

E-Commerce in Small and Medium Enterprises in Sri Lanka

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ABSTRACT

The growth of information technology in the business world is spreading at a phenomenal rate. The success of a business organization stands at the usage of IT in their business. Growth of e-commerce is the new born business method, which has originated through an extensive usage of IT in their business. This study will focus on the level of adoption of e-commerce in a population of 30 SMEs under the BOI, the relationship between firm-based characteristics and the adoption of e-commerce and also more importantly find out the critical success factors and discover potential benefits of adoption of e-commerce in SMEs. The results on the adoption of e-commerce showed a significant relationship with the two firm-based characteristics. That is management involvement and adoption of IT. The study also identified e-marketing and supplier service as the critical success factors in adoption of e-commerce.

KEYWORDS

Board of Investment (BOI), Information Technology, IT, Small and Medium Enterprise (SME)

1. INTRODUCTION

Today telecommunications are the keystone of the current technological revolution. The Sri Lankan government is currently on the process of upgrading the Internet infrastructure and developing it in the form of installation of super-fast telecommunication network using fiber optic cables and other necessary hardware. This is mainly due to the fact that Sri Lanka is unable to meet the changing requirements in the World Wide Web due to its weak and poor infrastructure. The rapid advancement in both Internet software and hardware has also lead to more and more organizations allocating resources to meet the changing requirements in E-Commerce. Large corporations, Small and Medium Enterprises (SMEs) and individuals are all investing more and more in the Internet business. The main challenge for these SMEs in adoption of E-Commerce is the lack of facility and resources in according to changing needs of the customers. The large corporations are finding no difficulties in their concurrence in E-Commerce world mainly because they have large resources and facilities compared with the SMEs. Senarathna and Wickramasuriya (2011) indicated that in Sri Lankan context there is a positive correlation between the adhocracy cultural characteristics among the SMEs and the level of e-commerce adoption. The lack of resources has been the major cause that has restricted SMEs in competing with their competitors. It is necessary to provide sufficient information and resources for SMEs by the BOI, since SMEs play a very vital role in the development of our country.

The main problem statement of this research would seek to understand, why and what are the reasons for SMEs to be reluctant to adopt E-Commerce to develop and grow their businesses in Sri Lanka and to identify the relationship between firm-based characteristics and adoption of E-Commerce

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in SME. It is hoped that with this information, more SMEs would be better prepared before venturing into E-Commerce activities. This information could also be useful for the larger corporations in Sri Lanka and those from abroad who wish to invest in E-Commerce in Sri Lanka. Through this research the SME will understand E-Commerce and its benefits. In the same time in the social benefit point of view this research will help make consumers more Internet friendly by making organizations push for E-Commerce adoption. Online purchasing will be the national shopping mall of the world. E-Commerce will increase consumer convenience and variety in choices; which will lead to the development of the economy of Sri-Lanka. This study will also help contribute to the little literature that exists on the Sri Lankan E-Commerce situation. It will help readers understand the E-Commerce landscape in Sri Lank and build on the studies conducted so far including this research.

2. LITERATURE REVIEW

There have also been a number of perspectives investigated with regard to e-commerce adoption and SMEs in recent studies. Of particular interest is the study by Wymer and Regan (2011) who have investigated the influential factors in the adoption of e-business and e-commerce technologies by SMEs. Further to this, Grandon et al. (2011) have compare e-commerce adoption theories, While Neilson et al. (2010) have examined the international perspective of the development of e-business by wine industry SMEs, and Beynon-Davies (2010) has considered e-business as a regional development driver. Additionally, scupola (2009) has studied the perspectives of e-commerce adoption by SME s in Australia and Denmark, and Williams et al. (2010) have explored small business sale growth in the UK and internationalization links to web site functions.

Sterrett and Shah (1998) and Stockdale and Standing (2004) have argued that micro-sized SMEs can compete with larger organizations through e-commerce as their size enabled them to be more adaptable and responsive to changing condition. Effective e-commerce deployment thus means that enterprises are no longer restricted by geographical locations and are able to compete in new national and global markets, both for customers and suppliers (Damanpour, 2001: Dholakia and Kshetri, 2004). In terms of financial support, Schneider and Perry (2001) and Galloway and Mochrie (2005) have suggested that SME owner/managers require support from government and support agencies to enable an effective transition in mindset. Such support can take multiple forms including business advice and/ or financial backing in grants and loans.

