

## **An Attempt to Understand E-Marketing: An Information Technology Prospective**

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### **Abstract**

*This paper aims to identify the possible main factors that might have an impact on the adoption of E-Marketing by small business enterprises. It starts by reviewing the different theories of new technology adoption in the related literature such as the Technology Acceptance Model (TAM), the Innovation Diffusion Theory (IDT) and the Decomposed Theory of Planned Behaviour model (DTPB) to develop a better understanding of their influence and potential for marketing activities (namely, E-Marketing adoption) in SBEs. The overall aim is to identify the variables that might influence the adoption of Electronic Marketing by SBEs.*

### **1. Adoption of New Technology**

Unlike new technological innovation, which often appears to occur as a single event or jump, the adoption or diffusion of any technology into practice appears as a continuous and rather slow process (Hall and Khan, 2003, P:1). Because it combines fast changing technologies and new marketing requirements for each company, the understanding of this process can take some time, and may be seen from a number of different perspectives. However, there are a number of accepted theoretical frameworks that have been used by researchers to investigate the adoption and diffusion of information technology and new technologies by the business community. These frameworks provide reliable arguments that enable managers and practitioners, as well as the academic community, to gain a better understanding of the applications and potential of new Internet technologies so they can be used in a more effective way (Karahanna and Straub, 1999). Moreover, recent research into IT adoption and use has been motivated by the desire to predict factors, which can lead to successful application in a marketing context (Lynn et al., 2002; P: 35; Rose and Straub, 1998; P: 39). But E-Marketing is still a relatively new concept, particularly for SBEs that have limited resources and can ill afford to make unwise investments. Therefore, there is a need to have a much clearer understanding of E-Marketing problems as well as opportunities for SBEs, and how these technologies can be used to carry out the marketing processes in a more effective way than reliance on traditional practice (El-Gohary, 2009).

Although there are a lot of theories related to technology adoption, the most frequently applied theories by the research community are: the Davis (1989) Technology Acceptance Model (TAM), the Rogers (1995) Innovation Diffusion Theory (IDT) and the Decomposed Theory of Planned Behaviour model (DTPB) Looi, (2004). Consequently this study will review all three theories and then examine their potential for an analysis of E-Marketing practice. Because each theory has a different perspective of new technology, a combination of elements from each may provide a more robust model that may be of use for the analysis of E-Marketing in a small businesses context.

#### **1.1 The Technology Acceptance Model (TAM)**

The Technology Acceptance Model (TAM) is proposed by Davis (1989) to explain the acceptance, usage and adoption of information technology. When developing this model, Davis referred to the theory developed by Ajzen and Fishbein (1980) regarding the understanding of attitudes and the predicting of social behaviour (theory of reasoned action - TRA).

Davis (1989) used this theory about reasoned action (TRA) to show that beliefs influence attitudes which lead to intentions, and therefore generate behaviours. Moreover this belief–attitude–intention–behavioural relationship can predict user acceptance of IT (Lederer, et al 2000).

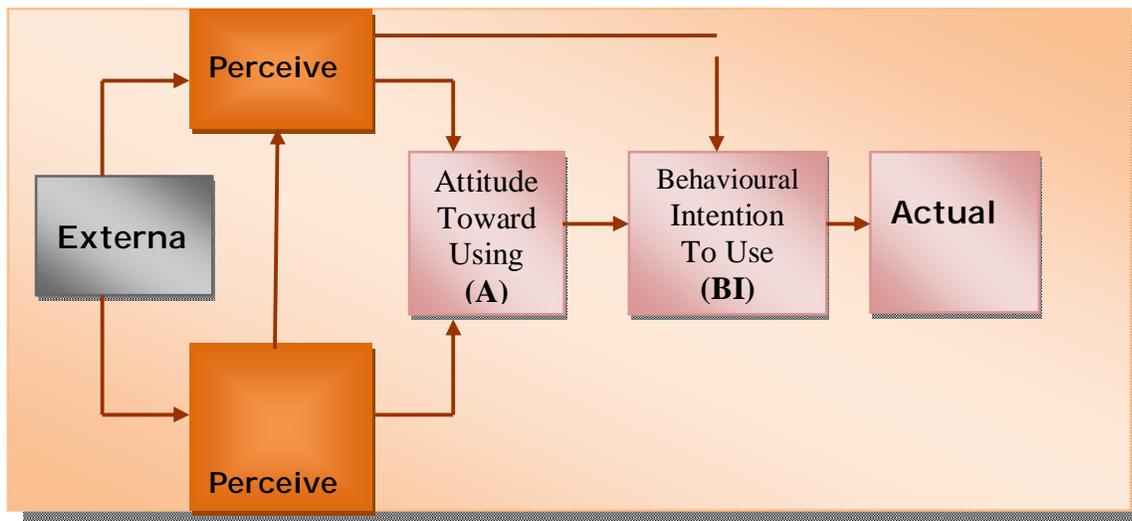
Based on that, according to Davis’s point of view, IT adoption is affected by prior use-related beliefs. When constructing his model, Davis depended on the following two beliefs to develop his model:-

- 1- **Perceived beliefs/usefulness (PU)** which is: “The degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989; P: 320)
- 2- **Perceived ease of use (PEOU)** which refer to: "The degree to which a person believes that using a particular system would be free of effort" (Davis, 1989; P: 320).

Although perceived usefulness and ease of use represent the main components of TAM, there is two other constructs in the model which are:

- 3- **Attitude towards the use of IT.**
- 4- **Behavioural intention to use.**

These four components will lead to the dependent variable of the model which is actual usage of IT, as illustrated in the following figure:-



**Figure 1: The Technology Acceptance Model (TAM)**  
 Source: Davis et al., (1989)

Research using the technology acceptance model has played an important role in understanding the acceptance, usage and adoption of information technology. Any review of the literature and scholarly research on Information Technology acceptance and usage will show that TAM has emerged as one of the most significant models in this stream of research. Thus it represents a sound theoretical contribution toward understanding the usage and acceptance behaviours of IT that may be applicable to the study about E-Marketing (El-Gohary, 2009).

Nevertheless, economic factors or outside influences (such as: suppliers, customers, social influence and competitors) are not specifically addressed in this model, nor the influence of personal control factors on behaviour (Looi, 2004). As a result, many researchers attempted to test the model. Within this respect, there are large numbers of studies that have tested the model since it was first presented in 1989. These studies had not only covered a number of different technologies and different aspects but also, while some of them tested all the model components, the rest tested only the two main components (perceived usefulness and perceived ease of use). These studies include: Looi (2004), Grandon and Pearson (2003), Dembla, Palvia and Krishnan (2007), Adams et al (1992), Bagozzi et al (1992), Chau 1996, Davis (1989), Davis et al (1989), Gefen and Straub (1997), Haynes and Thies (1991), Hendrickson and Collins (1996), Igarria et al (1995), Mathieson (1991), Morris and Dillon (1997), Straub et al (1995), Szajna (1996), Taylor and Todd (1995a), Taylor and Todd (1995b), Teo et al (1998), Thompson (1998) and Lederer (2000). The following table illustrates some examples of the different studies that have researched TAM in the last twenty years (El-Gohary, 2009).

