ease of use with internet adoption (Salim, et al., 2017). The additional findings on the new paths in the re-specified model support the presence of mediating effects for these relationships. Our findings found substantial partial mediating effect. This could imply that the adoption of internet may not be a direct process. More often than not, intention is profoundly necessary to enhance the relationship concerned (Figure 8).

Conclusions

This research investigates the predictors and mediating effects of intention on internet adoption amongst small and medium scale entrepreneurs using TAM conceptual underpinning theory. The findings support the TAM theory extremely well whereby, all the hypothesized paths were asserted. The generated model found three significant direct paths between perceived usefulness, perceived credibility and intention as well as between intention and adoption. The re-specified model produces two significant direct paths (perceived usefulness to intention and intention to adoption) and also introduces three new paths (direct paths from perceived usefulness, perceived ease of use and perceived credibility to adoption). The model also manage to establish partial mediating effects of intention on the said relationships between exogenous and internet adoption. Future research should investigate other underpinning TAM theory such as TAM2 (Venkatesh and Davis (2000) and extended TAM (Chiu, 2004). The importance of the YCE field cannot be denied and it is still very much under-researched especially in Asian countries. Similar cross-cultural and triangulation studies could be conducted in the future.

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