Daniel and Grimshaw (2002) found ICT adoption required consideration of a formal and appropriate ICT strategy (Chaffery, 2002) enterprise culture (Coates, 2001) and potential restructuring (Gulati and Garino, 2001). It was noted that SME owner/managers were reluctant to provide the time and finance to ICT development (Wolcott et al, 2008), without indications attainable benefit (Lockett and Brown, 2000). Lesjak and Vehovar (2005) recognized that ICT use contributed to the creation of current and future economic benefits, which was reflected in increased market value. Lewis and Cockrill (2002) identified that 71 per cent of SMEs surveyed realized quality benefits in terms of reduced costs, increased efficiency and increased customers. In terms of key success factors, Daniel (2003) identified that integration of ICT services with internal information systems, was an important determinant of eventual effectiveness. Lee (2001) described the change process as a potentially disruptive innovation which could radically alter operating procedures. Indeed, several examples of highly innovative SMEs that were prepared to adopt higher levels of ICT technologies (Loebbecke and Schafer, 2001), and thereby potentially change the nature of their business operations have also emerged

Sadowski et al. (2002) and Bengtsson et al. (2007) suggest that successful adoption of ICT varies according to enterprise size, exporting activity, awareness of benefits, industrial sector, customers and influence of trading partners. Hadaya and Pellerin (2008) for example, considered the understanding of the role of virtual enterprises in supporting manufacturing SMEs' internationalization processes. Furthermore, Poon (2000) identified that customer participation in ICT was critical to success

including relationships with suppliers, customers, partners and competitors, as was the nature of the business environment (Furnell and Karweni, 1999). These studies demonstrate that enterprises benefited from ICT deployment (Daniel and Grimshaw, 2002), but specific conditions had to be met to achieve significant benefit. Drew (2003) also noted differences could result in different internal requirements for SMEs, in relation to strategy development, training and support. Whilst adoption success has been reported in non-SMEs (Van Beveren and Thomson, 2002), however, doubt has been expressed regarding SMEs, particularly micro-sized enterprises' ability to exploit ICT successfully, given their limited access to in-house expertise and resources (Beckinsale and Levy, 2004). Levy et al. (2004) recounted that fewer than half the SMEs they surveyed believed that ICT was important.

Kleindl (2000) points out that the internet presents SMEs with a number of challenges, larger, technology enabled business are able to encroach on areas once held only by small companies. As transaction costs fall, it is becoming cost effective for large companies to enter niche markets in which SMEs traditionally had advantages. At the same time, customers in these markets are enabled to search for alternative suppliers. ICT & SMEs enterprises where ICT has a central focus it is employed to support business goals, and objectives as a reaction to customers and competitive forces (Gale and Abraham, 2005) Poon and Joseph (2001) and Simmons et al. (2011) also reported ICT benefits as increased competitiveness and improved performance. Mehrtens et al. (2001) identified three ICT SME drivers as perceived benefits (Poon and Swatman, 1999a) organizational readiness and external pressures (Ibbotson and Fahey, 2004) The ability of the SME owner/manager to recognize and understand benefits and relevance of ICT utilization also, however, represents an obvious driver towards usage and increased uptake (Bharati and Chaudhury, 2006) within this, owner/manager attitudes were a critical variable in deciding the competitive position of the enterprise. Fillis and Wagner (2005) concluded, for example, that some SMEs were only prepared to grow to a certain size, due to lifestyle influences and consequently the ICT adoption rate varied. Lifestyle business identified that they might adopt a particular level of ICT attainment, but would not actively pursue growth as a business objective (Chibelushi and Costello, 2009). Moreover, they noted the complex variables and relationships within SMEs meant that investment decisions, such as ICT, were not made in isolation. Hodson and Whitelock (2003), for example, differentiated between SMEs that operated as lifestyle businesses and entrepreneurial ventures which actively pursued growth.