**Table 1: Selective Number of Studies Researched the Technology Acceptance Model**

<i>N</i>	<i>Research area</i>	<i>Studies</i>
1	Mobile commerce	Khalifa and Shen (2008), Kamel and Hassan (2003), Wang, Wang, Lin and Tang (2003), Chan and Lu (2004)
2	Online applications and Internet	Lu, Hsu and Hsu (2005), Shih (2004), Devaraj, Fan and Kohli (2002), Gefen and Straub (1997), Lederer, Maupin, Sena, and Zhuang (2000), Spacey, Goulding and Murray (2004), Koufaris (2002), Wang and Benbasat (2005)
3	Online banking and financial services	Singer, Avery and Baradwaj (2008), McKechnie, Winklhofer and Ennew (2006), Pikkarainen, Pikkarainen, Karjaluoto and Pahlila (2004)
4	Information technology and systems	Kim and Malhotra (2005), Klopping, and McKinney (2004), Gong, Xu and Yu (2004), Lim (2003), Brown, Massey, Montoya-Weiss and Burkman (2002), Chau and Hu (2002), Gentry and Calantone (2000), Roberts and Henderson (2000), Agarwal and Prasad (1999), Chau and Hu (2001), Dishaw and Strong (1999), Riemenschneider, and Hardgrave (2001), Plouffe, Hulland, and Vandenbosch (2001), Venkatesh, Morris, Davis and Davis (2003), Venkatesh, Speier, and Morris (2002), Taylor and Todd (1995a), Taylor and Todd (1995b), Jackson, Chow and Leitch (1997), Chau (1996), Adams, Nelson and Todd (1992), Szajna (1994)
5	E-Marketing	Vijayarathy (2004), Gefen, Karahanna, and Straub (2003b), Gefen (2003), Koufaris (2002)
6	Culture	McCoy, Everard and Jones (2005)
7	Enterprise resource planning (ERP)	Amoako-Gyampah and Salam (2004)
8	Small businesses	Riemenschneider, Harrison, and Mykytn (2003), Ndubisi and Jantan (2003)
9	Electronic commerce	McCloskey (2003), Gefen and Straub (2000)
10	Computing	Igbaria, Zinatelli, Cragg and Cavaye (1997), Ndubisi, Gupta and Ndubisi (2005), Igbaria, Guimaraes and Davis (1995)
11	TAM	Davis (1986), Davis (1989), Davis, Bagozzi and Warshaw (1989), Al-Gahtani (2001), Venkatesh (2000), Venkatesh and Davis (1996), Szajna (1996)
12	TAM and TPB	Mathieson (1991)
13	Mobile learning	Huang, Lin and Chuang (2007)
14	Word processing	Brosnan (1999)
15	Broker workstations	Lucas and Spitler (1999)
16	Network externalities	Wang, Hsu and Fang (2004)
17	Usage behaviour	Venkatesh and Morris (2000)
18	User satisfaction	Wixom and Todd (2005)

**Source:** El-Gohary (2009) and El-Gohary (2012).

In fact, not only a lot of authors have tested the TAM model, but also some of them have extended it by using other constructs in an attempt to improve its ability to predict the use and acceptance of new technologies. Within this respect, Chau, (1996) has extended TAM to include both long-term and short-term perceived usefulness; Igbaria et al. (1995) has extended it to include individual, organisational and system characteristics; Gefen and Straub (1997) extended the model to include gender; and Vijayarathy (2004) extended it to include privacy, security and some other factors.

Moreover, there are a number of studies that tested or researched the TAM model in the acceptance of electronic commercial transactions (El-Gohary, 2009).

Gefen and Straub (2000), Grandon and Pearson (2003), Devaraj et al (2002), Kamel and Hassan (2003), Wang et al (2003), Pikkarainen et al (2004), McCloskey (2003), Chan and Lu (2004), Dembla, Palvia and Krishnan (2007) and Looi (2004) are examples of these studies.

Within this respect, Gefen and Straub (2000) conducted a study to test the applicability of TAM to E-Commerce adoption. They found that perceived ease of use (PEOU) and the perceived beliefs / usefulness (PU) play a significant role in the use of websites for product browsing and purchasing.

Similarly Dembla, Palvia and Krishnan (2007) conducted another study to understanding the adoption of web-enabled transaction processing by small businesses. They proved that perceived usefulness is very important in the adoption of web-enabled transaction processing by SBEs. They also found that some other factors are significant in the adoption of web-enabled transaction processing by SBEs, these factors include information systems maturity of a company, centralisation, formalisation, and the IS budget (El-Gohary, 2009).

Also, Looi (2004) conducted a study to investigate the different factors influencing E-Commerce adoption by SME's in Brunei Darussalam as a first step towards developing a model of the factors motivating and inhibiting E-Commerce adoption. He found a range of organisational, innovational and environmental factors that were indicated as being responsible for influencing the adoption of E-Commerce. These factors include relative advantage, security, government support, competitive pressure, perceived benefits and perceived usefulness.

Similarly, McCloskey (2003) conducted a study to apply TAM to E-Commerce participation. Based on her findings ease of use and perceived usefulness were found to have an impact on whether someone would buy a product online or not. Also, Devaraj et al (2002) conducted a research study to measure consumer satisfaction in B2C E-Commerce through linking the constructs prescribed by the technology acceptance model, transaction cost analysis (TCA), and service quality (SERVQUAL). The study proposed a model which was constructed and tested to examine the determinants of E-Commerce channel (B2C) satisfaction. The findings illustrate that perceived ease of use and usefulness are important in forming consumer attitudes and satisfaction with B2C E-Commerce channel. Other studies have covered some other research areas including Internet banking [Chan and Lu (2004), Pikkarainen et al (2004), Wang et al (2003), Kamel and Hassan (2003)] and the Internet [Gefen and Straub (1997), Lederer et al (2000), Yu et al (2003), Spacey et al (2004), Shih (2004), Lu et al (2005)] (El-Gohary, 2009).

From an E-Marketing perspective, by reviewing the literature it is noticed that there are a limited number of studies that have been conducted to apply the technology acceptance model in the field of E-Marketing. The studies of: Vijayasarathy (2004), Gefen (2003), Gefen, Karahanna and Straub (2003b) and Koufaris (2002) are examples of these studies. It is noticed also that most of these studies were concerned with online shopping and online consumer behaviour. Within this respect, Vijayasarathy (2004), Gefen (2003) and Gefen, Karahanna and Straub (2003b) conducted three studies on online shopping. In the first one, Vijayasarathy (2004) conducted a study to extend the original TAM model by using other constructs in an attempt to improve its ability to predict the use and acceptance of new technologies. Vijayasarathy attempted to explain consumer intention to use on-line shopping by extending TAM model to include: compatibility, privacy, security, normative beliefs and self-efficacy. He found that compatibility, usefulness, ease of use and security are significant predictors of attitude towards on-line shopping (El-Gohary, 2009).

Similarly Gefen (2003) conducted a study on online shopping through studying online shopper's behaviour. The study extended the original TAM model by using habit as another construct that might affect the acceptance of new technology. The results illustrated not only that it does, but also that habit might also be a major predictor of PU and PEOU among experienced shoppers. Also, Gefen, Karahanna and Straub (2003b) extended TAM model by adding trust to its constructs. They found that trust affects the acceptance of new technology between experienced repeat online shoppers. On the other hand, Koufaris (2002) conducted a study on online consumer behaviour. Based on his findings product involvement, web skills, challenges, and use of value-added search mechanisms have a significant impact on the behaviour of web consumer (El-Gohary, 2009).

To sum up, TAM has provided a very good base to understand the acceptance and usage of new technologies. The model has been tested for more than two decades in many different technologies and has been accepted as a successful model in predicting and explaining behaviour across a wide variety of domains. By reviewing the literature it is noticed that there are a limited number of studies that have been conducted to apply the model in the field of E-Marketing. Accordingly, there is a need to conduct more studies to investigate the model from an E-Marketing perspective. This is applicable because, according to Davis et al.

