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EFFECTIVENESS OF E-COMMERCE WEBSITES AS A MEANS OF TRANSFORMING TRADITIONAL GRASSROOTS BUSINESSES IN SRI LANKA

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ABSTRACT

The majority of traditional grassroots businesses are seeking continuous support from online platforms to expand their operations globally and within Sri Lanka. A grassroots business can be defined as an independently owned small business established with limited funds (e.g., bakers, florists, estheticians, and clothing manufacturers). The utilization of e-commerce websites to improve business activities within grassroots level businesses have been a continuous obstacle for many new entrepreneurs in Sri Lanka. This is mainly due to the fact that grassroots businesses lack the proper training on integrating e-commerce platforms into their current business infrastructure. Additionally, outdated technology, lack of trust in e-commerce, high costs associated with integrating e-commerce websites, and the lack of expertise in using the Internet and e-commerce websites are critical problems associated with grassroots businesses transitioning to e-commerce. Thus, the objective of this paper is to further investigate these challenges pertaining to building meaningful relationships among traditional grassroots entrepreneurs and their consumers through the integration of e-commerce websites into their current business landscape. Moreover, this study also attempts to identify the key factors that help enhance these relationships among grassroots businesses and their consumers. The findings of this research would aid traditional grassroots businesses in understanding the current issues and obstacles in transitioning to e-commerce and help build impactful relationships with other businesses and consumers. Moreover, this research would enable grassroots businesses to further expand their business activities, and in turn, contribute to the economic development of Sri Lanka.

Keywords: Grassroots businesses, e-commerce, grassroots entrepreneurs, Internet, Sri Lanka

INTRODUCTION

In the 21st century, organizations heavily depend on the e-commerce websites in order to promote and expand their products to customers. Several books and authors have described e-commerce in many different ways. For instance, Plunkett et al. (2014) state that e-commerce is all about use of internet and intranet to sell, purchase, transport or trading of data, goods or services whereas Clark (2005) describes e-commerce as a "support services" for trading. History of e-commerce started with the development of electronic funds transfer system in the early 1970's. Electronic fund transfer is involved with transferring funds between one companies to another. This allowed exchange process to happen but commercializing of e-commerce really happened after 1990s due to technological

improvement and the significant importance placed by the consumers over the internet. Nowadays, e-commerce is rapidly developing and giving the consumers and businesses the ability to connect, collaborate electronically with each other. Additionally, e-commerce allows to obtain feedback with each other, share innovative ideas and create free links to other websites for anyone who is interested in finding additional information (Kelly, 2005). Based on the e-marketer reports global (2019), e-commerce retail sales would experience an increase of US $3.535 trillion in 2019 to $ 5.695 trillion in 2022. Moreover, depending on the Asia-Pacific region would have 25% projection of change in the e-commerce sales. Countries like Mexico will report 35% tremendous increase in sales while India and Philippines will report 31% of change (e-marketer, 2019). Based on the statista information by Clement (2019), retail e-commerce sales will rise to $4.13 trillion by the period 2020. With the statistics, it is indicated that consumers in China will be accountable for 41% of complete e-commerce expenditure. This data indicates a global preference towards e-commerce sites by consumers in the future. Data analysis by Clement (2019) from statista digital market outlook studies depict that annual amount spent by the consumer e-commerce categories around the world have increased by 17% ($524.9 billion) on fashion and beauty category, $329.6 billion on electronic and physical media, $209.5 on billion food and personal care, $272.5 billion on furniture and appliances, $386.2 billion on toys and hobbies, $750.7 on travel (including accommodation), $12.05 billion on digital music and $70.56 billion on video games. This increase is mainly due to the convenience of the shopper and the availability of technological access throughout the world.