It is stated in Cashman, et al (2004) that e-commerce facilitates SMEs to compete with large organization and operate globally. Globalization of tourism is a driver for e-commerce adoption (Gunawardana, 2000). Adoption of E-Commerce tools enables customers to more easily communicate to others involved in the tourism industry (Gunawardana, 2003). As stated by Cloete et al. in 2002 E-Commerce can deliver the tools to provide cost effective ways for SMEs to market them, launch new products, improve communications, gather information, and identify potential business partners. Research findings of Lawrence (1997) conclude that e-commerce adoption leads to tremendous improvement in marketing and the ability to reach new customers. He further stated that trading partners such as suppliers who have adopted e-commerce force SMEs to adopt e-commerce as it provides cost saving in huge margins in long term. These cost savings are not only through external communication processes but also through internal communication processes. External communication is enhanced through EDI, online sales, whereas internal communication is enhanced through the use of internet rather than traditional telecommunication

According to Calvin B. Lee (2002) higher customer service levels lead to greater revenue and net income. The above stated research finding elaborates the extent to which customer service can lead to the company development. In every business, the customer service is very important. Without the help of customer service profit-oriented businesses cannot acquire leading positions as the ultimate objective of any business would be to satisfy user requirements in order to earn profits. For an internal Research & Development department to operate successfully, customer service is an important element as it provides the necessary feedback required from the customer to generate a useful product or service. When the customer service is in electronic form the difference is that the

feedback provided is faster. According to Estep and Castleberry (1999, p. 13) one primary benefit of e-commerce is the potential for an improved relationship with customers.

2.1. Factors Influencing Firms' E-Commerce Adoption

Paynter and Lim (2001) in their research finding states that e-commerce technology which plays a major role in selling of their products through internet is significantly increasing the growth of the company. They also predict that growing number of Internet users, who are mainly buyers provide the opportunity for the organization to expand the marketplace by deploying a cost effective and efficient solution. With relevance to above arguments the following hypothesis would be developed.

2.2. H1: Relationship Between Adoption of IT and Adoption of E -Commerce

Based on an analysis carried on a number of researches, it can be generally stated that successful E-Commerce adoption by SMEs involves the active participation of the CEO or the owner of the company in their investment in IT. According to Cloete, Courtney, and Fintz (2002) it is stated that even though the CEO or owner identifies the potential of e-commerce usage in their company, but due to their lack of understanding in technology they will be reluctant to adopt e-commerce. With relevance to above arguments the following hypothesis would be developed.

2.3. H2: Relationship Between Management Involvement and Adoption Of E-Commerce

According to Mukti (2000) has pointed out that one of the main barriers in adopting E-Commerce is the Legal issues which surround them. When E-Commerce mode of communication is used, legal issues are of special importance; even though the communication originates through a computer there are no physically documents to make a business deal legally binding. With relevance to above arguments the following hypothesis would be developed.

2.4. H3: Relationship Between Legal Requirement and Adoption Of E-Commerce

Adoption of IT will enhance the internal efficiency of the organization by utilizing the Internet for IOS (Inter-Organizational Systems). The Korean Ministry of Commerce pointed out that the adoption of E-Commerce will help the organization; thereby it will build efficient and effective relationships between the customers and suppliers within the company.

Customer service is an important element as it provides the necessary feedback required from the customer to generate a useful product or service. When the customer service is in electronic form the difference is that the feedback provided is faster. With relevance to above arguments the following hypothesis would be developed.

2.5. H4: Relationship Between Adoption of IT and Customer Service

The customer satisfaction is one of the main priorities of the management; Estep and Castleberry (1999, p.13) states that one primary benefit of E-Commerce is the potential for an improved relationship with customers. Today most of the customers are involved in the E-Shopping or E- business. The management involvement in providing the best service according to the customer s expectations is one of the top priorities of the management team. This involves effective adoption of E-Commerce in their SMEs.

2.6. H5: Relationship Between Management Involvement and Customer Service

With relevance to findings of Estep and Castleberry (1999) a primary benefit of e-commerce is potential for improved customer relationship. Since Gunawardana (2000) express in his findings that country to country e-commerce legal conditions are different. The e-commerce law in Sri Lanka is currently weak and its effectiveness in the business has not reached to the companies and consumers.

Basically, there are no awareness about it, which has led to less trust among the parties involved in the e-commerce transaction. Therefore, legal requirement would be important over customer service. With relevance to above arguments the following hypothesis would be developed.