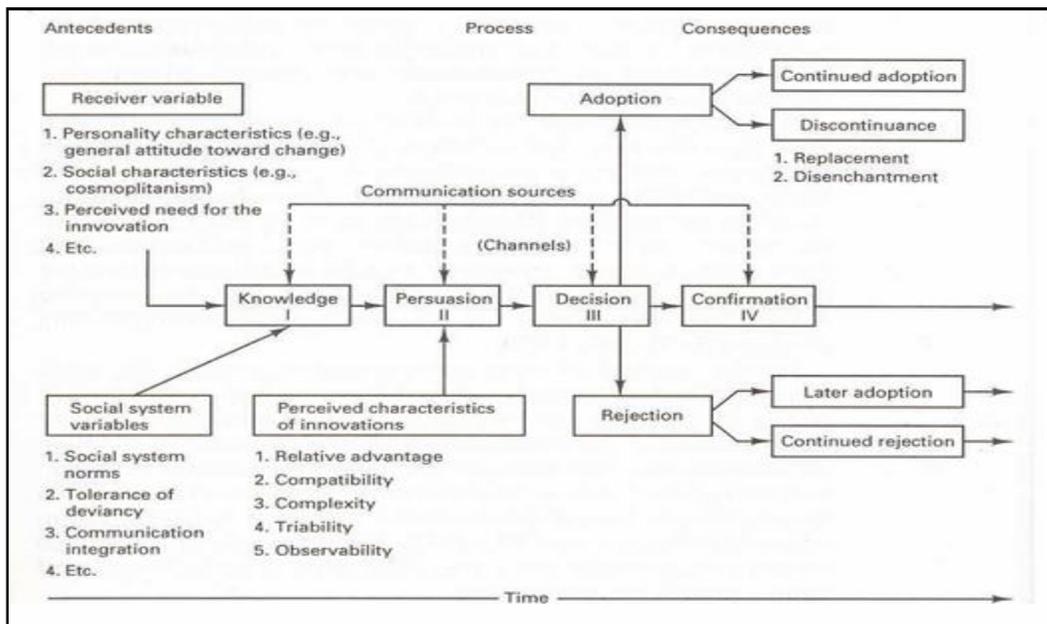
(1989), TAM is considerably less general than the Theory of Reasoned Action (TRA), but it is designed to apply to computer usage behaviour. Also TAM incorporates findings accumulated from over a decade of information systems research and may be especially well-suited for modelling computer application acceptance which includes E-Marketing (the subject of this study). Nevertheless, the model ignores some other important factors both within and outside the organisation that may have an impact on E-Marketing adoption.

Therefore, when implementing the model to study the adoption of E-Marketing it needs to be expanded to include some other factors. These factors might include: economic factors (cost, pressure from suppliers or customers or competitors), and characteristics of the firm (size, sector and status) (El-Gohary, 2009).

## 1.2 The Innovation Diffusion Theory (IDT)

The diffusion of new technology usually appears as a continuous and rather slow process (Hall and Khan, 2003, P: 1). Accordingly, implementation problems of any new technology will be - in most cases - related to the diffusion of this technology. Many researchers in management, information systems and information technology have therefore begun to rely on the theories of innovation diffusion to study implementation problems of new technologies.

Innovation diffusion theory (IDT) is one of the most popular theories in the diffusion of new technology and appeared to be the most widely accepted models by researchers, and is often associated with research into technology innovation. The theory was introduced by Rogers (1983; 1995) who identified eight types of diffusion research which are: earliness of knowing about innovation, rate of adoption in different social systems, opinion leadership, diffusion networks, communication channel use, and consequences of innovation. According to Rogers (1995) while diffusion is “*the process by which an innovation is communicated through certain channels over time among the members of a social system*”, innovation is “*an idea, practice, or object that is perceived as new by individual or another unit of adoption*” (Rogers, 1995; P: 5). Figure 2 illustrates the main components of the Innovation Diffusion Theory.



**Figure 2: The Innovation Diffusion Theory**

*Source:* Rogers (1995)

As illustrated in the figure, the innovation decision process developed by Rogers (1995) consists of five stages which begin with one's knowledge about the innovation existence. At this stage, expected users start to know the innovation and gain initial understanding about it. In the second stage (persuasion) the expected users will be influenced by the new technology which in turn will lead to the third stages when managers/expected users move from persuasion to the decision of adopting or rejecting the innovation. In the fourth stages managers/users will implement the new technology, by this usage of the new technology the managers/users in the final stage will confirm or reserve the system from a usefulness or fitness perspective.

The main contribution of the Innovation Diffusion Theory (IDT) is the set of innovation attributes it provides that affect the rate of adoption. These attributes include: relative advantage, compatibility, complexity, trialability, visibility, and observability (Rogers, 1983).

Rogers (1995) defines these attributes as follows:-

1. **Relative advantage** : is the degree to which an innovation is perceived as being better than its antecedent (Rogers, 1995; P: 229)
2. **Compatibility**: is the degree to which an innovation is perceived as being consistent with the existing values, needs and past experiences of potential adopters (Rogers, 1995; P: 240).
3. **Complexity**: is the degree to which an innovation is perceived as being difficult to use (Rogers, 1995; P: 257).
4. **Trialability**: is the degree to which an innovation may be experimented with before adoption (Rogers, 1995; P: 258).
5. **Observability**: is the degree to which the results of an innovation are observable by others (Rogers, 1995; P: 258)

According to Rogers these five attributes can explain 49 to 87 percent of the variance rate of adoption (Rogers, 1995).

A large numbers of studies have tested the model since it was first presented in 1983. These studies have covered a number of different technologies and aspects. These studies include: Park and Yoon (2005), Zhu and Kraemer (2005), Tan and Teo (2000), Venkatesh et al (2003), Wu and Wang (2005), Roman (2003), Seyal and Rahman (2003), Parthasarathy and Bhattacharjee (1998), Peansupap and Walker (2005) and Rajagopal (2002). The following table illustrates some examples of the different studies that have researched the Innovation Diffusion Theory in the last thirty years (El-Gohary, 2009).

**Table 2: Selective Number of Studies Researched Innovation Diffusion Theory (IDT)**

<i>N</i>	<i>Research area</i>	<i>Studies</i>
1	Electronic commerce	Dos Santos and Peffers (1998), Eastin, M. S. (2002), Chircu and Kauffman (2000), Seyal and Rahman (2003)
2	Enterprise resource planning (ERP)	Bradford and Florin (2003), Rajagopal, P (2002)
3	Information technology and Information System	Roman, R. (2003), Peansupap and Walker (2005), Venkatesh, Morris, Davis and Davis (2003), Karahanna, Straub and Chervany (1999), Straub, D. W. (1994), Crum, Premkumar and Ramamurthy (1996), Baskerville and Pries-Heje (2003), Cooper and Zmud (1990), Baskerville and Pries-Heje (2001), Fichman, R. G (2004), Mustonen-Ollila and Lyytinen (2003), Sharma and Rai (2003), Geroski, P. A. (2000), Shao, Y. P. (1999), Armstrong and Yokum (2001), Brancheau and Wetherbe (1990), Reich and Benbasat (1990)
4	The Internet and consumer	Cheung, Chan and Limayem (2005), Beatty, Shim and Jones (2001), Chen, Gillenson and Sherrell (2004), Chen, Gillenson and Sherrell (2002), Parthasarathy and Bhattacharjee (1998), Blake, Neuendorf and Valdiserri (2005), Park and Yoon (2005), Martins, Steil and Todesco (2004), Cheng, Kao and Lin (2004), Forman, C. (2005), Eder and Igarria (2001), Hung, Ku and Chang (2003), Grantham and Tsekouras (2005)
5	E-business	Zhu and Kraemer (2005)
6	Internet banking	Tan and Teo (2000), Liao, Shao, Wang and Chen (1999)
7	Organisational innovation	Fichman, R. G. (2001), Ramamurthy, Premkumar and Crum (1999)
8	E-Marketing	Vijayasarathy (2004), Kocas, C (2002), Wu and Wang (2005)
9	Small businesses	Iacovou, Benbasat and Dexter (1995)
10	Acceptance of IT	Agarwal and Prasad (1997)
11	Assimilation gaps	Fichman and Kemerer (1999)
12	Communication	Carter Jr., Jambulingam, Gupta and Melone (2001)
13	Customers	Grover, V. (1993)
14	Microcomputers	Goslar, M. D. (1987)
15	Personal innovativeness	Agarwal and Prasad (1999)