At present, most of the global giants like Amazon, AliExpress and eBay are not only catering to the consumer market directly they also help grass root companies by establishing a platform where they can sell their products internationally. For example, eBay's main motive is to connect millions of buyers and sellers together. E-bay statistical reports (2019) depicts that there are 1.3 billion listed sellers and 183 billion buyers. Moreover, Amazon is considered to have 2.5 billion sellers (marketplace pulse, 2019). AliExpress is considered prime online marketplaces throughout world which offers more than 100 million merchandises from 200,000 venders (Actionpay, 2018). These statistical data suggest that current trends are to open doors by well-known e-commerce sites and create opportunities for sellers to reach customers. In Sri Lankan context, e-commerce is fast growing and concentrates basically on urban areas. Based on industry experts' predictions and opinions in Sri Lanka, e-commerce sales are supposed to raise from $40 million US dollars (Sri Lanka 6.4 billion rupees) to $400 million US dollars by 2022 (Daily News, 2018). Presently, it is identified to remain 0.4% which is US $10 billion of Sri Lanka's annual total retail sales. This is mainly due to the lack of infrastructure such as computers by users and high cost that people tend to use on traditional stores in order to make purchases. Hence, currently Sri Lankan government is laying infrastructure such as fiber optic cables and other hardware in order to promote the internet access. According to World Bank Group (2018), Sri Lankan internet users have increased from 2003 to 2016 due to availability of internet access. Recently most of the industries in Sri Lanka have identified that going online is the most accessible method to reach the consumers. For instance, major companies like Keells Super, Arpico, Damro and Softlogic are going online in order to capture a larger

market share in Sri Lanka. These major companies tend to promote their own brands and other brands offered by grass root companies. Most of the grass root companies tend to suffer financially to establish their own websites to reach the consumers, however they continually tend to seek the support of the major companies. Major e-commerce businesses like Daraz, Kapruka, Takas, Mydeals, Ikman,and Tickets.lk have irrupted by offering a major helping hand to the grass root companies. Although major companies are willing to support grass root companies they have negative approach of adopting e-commerce websites.

From a general pilot study of telephone interviews conducted within a group of 20 grass root businesses, numerous factors were identified for lack of utilization of major e-commerce sites by grass root companies. One major factor is lack of ICT education and knowledge training among upcoming grass root companies. It is widely understood that education and training are necessary to succeed in digital economy. Compared to other countries, Sri Lanka's universal literacy rate tend to show positive signs of improvement. However, English language and computer literacy tend to be a lower rate. According to Department of Census and Statistics, (2017), computer literacy of Sri Lankans show a decrease of computer literacy from 28.3% to 27.5%. As a result of deficiency of computer literacy training and English language, grass root companies fail to integrate e-commerce platforms into their current infrastructure, establish relationships and gain support from larger companies.

Another major cause found from the pilot study was technological advancements and development is limited to Colombo area. Other areas in Sri Lanka tend to have a slower technological development comparatively. Unfortunately most of the grass root companies are segregated in rural areas. Lack of infrastructure in rural areas have lead grass root companies of Sri Lanka been limited to traditional methods of exchange and also a limited capacity of their customers. Even larger companies find it difficult to support grass root companies because they lack basic infrastructure to connect with internet.

Additionally, grass root level traditional companies in Sri Lanka fail to recognize the benefits of engaging of e-commerce sites. Most believe it is not a reality to reach consumers through e-commerce sites and there are huge uncertainties of potential failures. According to Organization for Economic Co-operation and Development (OECD) (1998), uncertainty about e-commerce sites is a major issue among small and medium companies in developing countries. Grass root companies in Sri Lanka tend to operate in limited budget. Any additional cost would make them difficult to bear and compete with other well-established firms. When grass root companies expect to reach larger audience, they would need to use larger channels which might incur additional cost. Therefore, as a result of cost factor, Sri Lankan grass root firms tends to reject larger E-commerce channels to reach customers.

Finally, lack of appropriate specialized human resource is a major challenge to grass root businesses. According to Department of Census and Statistics (2017), it depicts overall computer literacy rate is 28.3% and 27.5% from overall population respectively in 2017 and 2018. This indicates a lesser computer literate society. Especially, grass root businesses owners tend to be very much specialized on the work they do. For example, cake bakers tend to be skilled at making cakes and they focus less on acquiring ICT knowledge. So when there is a malfunction of the e-commerce channel, they find it difficult to find specialist in order to fix the problem. As a result of lack

of expertise knowledge by grass root businesses, they tend to use traditional methods to reach the customers.