2.7. H6: Relationship Between Legal Requirement and Customer Service

According to Chan and Al-Hawamdeh (2002), e-commerce totally depends on the digital communication and IT. When considering E-Marketing this is a very important feature of E-Commerce. Gunawardana (2000) stated that one also could conclude that marketing a product or service through internet is easier than any other way. E-marketing is the vast cost-effective way. These arguments on adoption of IT and E-Marketing would facilitate the below developed hypothesis.

2.8. H7: Relationship Between Adoption of IT and E-Marketing

Findings on Osmonbekov (2003) stated CEO or Manager are taking key role to adoption of IT in SMEs. Standing and Stockdale (2003) points out the at E-Marketing is the cost-effective marketing strategy and it provides an opportunity to SMEs by providing avenues to compete with larger firms by making marketing, communication and information resources available for comparatively low financial cost. Establishing an effective E-Marketing practice involves a greater management involvement by providing the best IT for their SMEs. These arguments would facilitate the below developed hypothesis.

2.9. H8: Relationship Between Management Involvement and E-Marketing

Adoption of E-Commerce is mainly for few main purposes, of which to market the company themselves by providing company information and to market the products and services offered by the companies. Since the company is advertising in the internet and selling its product without any physical documents, the legal requirements plays a major part during the adoption. These arguments would facilitate the below developed hypothesis.

2.10. H9: Relationship Between Legal Requirement and E-Marketing

The relationship with the supplier is also extended by adoption of E-Commerce. Another research finding of Stricker (2003) states that cost of delivery may be saved due to E-Commerce adoption. The communication and access of business deals between the two parties through the most cost effective E-Commerce operations turns the relationship with the supplier well-organized. These arguments would facilitate the below developed hypothesis.

2.11. H10: Relationship Between Adoption of IT and Supplier Service

According to Estep and Castleberry (1999) they point out that one of the primary benefits of e-commerce is that it improves the potential for an improved Relationship with suppliers and the management. The adoption of e-commerce will facilitate both the parties by giving up-to-date detail of every transaction, where the business deals with both the parties will be more cost-effective. These arguments would facilitate the below developed hypothesis.

2.12. H11: Relationship Between Management Involvement and Supplier Service

Estep and Castleberry (1999) in their study states that one of the primary benefits of the e-commerce is that it improves the relationship with suppliers and the management stronger, the legal requirements play a major role between these two parties since there are no physical documents as evidence of the Transactions held between the two parties. These arguments would facilitate the below developed hypothesis.

Table 1. Survey response rate

	Total sample size	Enterprise on Operation	Response received	Response rate
SME Survey	36	30	21	70%

2.13. H12: Relationship Between Legal Requirement and Supplier Service

The increase of E-Commerce today has also built a greater demand for e-currency. It has opened up an opportunity to SMEs global network by allowing payments worldwide. E-payment methods are essential in E-Commerce to attain the speed of processing payments and for accuracy of transaction information (Singh, 2002, p. 443). Also, the electronic payment system provides opportunities for new global and national trading relationships (Paynter, Lim, 2001, p.3). This creates a high importance of E-Payment in E-Commerce. This arguments would facilitate the below dev eloped hypothesis.

2.14. H13: Relationship Between Adoption of IT and E-Payment

According to Singh (2002), E-payment system has induced customers to purchase online at their convenience. The management involvement is necessary since today E-payment is considered to be the fastest mode of transaction. Paynter & Lim (2001) states e-payment system provides opportunities for new national & international trading relationships, these sorts of opportunities are out for grab when SMEs are not adopting the e-commerce.

2.15. H14: Relationship Between Management Involvement and E-Payment

According to the research carried out by Silveira, 2003 it is stated that currently in Sri Lanka, there is culture of cash payments. The different modes of carrying out e-payment are for e.g.: credit cards, e-money, etc. According to Singh (2002) generally it is accepted norm that credit cards are the most preferred method of making payments in the current business environment. However, it is stated that it has to be reliable and secure payment systems (Brendan & Hussain, 2001). According to Singh (2002, p. 443) Payment information via e-mails or automated responses are greatly appreciated by Customers the legal requirements should be clearly defined as when the customer or the supplier involves in the transaction process, since it is still considered as an insecure method of payments. These arguments would facilitate the below developed hypothesis.