**Source:** El-Gohary (2009) and El-Gohary (2012).

Moreover, there are a number of studies that have tested or researched the innovation diffusion theory (IDT) model in the acceptance and diffusion of electronic commercial transactions. Kuan and Chau (2001), Beatty et al (2001), Riemenschneider et al (2003), Mirchandani and Motwani (2001), Grandon and Pearson (2004), Mehrrens et al (2001), Iacovou et al (1995), Chwelos et al (2001), Doolin et al (2003), Poon and Swatman (1997),

(1998) and (1999), Teo et al (1998), Forman (2005), Eastin (2002), Dos Santos and Peffers (1998), Chircu and Kauffman (2000), Cheung et al (2005), Chen et al (2002) and (2004), Blake et al (2005), Beatty et al 2001, Zhu and Kraemer (2005), Wu and Wang (2005), Tan and Teo (2000), Seyal and Rahman (2003), Parthasarathy and Bhattacharjee (1998), Liao et al (1999), Kocas (2002), Lu et al (2003), Al-Qirim (2007a), Al-Qirim (2006), Stockdale and Standing (2006) and Chin and Gopal (1995) are examples of these studies (El-Gohary, 2009).

These studies investigate and cover a number of research areas. While some of these studies concentrate on studying consumer behaviour (e.g. Blake et al, 2005 and Chen et al, 2004), a considerable number of them research E-Commerce (e.g. Seyal and Rahman, 2003; Eastin, 2002; Dos Santos and Peffers, 1998; Chircu and Kauffman, 2000, Al-Qirim, 2007a; Al-Qirim, 2007b; Al-Qirim, 2006 and Lertwongsatien and Wongpinunwatana, 2003). Other studies have researched Internet banking (e.g. Tan and Teo, 2000 and Liao, 1999), post-adoption behaviour (e.g. Parthasarathy and Bhattacharjee, 1998), Internet adoption (e.g. Forman, 2005) and Electronic newspaper (e.g. Lu et al, 2003)

From an E-Commerce perspective, Al-Qirim conducted two studies to investigate the adoption of E-Commerce by SBEs in New Zealand. The first study (Al-Qirim, 2007b) aimed not only to test the innovation diffusion theory (IDT) but also expanded the model to include some other factors such as organisational, environmental and individual factors. The study findings illustrate that technological innovation factors (relative advantage, complexity and compatibility), organisational factors and individual factors affect the adoption of E-commerce among SBEs in New Zealand. Similarly, the second study (Al-Qirim, 2006) aimed to investigate E-Commerce adoption by New Zealand SBEs. The findings illustrate that cost and compatibility does not hinder the SBE E-Commerce adoption decision. Also, Lertwongsatien and Wongpinunwatana (2003) conducted another study to investigate the factors affecting SME's E-commerce adoption in Thailand. They found that factors influencing E-Commerce adoption decisions can be organised into three main groups of factors which are: organisational, technological and environmental factors. They also found that compatibility is one of the main factors that can affect the adoption of E-Commerce by SME's in Thailand (El-Gohary, 2009).

Dos Santos and Peffers (1998) conducted a study to investigate the factors influencing the adoption decision for automated teller machines (ATMs). They aimed to determine whether marketing efforts by hardware and software vendors, imitation of competitors or a mixture of influences affected these decisions among bank managers. The findings illustrate that imitation and communication among industry competitors, as well as marketing efforts by the technology vendors, are the most important factors affecting the adoption decision for automated teller machines.

Eastin (2002) investigated the adoption of four E-commerce activities available to Internet users which are online shopping, online banking, online investing and electronic payment for an Internet service. The study results indicate that the attributes of the diffusion model play a significant role in the adoption of the Internet. Results also indicate that when users decide to adopt one of these activities they tend to adopt other activities as well.

From an E-Business perspective, Zhu and Kraemer (2005) developed an integrative model for assessing the diffusion and consequence of E-business at the firm level. They focused on the post adoption stages (actual usage and value creation) to develop their model which linked technological, organisational, and environmental factors to E-business use and value. The findings illustrate that technology competence, firm size; financial commitment, competitive pressure and regulatory support are important factors for E-business use. Also Beatty, Shim and Jones (2001) conducted a study to investigate the factors influencing corporate web site adoption in USA. They found that early adopters placed more emphasis on perceived benefits and compatibility of the Web with existing technology and organisational norms than did later adopters.

From a consumer behaviour perspective, Blake, Neuendorf and Valdiserri (2005) conducted a study to investigate how a commercial website can be configured to attract online shoppers in USA and Canada. They found that tailoring websites to fit the orientation of the early site visitors is important to attract shoppers to these websites. On the other hand, in a study to understand the determinants of consumer acceptance of virtual stores, Chen, Gillenson and Sherrell (2004) applied the technology acceptance model (TAM) and innovation diffusion theory (IDT) to examine consumer behaviour in the virtual store context (El-Gohary, 2009).

The findings illustrate that the classic theories on technology acceptance and innovation diffusion/adoption are still valid in explaining and predicting user behaviours (in the virtual store context).

From a post-adoption behaviour perspective, Parthasarathy and Bhattacharjee (1998) examined post-adoption behaviour within the context of online service use depending on the innovation diffusion theory as a theoretical framework to extend information technology adoption research to the case of post-adoption behaviour. The findings indicate that potential discontinuers can be discriminated from continued adopters based on their sources of influence (external and interpersonal), perceived service attributes (usefulness and compatibility), service utilisation and network externality (complementary product usage). The findings also illustrate that later adopters are more likely to discontinue use and are more influenced by interpersonal sources and utilise the service less during their adoption period (El-Gohary, 2009).

From an E-Marketing perspective, by reviewing the literature it is noticed that there are a limited number of studies conducted to apply the innovation diffusion theory (IDT) in the field of E-Marketing. Within this respect, Vijayasathy (2004) conducted a study to extend the original IDT model by using other constructs in an attempt to improve its ability to predict the use of new technologies. In his study, Vijayasathy attempted to explain consumer intention to use on-line shopping by extending the IDT model to include not only compatibility but also privacy, security, normative beliefs and self-efficacy. He found that compatibility is a significant predictor of attitude towards on-line shopping. Also, Wu and Wang (2005) presented an extended technology acceptance model (TAM) that integrated the innovation diffusion theory into TAM to investigate the main determinants of mobile commerce acceptance. The findings illustrated that all variables related to the innovation diffusion theory as well as the technology acceptance model, except for perceived ease of use, significantly affect users' behavioural intent to accept mobile commerce as a new technology (El-Gohary, 2009).

On the other hand, Kocas (2002) developed a dynamic competitive pricing model that deals with electronic markets, where the segment sizes are determined through a diffusion process. He found that stores with loyal customers or with a preference for their brands can attain higher profits further into the diffusion process.