It is clear that grass root companies fail to adopt and build relationship with e-commerce sites is a major problem. This is mainly because grass root domestic companies can contribute to the local economy by producing the products that are required. If grass root companies are not profitable they might not continue their operations which will impact the development of economic growth of Sri Lanka. Therefore, abundant attention should be given to maintaining healthy relationship between major e-commerce platforms and grass root companies of Sri Lanka. With building relationship becoming a major issue to the economy we need to clarify what are the challenges pertaining to building effective relationship among grass root and major e-commerce sites? Determine what are the key factors that help to enhance the relationship among grass root businesses and e-commerce sites? Finally, identify what are the available recommended solutions to encourage utilization of e-commerce sites by grass root companies to reach consumers?

Although this paper focus on answering the above mentioned questions. For the purpose of limiting the boundaries the consideration is based on grass root companies such as cake producers, florist, estheticians and clothing manufacturers who established and succeeded during the last 10 years (2008 to 2018) from Kurunegala district, Sri Lanka. The objective of the paper is to identify the challenges pertaining to building a relationship among grass root companies and e-commerce websites. Challenges such as: lack of training, outdated technology, lack of trust in e-commerce, high cost and lack of expertise really lead into determination of utilization of e-commerce sites by grass root companies. Moreover, to determine the key variables that help to enhance the relationship among grass root businesses and major e-commerce platforms. Finally, to recommend a cause of action that needed to implement to enhance relationships.

LITERATURE REVIEW

E-commerce is developing so rapid in various societies today. Hence, Lawson et al. (2003) state that nowadays e-commerce have offered wide range of opportunities for businesses to trade online and connect customers in an international market. According to Pilinkiene et al. (2013), E-commerce have enhanced the competitiveness by involving businesses and customers collectively to create business opportunities. Although there are wide variety of benefits of using e-commerce, it continuously creates numerous challenges and barriers for developing countries grassroots businesses to adopt to the changing demands of technology.

Challenges of adopting e-commerce

A study conducted by Auger and Gallaugher (1997) debated that six challenges when adopting e-commerce such as finance concerns, rise of competition, costs of development and maintenance, testing on novel marketing techniques, obstacles of gathering and organizing data, and strong desire to build brand reputation through product promotion. They stated that these challenges will make a crucial impact on making decisions of going online for small grassroots businesses. However, Jennex, Amoroso and Adelakun (2004) explored that most of developing countries consider infrastructure as most vital factor along with appropriate skills, interfaces and technology in order to connect with other e-commerce businesses. Another study conducted about E-commerce implementation in South Africa by Cloete,

Courtney, and Fintz (2002) found out that having less access to software, hardware, telecommunication, and computers at a realistic cost, less usage of e-commerce by distributors and suppliers, negative attitudes towards security and legal issues, low knowledge about e-commerce by small businesses and not recognizing the value of e-commerce usage act as barriers for e-commerce adaptation of most businesses. A Chinese study also identified that limited distribution of computers, not having secure online payment methods, taxations and regulatory framework and not having proper channels to distribute are major inhibitors of e-commerce implementation. A comprehensive study of not adopting e-commerce by small companies in Egypt by El-Nawawy and Ismail (1999) argued that lack of awareness about the technology, lack of education, lesser size of market for e-commerce, lack of telecommunication facilities, insufficient finance, tough legal and regulatory systems, lesser government support and cultural attitude towards e-commerce are key reasons for not implementing e-commerce systems by small businesses in Egypt. Furthermore, Asia foundation report (2002) identified drivers and inhibitors of e-commerce adaptation. This report illustrated that main drivers of e-commerce adaptation are easiness of reaching local and foreign customers and business partners, ability to offer e-commerce and benefits received from usage of e-commerce whereas the main inhibitors of not using e-commerce are primarily infrastructure and speed of access, less access to internet facilities such as landline and telephone, high cost associated with telephone facilities, connections speed, concerns of security and privacy, banking systems and regulations, main business transactions continue to be completed offline, as well as risk of credit activities. Another report by Economic Intelligence Unit (2003) exhibited the ability to connect and technological infrastructure, environment of the organization, ability of consumer and business to adopt, legal and policy of the environment, cultural and social infrastructure (for instance, literacy level and basic education), support of the e – services are main challenges of e-commerce adaptation for grassroots businesses. Moreover, APEC's E-commerce Readiness Assessment report (2002) highlighted measure of e-readiness of any country can be assessed using factors such as basic technology and infrastructure, access to networking facilities, usage of the internet systems, amount of promotion and assistance, availability of skills and human resources (amount of ICT education workforce), and environment setting for the digital economies (taxes and tariffs, industry self-regulation and control, implemented government rules, and consumer faith). Finally, extensive literatures by Beale (1995) and Cristache, et al (2015) concluded that challenges like deficiency of skilled human resources and professionals, ICT security concerns and minimum confidence in the e-commerce, policy frameworks to enhance innovation, quality, productiveness and competitiveness, as well as lack of knowledge and expertise to use the e-commerce technologies lead as barriers for implementation and adaptation of e-commerce by small businesses around the globe.