2.16. H15: Relationship Between Legal Requirement and E-Payment Methodology

The section provides information on collection of data, data gathering procedure, dimensions of variables, research instrument, data analysis and guide to adoption of E-Commerce activity level. Data were collected from twenty-one companies through interviews. The population of the research will be all small and medium enterprises registered with BOI in Sri Lanka. However, due to budget and time constraints, the sample of the research was obtained only in the Colombo Metropolitan area. The total population of the Board of Investment registered SME s are 30.

In this research non-probability sampling technique was carried out. In that, particularly convenience sampling method is used because of time and budget constraints. A survey questionnaire was developed and data was gathered through personal interviews. The table 1 shows the total sample size, enterprise on the operation, response received from the enterprise and response rate.

For the research purpose after collecting the 10 data set questionnaire from companies, the reliability test carried out. The Conbach's Alpha is 0.8955. Therefore, questionnaire is reliable.

The questionnaire was the main element for this research. It has divided into three sections. Section I is divided into subsection on the basis of variables. This is to make it easy to fill the questionnaire. Subsections are the variables to collect information related to the e-commerce adoption. There are 50 statements, which are categorized into Customer Service, Supplier Service, Management involvement,

Table 2. Sector

Industry	Frequency	Percentage
Finance	1	4.8%
Information Technology	4	19.0
Manufacturing	12	57.1
Education	1	4.8
others	3	14.3
Total	21	100.0

adoption of IT, e-marketing, legal requirement, and e-payment. Every item required the respondents to choose one answer out of five alternatives. The scale used is called the Likert scale, where the five alternatives are strongly disagree, disagree, moderate, agree, strongly agree respectively. Section II is designed to collect information related to the benefits received from using E-Commerce applications. There are 14 items where the respondents choose one answer from each item which is of Likert scale type. Section III is designed to collect information related to the company profile. There are 16 questions where the respondents are required to tick one answer or fill in the blank.

3. DATA ANALYSIS

All data from the respondents are coded and entered into the data sheet of the SPSS program for statistical analysis. To evaluate the entire variable, each variable has set of Likert scale questions. On that, got the mean of each set of variables and convert that to ratio type data. The following analysis and tests are carried out:

1. The first part of the analysis consist various tabulation of data, where frequency and percentage will be displayed.
2. In the second part of the analysis, Simple Linear Regression analysis will be carried out to identify the relationship between the adoption of E-Commerce and the firm-based characteristics.

From Table 2, it can be seen that among the respondents, those from the manufacturing sector constitute the highest percentage at 57.1%. That is more than half of population in the SME industry. Continue with this followed by the IT sector. This is current growing sector in Sri Lanka. The figures reflect the current trend that IT is becoming a major sector in the economy. One of the reasons could be that many companies now venture into IT related business because the government is providing all kinds of incentives to promote IT to transform the economy into knowledge economy. Another obvious reason is the global trend of Information revolution where Internet is becoming a part of everybody live and IT is becoming the basic enabler of every business, the demand for IT related products is increasing, naturally more and more companies are investing in the IT sector.

3.1. Company Ownership

From Table 3, Private Limited Company is the highest form of company ownership among the respondents, which constitute 76.2%. The second highest respondents rated the Partnership. The lowest are public Limited Company and Others, which constitute only 4.8% each category among the respondents.

Table 3. Ownership

Company	Frequency	Percent
partnership	3	14.2%
Private limited company	16	76.2%
Public limited company	1	4.8%
others	1	4.8

3.2. Number of Employees

From Table 4, it can be seen that among the respondents, most of them have 50 - 250 employees, while only 23.8% have more than 10 - 50 employees. It shows that most small and medium Enterprise has more employees as the extent of operation.