With regards to SBEs, it is noticed that there are a considerable number of studies that have tested the Innovation Diffusion Theory (IDT) in a small business context. While some of these studies investigated all the elements of the model, the rest tested only one or more elements of the model. The following table illustrates the different studies conducted to investigate the model in a small business context:

**Table 3: Studies Conducted to Investigate the Innovation Diffusion Theory (IDT)**

<i>N</i>	<i>Factor</i>	<i>Studies</i>
1	Relative advantage	Kuan and Chau (2001), Beatty et. Al. (2001), Riemenschneider et. al. (2003), Mirchandani and Motwani (2001), Grandon and Pearson (2004), Mehrrens et. al. (2001), Iacovou et. al. (1995), Chwelos et. al. (2001), Doolin et al (2003), Poon and Swatman (1997), (1998) and (1999), Teo et. al. (1998), Al-Qirim (2007b), Al-Qirim (2006), Stockdale and Standing (2006), Chin and Gopal (1995).
2	Compatibility	Beatty et. Al. (2001), Mirchandani and Motwani (2001), Poon and Swatman (1998), (1999a) and (1999b), Macgregor and Vrazlaic (2004), Teo et. al. (1998), Al-Qirim (2007b), Al-Qirim (2006), Lertwongsatien and Wongpinunwatana (2003), Seyal and Abd Rahman (2003), Stockdale and Standing (2006), Stylianou et al (2003).
3	Complexity	Riemenschneider et. al. (2003), Stockdale and Standing (2006), Chang and Cheung (2001).
4	Trialability	Seyal and Abd Rahman (2003), Stockdale and Standing (2006).
5	Observability	Seyal and Abd Rahman (2003), Stockdale and Standing (2006).

**Source:** Adopted from: El-Gohary (2009) and El-Gohary (2012).

As can be noticed from the table, most of the scholars have concentrated on researching the first two elements of the model, namely, relative advantage and compatibility, which reflect the high importance of these two elements in the diffusion of new technologies among SBEs.

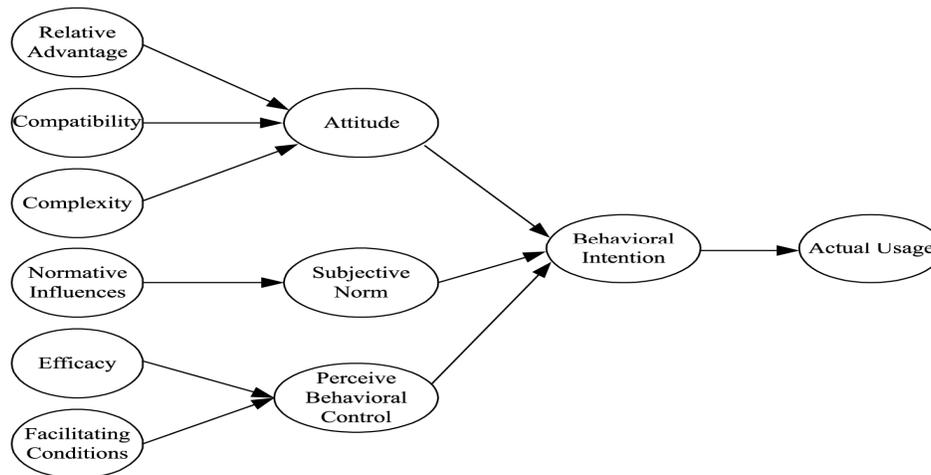
To sum up, the IDT model has provided a good contribution toward understanding the acceptance, usage and diffusion of new technologies. The model has been tested in many different technologies and has been accepted as a successful model. By reviewing the literature it is noticed that there are a limited number of studies conducted to apply the IDT in the field of E-Marketing.

Accordingly, there is a need to conduct more studies to investigate the model from an E-Marketing perspective. Although the model has considered important factors to illustrate the diffusion of new technologies, it ignores some other important factors both within and outside the organisation that may have an impact on E-Marketing adoption. Therefore, when implementing the model to study the adoption of E-Marketing, the model needs to be expanded to include some other factors (El-Gohary, 2009).

### 1.3 The Decomposed Theory of Planned Behaviour

Among other IT adoption models there is the Decomposed Theory of Planned Behaviour model which was introduced by Taylor and Todd (1995b). The model is an extension of one of the most well-known behavioural theories, the Theory of Planned Behaviour (TPB), introduced by Ajzen (1991) and investigates technology adoption in terms of behaviour and social influence. As a result of that, the model indicates that a better understanding of the relationships between belief structures and antecedents of intention requires the decomposition of attitudinal beliefs (Taylor and Todd, 1995b).

Within this model, technology adoption is a direct function of behavioural intention and perceived behavioural control. The model further suggests that innovation characteristics (e.g. relative advantage, compatibility) help to form intention. As illustrated in figure 3, the constructs used in this model are generally based on perceptions, attitudes, beliefs, perceived behavioural control and social influence, together with psychological considerations, in determining technology adoption, acceptance and usage.



**Figure 3: Decomposed Theory of Planned Behaviour**

Source: Shih and Fang (2004)

Taylor and Todd (1995b) show that their model has better explanatory power than the pure Theory of Planned Behaviour (TPB). Since this research is mainly about E-Marketing, which is considered as a technological innovation, the decomposed TPB model could give a satisfactory explanation of E-Marketing adoption intention by SBEs.

To determine the possibility of using the Decomposed Theory of Planned Behaviour in explaining and understanding the adoption of E-Marketing by SBEs the literature related to the model was examined. By reviewing this literature it was found that while some studies found support for the model (e.g. Shih and Fang, 2004; Hsu and Chiu, 2004; George, 2004; Burnkrant and Page, 1988), other studies failed to do so or to identify a multi-dimensional structure for it, such as Shimp and Kavas (1984) and Oliver and Bearden (1985). On the other hand, some of the main constructs used in this model are adopted from the innovation diffusion theory (IDT) - related advantage, complexity and compatibility. Accordingly, depending on the innovation diffusion theory (IDT) could give a more satisfactory explanation of E-Marketing adoption intention by SBEs (especially if the limitations of the model are taken into consideration). Within this respect the model has some main limitations. The main limitation is that the model ignores factors both within and outside the organisation that might have an impact on new technologies adoption and diffusion, for example, economic factors (like: cost, pressure from suppliers, customers or competitors) and characteristics of the enterprise (size, sector and status).

## **2. Focus for Future Research**

Although technology acceptance model (TAM), innovation diffusion theory (IDT) and the decomposed theory of planned behaviour (DTPB) model are among the most effective theories in predicting and explaining innovation diffusion. For the purpose of conducting this research, only the first two models will be taken into consideration, namely, technology acceptance model (TAM) and innovation diffusion theory (IDT) because there are some questions about the reliability of the DTPB model. Consequently this research examines the possibility of their use to anticipate the different factors that might have an effect on the adoption of E-Marketing among SBEs.

Unquestionably, E-Marketing is a new type of end-user information system that is heavily based on telecommunication technologies, and there are a number of studies that tested the TAM model in the acceptance of electronic commercial transactions. Gefen and Straub (2000), Grandon and Pearson (2003), Devaraj et al (2002), Kamel and Hassan (2003), Wang et al (2003), Pikkarainen et al (2004), McCloskey (2003), Chan and Lu (2004), Wu and Wang (2005), Dembla, Palvia and Krishnan (2007) and Looi (2004) are examples of these studies. Some of these studies find that TAM is appropriate to analyse the use of websites for product browsing and purchasing (Gefen and Straub, 2000), web-enabled transaction processing by SBEs (Dembla et al., 2007), E-Commerce adoption by SME's (Looi, 2004), buying products online (McCloskey, 2003), online shopping and online consumer behaviour (Vijayasarathy, 2004; Gefen, 2003; Gefen et al, 2003a and Koufaris, 2002) as well as Business to Customer (B2C) satisfaction (Devaraj et al, 2002). Consequently, using TAM to study small businesses acceptance and adoption of E-Marketing is considered to be an appropriate approach (El-Gohary, 2009).

On the other hand, the innovation diffusion theory is a theory that helps to understand how and why a certain innovation is diffused into a social system (Rogers, 1995) and might help to explain how technology has been incorporated into companies from a marketing perspective. Given that E-Marketing is considered to be innovative, because of its ability to completely change the traditional marketing practice, and since E-Marketing still in its infancy stage, a well-researched theory such as the IDT will help us to understand the process of using and adopting E-Marketing by SBEs.

Furthermore, there are a number of studies that have used TAM and IDT as a combined tool to investigate the factors affecting the adoption of new technologies. These studies include: Jie, Peiji and Jiaming (2007), Yi et al (2006), Chen, Gillenson and Sherrell (2002) and (2004), Wu and Wang (2005), Looi (2004) and Lertwongsatien and Wongpinunwatana (2003). Within this respect, in a study to understand the factors that attract consumers to use firms' websites, Chen, Gillenson and Sherrell (2002) applied the technology acceptance model and innovation diffusion theory to examine consumer behaviour in the virtual store context. The findings illustrate that the technology acceptance and innovation diffusion/adoption theories are still valid in explaining and predicting user behaviours (in the Business-to-Consumer context). Similar findings were reached by Jie, Peiji and Jiaming (2007), Yi et al (2006), Chen, Gillenson and Sherrell (2004), Wu and Wang (2005), Looi (2004) and Lertwongsatien and Wongpinunwatana (2003) who indicated that TAM and IDT are valid and can be combined to explain acceptance and adoption of new technologies (El-Gohary, 2009).

Based on the previous discussion and the fact that TAM and IDT often complement each other in research (Eid, 2003), combining both TAM and IDT to study SBEs acceptance and adoption of E-Marketing is a highly valid approach and can lead to fruitful results. However, researchers and practitioners working with TAM and IDT have discovered a similar relationship between the two theories. This similarity is clear between "relative advantage" and "complexity" from one side (IDT), and "perceived usefulness" and "perceived ease of use" on the other side (TAM). Although TAM does not use Rogers' constructs "relative advantage" and "complexity", perceived ease of use (PEU) and perceived usefulness (PU) are related and lead to similar results to the diffusion theory outcomes. Consequently, TAM can be viewed as a sub model of the Rogers' IDT model (El-Gohary, 2009).

On the other hand, although that IDT has been studied by many researchers (see table 2), it is reported that elements of the model have different influences on the adoption of technological innovation. Most researchers and scholars find that relative advantage, compatibility, and complexity are the most important elements in the IDT model that can influence the adoption of new technological innovation (Al-Qirim, 2007b; Al-Qirim, 2006; Lertwongsatien and Wongpinunwatana, 2003; Stockdale and Standing, 2006 and Looi, 2004). This is in line with the findings of Tornatzky and Klein (1982), based on their meta-analysis of 75 research studies related to innovation diffusion characteristics (identified from a larger sample of 105 references from the literature related to innovation diffusion).

They find that only relative advantage; compatibility and complexity were strongly related to new innovation adoption and have the most significant relationships with adoption across a broad range of innovation types. Consequently, for the purpose of conducting this research, these variables can be reasonably included in the research model (El-Gohary, 2009).

Moreover, Moore and Benbasat (1991; P: 197) raised a question about: the appropriate terminology to be used for the “perceived usefulness” construct of the TAM. They suggested instead using the term “relative advantage” (Moore and Benbasat, 1991; P: 197). The main logic behind that is that the term usefulness is a broad term while the term “relative advantage” has more significant intuitive appeal, as it is a very generalisable concept (Moore and Benbasat, 1991; P: 198; Tornatzky and Klein, 1982; P: 34).

Accordingly, the main constructs of interest for this research are these three main elements namely:-

- 1- Perceived ease of use
- 2- Perceived relative advantage (Usefulness)
- 3- Perceived compatibility.

These three constructs are included in the first part of the research framework that deals with E-Marketing adoption by SBEs. It also refers to the work of Moore and Benbasat (1991), in which they developed measurement scales for these attributes that can be applied to any innovation. These measurements depend on a seven-point Likert scale ranging from “extremely disagree” to “extremely agree” as the response format (Moore and Benbasat, 1991; P: 198). The following table illustrates the measurements used by Moore and Benbasat (1991) to measure perceived ease of use, perceive relative advantage (usefulness) and perceived compatibility.

**Table 4: Measurements Used By Moore and Benbasat (1991) to Measure Perceived Ease of Use, Perceive Relative Advantage (Usefulness) and Perceived Compatibility**

<i>Construct</i>	<i>Measurements</i>
<i>Relative Advantage (Usefulness)</i>	1.* Using a <i>personal work station (PWS)</i> enables me to accomplish tasks more quickly. 2.* Using a PWS improves the quality of work I do. 3.* Using a PWS makes it easier to do my job. 4. The disadvantages of my using a PWS far outweigh the advantages 5. Using a PWS improves my job performance. 6. Overall, I find using a PWS to be advantageous in my job. 7.* Using a PWS enhances my effectiveness on the job. 8.* Using a PWS gives me greater control over my work. 9. Using a PWS increases my productivity.
<i>Compatibility</i>	1.* Using a PWS is compatible with all aspects of my work. 2. Using a PWS is completely compatible with my current situation. 3.* I think that using a PWS fits well with the way I like to work. 4.* Using a PWS fits into my work style.
<i>Ease of use</i>	1. I believe that a PWS is cumbersome to use. 2. It is easy for me to remember how to perform tasks using a PWS. 3. My using a PWS required a lot of mental effort. 4. Using a PWS is often frustrating. 5.* My interaction with a PWS is clear and understandable. 6.* I believe that it is easy to get a PWS to do what I want it to do. 7.* Overall, I believe that a PWS is easy to use. 8.* Learning to operate a PWS is easy for me.

**Source:** Moore and Benbasat (1991)

\* Indicates items suggested by Moore and Benbasat (1991) for inclusion in any "short" scales.

In fact many researchers have adapted the Moore and Benbasat (1991) measurements in many research studies (e.g. Moore and Benbasat, 1996; Karahanna and Straub, 1999; Moon and Kim 2001; Pavlou 2003; Eid, 2003; Van Slyke et al. 2004, Carter and Belanger, 2003 and Van Slyke et al, 2007) which reflects not only its nature as a validated scales but also the high possibility for reusing it to measure the same constructs in future researches.

Consequently, for the purpose of conducting this research, the measurements of Moore and Benbasat (1991) will be adopted to measure the constructs of perceived ease of use, perceived relative advantage (usefulness) and perceived compatibility of the research model.

Within this context, in some cases shortened forms of the scales are used in order to control the length of the survey. Also, items are slightly reworded to reflect this research context (E-Marketing ) and the scale items are measured on a five-point Likert scale with the anchors “strongly disagree” (1) to “strongly agree” (5)..

On the other hand, Hernandez et al (2008) proved that studies investigating technology adoption are heavily based on behavioural theories such as TAM and IDT to investigate individuals’ technology adoption, as seen enormously in the literature. In contrast, the literature on TAM and IDT business-level technology adoption is not only very limited compared to general literature examining technology adoption on individual-levels but also has devoted insufficient attention to exploring the consequences of business-level attitude and decision on new technology adoption (Yu and Tao, 2009). Therefore, it is important to investigate technology adoption at a business-level using TAM and IDT.