3.3. Connection of Internet Service

Table 5 shows the 52.4% respondents have using Dial-up Connection for the internet usage in companies. With that 33.3% respondents are using data service (leased line) and 28.6% respondents are using ADSL. The lowest connection usages are IP-VPN and ISDN. If we consider all these facts, all these SMEs are well known the Internet advantages and its benefits. That is why at least in the companies has minimum dial-up connection

3.4. E-Commerce Activities Usage by SME s

As per Table 6, it can be concluded that most frequently used E-Commerce activities in SMEs are e-mail, internet and web site activities. The percentages are respectively 95.2%, 90.5% and 71.4%. It can be generalized that the usage of e-commerce in relation to these three activities are above 70%. These are the most commonly used activities in SMEs. The leased used e-commerce activities in SMEs are the following: EDI (electronic data interchange) 28.6%, making purchase online 23.8%, online payment 14.3%, CRM (customer relationship management) 14.3%, e-customer service 14.3% and video conferencing 9.5%.

4. HYPOTHESES TESTING

Prior to conducting the statistical analyses, the three major assumptions of a multiple regression analysis, namely, normality, linearity and homogeneity of variance were examined and found no major violations. Consistent with the well-established procedure in creating interaction terms (Aiken and West, 1991), the variables were first mean-centered before creating the interaction term. Along with mean-centering, the variance inflation factor (VIF) and tolerance levels were also checked

Table 4. Employees

No. of employees	Frequency	Percent
Less than 10	2	9.6%
10-50	5	23.8%
50-250	7	33.3%
250 and more	4	19.0
Data unavailable	3	14.3

Table 5. Connection types

Connection	Usage	Non-Usage	Usage %	Non-Usage %
Data Service	7	14	33.3%	66.7%
IP-VPN	1	20	4.8%	95.2%
ADSL	6	15	28.6%	71.4%
IDC	0	21	0.0%	100.0%
ISDN	1	20	4.8%	95.2%
Dial-Up	11	10	52.4%	47.6%

for the presence of multicollinearity. Accordingly, it was found that all tolerance values were well below 0.1, which is considered as the rule-of-thumb cut-off point (Hair et al., 2006). Table 7 below shows the results of simple liner regression analysis. First hypothesis proposed a significant, positive relationship between adoption of IT and adaption of e-commerce. To further test the first hypothesis (H1), a one-way analysis of variance (ANOVA) was conducted in order to see whether there is a statistically significant. Hypotheses 1, 2, 8.10 and 11 were statistically significant and proved that there is relationship among the two variables. Other remaining variables proved that, there is no relationship.

5. CONCLUSION AND IMPLICATION

The main issue addressed in this study was why SMEs are reluctant or are not prompted to adopt e-commerce to develop of day to day business. The most frequently used e-commerce activities are the internet, email and websites. The least used activities are electronic data interchange, making purchases online, online payment, customer relationship management, e-customer service and video conferencing. Overall, what was found that the SME s use only the basic or low-level e-commerce activities to carry out day to day operations.

The next finding is to identify the relationship between firm-based characteristics and adoption of e-commerce in SME. Under this first one is adoption of IT has a relationship with the adoption of E-Commerce. There is evidence that the level of adoption of E-Commerce is influenced by the adoption of IT. It was found that there is a 25.5% impact of adoption of IT on the adoption of e-commerce. It

Table 6. E-commerce activity usage

Activity	Usage	Non-usage	Usage in %	Non-usage in %
E-mail	20	1	95.2%	4.8%
Internet	19	2	90.5%	9.5%
Web site	15	6	71.4%	28.6%
On line payment	3	18	14.3%	85.7%
Purchase online	5	16	23.8%	76.2%
E-customer service	3	18	14.3%	85.7%
Video Conferencing	2	19	9.5%	90.5%
CRM	3	18	14.3%	85.7%
EDI	6	15	28.6%	71.4%
others	1	20	4.8%	95.2%

Table 7. Adoption of IT on adoption of E-Commerce

Hypotheses	R ²	Sig F
H ₁ . Adoption of IT on adoption of E-Commerce	0.255	0.010*
H ₂ . Management involvement on adoption of e-commerce	0.212	0.023*
H ₃ . Legal requirement on adoption of E-Commerce	0,0000	0.955
H ₄ . Adoption of IT on customer service	0,128	0.175
H ₅ . Management involvement on customer service	0,242	0.051
H ₆ . Legal requirement on customer service	0,105	0.225
H ₇ . Adoption of IT on E-Marketing	0,221	0.074
H ₈ . Management involvement on E-Marketing	0,295	0.033*
H ₉ . Legal requirement on E-marketing	0,002	0.868
H ₁₀ . Adoption of IT on Supplier service	0,137	0.023*
H ₁₁ . Management involvement on supplier service	0,233	0.001*
H ₁₂ . Legal requirement on supplier service	0,021	0.423
H ₁₃ . Adoption of IT on e-payment	0,003	0.836
H ₁₄ . Management involvement on e-payment	0,001	0.901
H ₁₅ . Management involvement on e-payment	0,001	0.901
H ₁ . Legal requirement on e-payment	0,001	0.935