However, examining the validity of TAM and IDT at business-level technology adoption has gained a lot of interest from researchers and practitioners in the last few years. For example, Yu and Tao (2009), Deng and Wang (2009), Cloete and Doens (2008), Lu, Deng and Wang (2007), He et al (2006), Eid et al (2006), Wu and Wu (2005), Zain et al (2005) Zhu and Kraemer (2005) Amoako- Gyampah and Salam (2004) and Eid (2003) have conducted studies to investigate technology adoption and diffusion at the business-level depending on TAM and/or IDT. Within this context, Wu and Wu (2005) employed TAM and IDT to investigate the acceptance and diffusion of web-based customer relationship management software (e-CRM) in organizations. Deng and Wang (2009) as well as Lu, Deng and Wang (2007) examined enterprises' adoption of enterprise short messages services (ESMS) based on the innovation diffusion theory (IDT). On the other hand, Zhu and Kraemer (2005) developed an integrative model for assessing the diffusion and consequence of E-Business at the firm level (El-Gohary, 2009).

Moreover, Yu and Tao (2009) confirmed that TAM can effectively explain new technology adoption by enterprises. Furthermore, Eid et al (2006) and Eid (2003) tested the validity of TAM and IDT at a company level in the domain of B2B international Internet Marketing. Cloete and Doens (2008) employed TAM and IDT to investigate the adoption of B2B E-Commerce in South African agriculture companies at a business level and He et al (2006) examined the adoption of online e-payment by Chinese business enterprises using Rogers’ innovation diffusion theory. However, such studies have not investigated E-Marketing adoption at the business-level which implies the need to conduct more research to investigate business-level E-Marketing adoption.

Motivated by the above discussion, this research will combine both TAM and IDT to investigate SBE acceptance and adoption of E-Marketing at a business-level. This is not only because TAM and IDT have been confirmed as effective tools for explaining new technology adoption at a business-level by other researchers, but also because:

- When developing IDT, Rogers (1995) defined innovation as “*an idea, practice, or object that is perceived as new by individual or another unit of adoption*” (Rogers, 1995; P: 5). Accordingly, he accepted the idea of implementing his model by individuals or another unit of adoption (such as SBEs).
- Researchers in the field (e.g. Yu and Tao, 2009) argue that new technology adoption behaviour demonstrated by the whole business might resemble that demonstrated by a single individual. This argument is true in the case of small business enterprises where the business decision making process is highly similar to the individual decision making process for the business owner or manager.

### **3. Extending TAM and IDT**

As discussed earlier, many authors and scholars have extended both TAM and IDT in an attempt to improve the ability of the models to predict new technology use and adoption (Chau, 1996; Igbaria, et al., 1995; Gefen and Straub, 1997; Eid 2003 and Vijayasarathy, 2004). The main logic behind this is because although the two models have taken important factors into consideration to illustrate the acceptance and diffusion of new technologies, they both ignore some other important factors both within and outside the organisation that may impact on new technology acceptance, diffusion and adoption (El-Gohary, 2009).

Therefore, when implementing the models to study the adoption of E-Marketing, the models need to be expanded to include some other factors. These factors will include some external and internal variables that might have an impact on E-Marketing adoption by SBEs.

To determine these factors the literature of new technology adoption was investigated from a small business enterprises context to form a clear picture about the factors used by other researchers and scholars to understand the adoption of new technologies by SBEs.

### 3.1 Factors Affecting New Technology Adoption in SBEs

Although TAM, IDT and even the Decomposed Theory of Planned Behaviour have provided some important factors that might affect the acceptance, diffusion and adoption of new technologies in a systematic way, such theories are not the only source for generating such factors. A lot of researchers have tested and investigated other factors that might have some impact of the adoption of new technologies, as can be seen in any review of the literature of new technologies adoption.

Since this study is mainly concerned with SBEs, the research concentrated on reviewing the literature from a small businesses perspective. By reviewing this literature, it is noticed that there are a considerable number of studies conducted to investigate the different factors that might have an effect on the adoption of new technologies. The following table summarise most of these studies.

**Table 5: Factors Affecting Electronic Technology Adoption**

Factors		Studies
<i>IDT</i>	Relative advantage	Kuan and Chau (2001), Beatty et. Al. (2001), Riemenschneider et. al. (2003), Mirchandani and Motwani (2001), Grandon and Pearson (2004), Mehrtens et. al. (2001), Iacovou et. al. (1995), Chwelos et. al. (2001), Doolin et al (2003), Poon and Swatman (1997), (1998) and (1999), Teo et. al. (1998), Al-Qirim (2007b), Al-Qirim (2006), Stockdale and Standing (2006), Chin and Gopal (1995), El-Gohary, H. (2012a), El-Gohary, H. (2012b), El-Gohary, H, and Eid, R., (2013), Raghubansie, A., El-Gohary, H, Samaradivakara, C. (2013), El-Gohary, H, Edwards, D., Eid, R., and Huang, J (2013), Eid, R., and El-Gohary, H, (2013), El-Gohary, H, Edwards, D., and Huang, J (2013), El-Gohary, H, (2012), El-Gohary, H, and Eid, R., (2012), El-Gohary, H, O'Leary, S. and Radway, P. (2012), Millman, C. and El-Gohary, H, (2011), El-Gohary, H, (2011), El-Gohary, H, (2010a), El-Gohary, H, (2010b), El-Gohary, H, Trueman, M. and Fukukawa, K. (2009), El-Gohary, H, Trueman, M. and Fukukawa, K. (2009a), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008a), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008b), El-Gohary, H, (2010c), El-Gohary, H, (2010d), El-Gohary, H, Trueman, M. and Fukukawa, K. (2009c), El-Gohary, H, (2013), Shah, S., El-Gohary, H., and Hussain, J. (2013), Khalefa, M., Zhang, Y., Forrester, P., and El-Gohary, H. (2013), Eid, R., and El-Gohary, H, (2013), El-Gohary, H, Eid, R., and Khalifa, M. (2012), El-Gohary, H, (2011), O'Leary, S. and El-Gohary, H, (2011), Millman, C. and El-Gohary, H, (2010b), El-Gohary, H, (2009), El-Gohary, H, Trueman, M. and Fukukawa, K., (2009), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008), El-Gohary, H and Trueman, M. (2007), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008), El-Gohary, H, Trueman, M. and Fukukawa, K. (2009), El-Gohary, H O A S (2009).
	Compatibility	Beatty et. Al. (2001), Mirchandani and Motwani (2001), Poon and Swatman (1998), (1999a) and (1999b), Macgregor and Vrazlaic (2004), Teo et. al. (1998), Al-Qirim (2007b), Al-Qirim (2006), Lertwongsatien and Wongpinunwatana (2003), Seyal and Abd Rahman (2003), Stockdale and Standing (2006), Stylianou et al (2003).
	Complexity	Riemenschneider et. al. (2003), Stockdale and Standing (2006), Chang and Cheung (2001).
	Trialability	Seyal and Abd Rahman (2003), Stockdale and Standing (2006).
	Observability	Seyal and Abd Rahman (2003), Stockdale and Standing (2006).
<i>TAM</i>	Perceived usefulness	Davis (1989), Dembla et al (2007), Grandon and Pearson (2003), Kaynak et al (2005), Lertwongsatien and Wongpinunwatana (2003), Looi (2004).
	Perceived ease of use	Davis (1989), El-Gohary, H. (2012a), El-Gohary, H. (2012b), El-Gohary, H, and Eid, R., (2013), Raghubansie, A., El-Gohary, H, Samaradivakara, C. (2013), El-Gohary, H, Edwards, D., Eid, R., and Huang, J (2013), Eid, R., and El-Gohary, H, (2013), El-Gohary, H, Edwards, D., and Huang, J (2013), El-Gohary, H, (2012), El-Gohary, H, and Eid, R., (2012), El-Gohary, H, O'Leary, S. and Radway, P. (2012), Millman, C. and El-Gohary, H, (2011), El-Gohary, H, (2011), El-Gohary, H, (2010a), El-Gohary, H, (2010b), El-Gohary, H,

		Trueman, M. and Fukukawa, K. (2009), El-Gohary, H, Trueman, M. and Fukukawa, K. (2009a), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008a), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008b), El-Gohary, H, (2010c), El-Gohary, H, (2010d), El-Gohary, H, Trueman, M. and Fukukawa, K. (2009c), El-Gohary, H, (2013), Shah, S., El-Gohary, H., and Hussain, J. (2013), Khalefa, M., Zhang, Y., Forrester, P., and El-Gohary, H. (2013), Eid, R., and El-Gohary, H, (2013), El-Gohary, H, Eid, R., and Khalifa, M. (2012), El-Gohary, H, (2011), O'Leary, S. and El-Gohary, H, (2011), Millman, C. and El-Gohary, H, (2010b), El-Gohary, H, (2009), El-Gohary, H, Trueman, M. and Fukukawa, K., (2009), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008), El-Gohary, H and Trueman, M. (2007), El-Gohary, H, Trueman, M. and Fukukawa, K. (2008), El-Gohary, H, Trueman, M. and Fukukawa, K. (2009), El-Gohary, H O A S (2009).
<i>Other factors</i>	Top management support	Mirchandani and Motwani (2001), Al-Qirim (2007b), Lertwongsatien and Wongpinunwatana (2003), Seyal and Abd Rahman (2003), Tsao, Lin, and Lin (2004), Stylianou et al (2003).
	Product characteristics	Doolin et al (2003a), Doolin et al (2003b), Fillis, et al (2004a), Ng (2005).
	Organisational readiness (size, cost, accessibility, organisational culture, financial technical and other resources)	Kuan and Chau (2001), Mirchandani and Motwani (2001), Grandon and Pearson (2004), Mehrtens et. al. (2001), Iacovou et. al. (1995), Chwelos et. al. (2001), Zhu et al (2005), Doolin et al (2003), Macgregor and Vrazlaic (2004), Al-Qirim (2006), Al-Qirim (2007b), Lawson et. al. (2003), Lal (2005), Lertwongsatien and Wongpinunwatana (2003), Okazaki, S. (2005), Kula and Tatoglu (2003), Tsao, Lin, and Lin (2004), Warren (2004), Premkumar and Potter (1995), Paul (1996), Damaskopoulos and Evgeniou (2003), Fillis, et al (2004a), Ng (2005).
	Information intensity	Doolin et al (2003), Poon and Swatman (1997) and (1998), Al-Qirim (2006), Al-Qirim (2007b).
	Industry pressure (competition) / market trends	Kuan and Chau (2001), Grandon and Pearson (2004), Chang and Cheung (2001), Mehrtens et. al. (2001), Iacovou et. al. (1995), Chwelos et. al. (2001), Doolin et al (2003), Poon and Swatman (1999a), Zhu et al (2005), Al-Qirim (2007b), Al-Qirim (2007), Grandon and Pearson (2003), Lertwongsatien and Wongpinunwatana (2003), Scupola (2003), Yu (2006), Looi (2004), Fillis, et al (2004a), Ng (2005).
	National and technological infrastructure	Looi (2004), Ng (2005), Jennex, Amoroso and Adalakun (2004a).
	Security	Lawson et al (2003), Okazaki, S. (2005), Paul (1996), Leiby and Konkol (1996), Liddy (1996), Aldridge et al (1997), Smith (2004b), Forcht et al (1995), Forcht (1996)
	Government pressure and/or support	Kuan and Chau (2001), Grandon and Pearson (2004), Chang and Cheung (2001), Jutla, et al (2002), Simpson and Docherty (2004), Tsao, Lin, and Lin (2004), Looi, H. (2004).
	Consumer readiness	Zhu et al (2005), Doolin et al (2003a and 2003b), Poon and Swatman (1999a).
	Support from technology vendors	Doolin et al (2003), Abell and Lim (1996).
	International orientation of the enterprise	Doolin, McQueen and Watton (2003), Doolin, McLeod, McQueen and Watton (2003), Kula and Tatoglu (2003), Lal (2005).
	Entrepreneur (owner) skills	Al-Qirim (2006), Al-Qirim (2007b), Damaskopoulos and Evgeniou (2003), Lal (2005), Yu (2006), Fillis, et al (2004), Looi (2004).

**Source:** Adopted from: El-Gohary (2009) and El-Gohary (2012).

As can be seen from the previous table, researchers in the field depended not only on TAM and the IDT but also on a number of other factors. These factors are top management support, product characteristics, organisational readiness (e.g. size, cost, accessibility, financial technical and other resources), information intensity, industry pressure (competition), national infrastructure, security, government pressure / support, consumer readiness, support from technology vendors, international orientation of the enterprise and entrepreneur (owner) skills (El-Gohary, 2009).

It is also noticed that organisational readiness (size, cost, accessibility, financial technical and other resources), security, government pressure / support, industry pressure (competition), top management support, international orientation of the enterprise and entrepreneur (owner) skills are the most investigated factors from the researchers in the field of SBEs alongside the TAM and IDT related factors. This not only reflects the high importance of such factors in the adoption of new technologies by SBEs but also reflects a potential possibility to use these factors to investigate its impact on the adoption of other technologies or electronic phenomena's (like E-Marketing ) by SBEs.

#### 4. Conclusion

One of the main objectives of this research is to identify the factors affecting the adoption of E-Marketing by SBEs. Towards achieving this end, the different theories of new technology adoption such as the Technology Acceptance Model (TAM), the Innovation Diffusion Theory (IDT) and the Decomposed Theory of Planned Behaviour model (DTPB) were presented and discussed. Based on this discussion, and the findings of the review process for the literature related to the adoption of new technology, it was found that although technology acceptance model (TAM) and the innovation diffusion theory (IDT) have provided a very good base to understand the acceptance, diffusion and usage of new technologies, the two models have ignored other important factors both within and outside the organisation that may have an impact on the acceptance, adoption, diffusion and usage of new technologies. As a result, a lot of researchers and scholars have combined and expanded the two models to overcome this problem.

It was also illustrated that, researchers and practitioners working with TAM and the IDT have discovered a similar relationship between the two theories. This similarity is clear between “relative advantage” and “complexity” from the IDT side, and “perceived usefulness” and “perceived ease of use” from the TAM side. Moreover, most researchers and scholars find that relative advantage and compatibility are the most important elements in the acceptance, diffusion and usage of new technologies. Accordingly, the main constructs of interest for this research are perceived ease of use, perceived relative advantage (usefulness) and perceived compatibility.

Additionally, the idea of extending TAM and IDT, in an attempt to improve their ability to predict the adoption of E-Marketing by SBEs, was discussed. These factors are expected to include some external and internal variables that might have an impact on E-Marketing adoption by SBEs. Towards achieving this end, the literature of new technology adoption was investigated from a small business enterprise context to form a clear picture about the factors used by other researchers and scholars to understand the adoption of new technologies by SBEs. Based on this review, a considerable number of factors were found. Within this context, organisational readiness (size, cost, accessibility, financial technical and other resources), security, government pressure/support, industry pressure (competition), top management support, international orientation of the enterprise and entrepreneur (owner) skills were the most investigated factors from the researchers in the field of SBEs.

This reflects not only the high importance of such factors in the adoption of new technologies by SBEs but also the potential possibility of using these factors to investigate its impact on the adoption of other technologies or electronic phenomena's (like E-Marketing ) by SBEs. All the factors found within the literature should be methodologically investigated to determine the relative importance of each one of these factors.

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