*Significant at 95% confidence level

is also clear that the adoption of IT is vital for successful implementation of e-commerce activities. Companies who have less access to advance information telecommunication infrastructure and lack of technological expertise are likely to have low level of adoption of e-commerce and low level of e-commerce activities. This is supported by the fact that there is an impact of 25.5% of adoption of IT on adoption of E-Commerce in Sri Lanka. On the contrary, companies who have better access to Information Telecommunication infrastructure that support e-commerce and have better knowledge in technology are likely to have higher percentage of e-commerce adoption and higher e-commerce activities. This is not seen in the Sri Lankan context where adoption of IT is mostly confined to day to day business activities that do not involve high usage of e-commerce. This is further supported by the earlier finding that e-commerce activities are mainly concentrated on e-mail, internet and websites in Sri Lanka.

The second one is management involvement has a relationship with the adoption of e-commerce. There is evidence that the level of adoption of e-commerce is influenced by management involvement. The finding was that there is 21.2% impact of management involvement influencing the adoption of e-commerce. This could be explained from the management aspect. The lack of IT knowledge amongst top management was seen as an obstacle to adopt e-commerce and denotes the commitment shown towards the adoption of e-commerce. The majority of the respondents also believe that top management commitment is important for the adoption of e-commerce. However, the lack of IT knowledge at the top management level in using the technology or literacy of IT has hampered the adoption of e-commerce activities. The third one is to find out the critical success factors of adoption of e-commerce, for SMEs in Sri Lanka. The significance of critical success factors of e-commerce and firm-based characteristics are studied. The factors which had significance impact on adoption e-commerce are given below:

1. E-Marketing and Management Involvement

There is evidence that management involvement has an effect on e-marketing. The analysis shows that management involvement has 29.95% impact on e-marketing which is a critical success factor of e-commerce. The current business environment is such that in order to be competitive, fast communication and global connectivity is an important factor. E-Marketing enables managers to identify niche markets. This has been proved; since data collected shows that most companies agree that e-marketing immensely assists them in identifying niche markets. Likewise, companies have agreed that advantages derived through E-Marketing such as cost minimization, self-marketing and launching products; encourage managers to increase their involvement with e-marketing. These are the reason as to why there is significance between management involvement and e-marketing.

2. Supplier service and Adoption of IT

There is evidence that supplier service determines the adoption of IT. The analysis shows that supplier service has 13.7% impacts on adoption of IT. It is always best for a company to find the best fit supplier, since output and timely customer delivery depends on the quality and reliability of the supplier. By adopting IT, the company introduces new methods of running a business. The use of computers and the internet opens up the opportunities of finding relevant, reliable and quality suppliers. In order to be able to find key suppliers and be in touch with them, most companies agreed on the fact that IT needs to be adopted.

3. Supplier service and Management Involvement

There is evidence that supplier service determines management involvement. The analysis shows that supplier relation service has 23.3% impact on management involvement. Here again the management emphasizes on the need to have reliable, relevant and quality suppliers. Therefore, the benefits derived through supplier service, which relies on IT, will definitely increase the management involvement in this regard.

The Top executives and the top management in the target SME companies pointed out that the adoption reduces the cost and at the same time it also increases the efficiency in dealing with suppliers. These were seen as the two primary benefits in adopting e-commerce in their companies. They also identified that it also increases their service to the customer and also increases the relationship with the customer, and it goes to the level of making the customer loyal towards the company. The other main benefits should also be noted since the respondents showed a very favorable response to them. The benefits shown in the moderate level should also be noticed and SME companies should take the advantage in gaining by adopting E-Commerce in the best strategic way.

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