Challenges of adopting E-commerce in Sri Lanka

According to a report produce by Lanka business development (2002) demonstrated that there are positive and negative factors contributing to e-commerce adaptation and implementation in Sri Lanka. Although report talks about both sides, negative factors tend to outweigh the positives more significantly. According to the that report some of the negative factors are negative attitudes

towards adopting to the new technology, lack of understanding about the paybacks of e-commerce, limited experience about usage of e-commerce products and services, poor knowledge in English, lack of IT expertise, selling online is considered impractical, internet banking facilities are considered to be limited, lack of telecommunication infrastructure, and setting up online payment is considered a problem.

In addition, another study conducted by Greenberg et al., (2002) on IT adaptation competence in Sri Lanka identified some key factors which led towards not adopting e-commerce processes in trade industry. It stated that overall impression is considered low among the rural sector mainly due lack of electricity and telecommunication facilities when adopting e-commerce whereas most of the e-commerce adaptation is centered towards urban cities like Colombo, Kandy, and Galle. Secondly, lack of human resources and education, especially in terms of information technology literacy among Sri Lankan small businesses were considered to be inadequate, it lead towards problematic situation in implementing e-commerce in Sri Lanka. It is evident that Sri Lanka has been considered to have the highest literacy rates in South East Asia, but according to the study having high literacy rates do not support the adaption of e-commerce. Thirdly, Telecommunication cost was identified as a major barrier in implementing e-commerce. Only major businesses were identified cost as not a problem, but majority considered cost per minute telephone charges as a major challenge for implementing e-commerce. Fourthly, study also agreed on maintaining regular electricity coverage is challenging to maintain information technology facilities which results in less adaptation of e-commerce websites. There are regular power outages which impacts the processors and storage facilities, therefore most of small businesses discourage the utilization of e-commerce. Finally, study depicted that lack of expertise with information technology capability to maintain the complicated software and hardware is a major threat to e-commerce adaptation. Most Sri Lankans currently use outdated technology which do not support the current requirements for e-commerce technology.

Relevant Ecommerce Adaptation models

Technology acceptance model was developed by Davis (1989) to identify the major causes that lead to acceptance of novel technologies in any situation. In other words, he determined a framework to identify what lead towards actual usage of technology. His studies have depicted behavior of acceptance is highly influenced by perceived usefulness, ease of use and external variables such as experience, image, relevance to the jobs, subjective norms, quality of output and ability to demonstrate results. It was argued by El-Gohary (2012) most of the internal and external factors are ignored in what lead to usage of technology, however this model has been empirically tested by many studies around the world.

In 1990, Tornatzky and Fleisher were introduced the theory of technology organization framework to identify and observe the factors that impact the introduction of technology. It demonstrated that technology adaptation is basically effected by context of the technology, context of the organization and also context of the environment (Tornatzky and Fleisher, 1990; Taherdoost, 2017). According to Tornatzky and Fleisher (1990), technology context is mainly influenced by availability of the relevant technologies both internally and externally. Organizational context is mainly influenced by firm's resources, size of the firm, structure of the management, resources which are slack and

communication process. Context of the environment is based on regulations of the market, structure of the market, characteristics of the industry and available technological infrastructure.

Diffusion of innovation model was introduced by E. M Rogers in 1962.This model studies how a particular idea or innovation spread among the society or how long it take for innovation to adopt (Taherdoost, 2017). There are various group of people in the society they are namely: innovators, early adopters, early majority, late majority and laggards (Rogers, 1962). Innovators: who try the idea first, early adopters: who share positive opinions about the technology, early majority: who read opinions from early adopters, late majority: who will try to adopt new technology if there is a strong feeling or if there is idea of been left out of the society and laggards: they prefer only traditional technologies but will choose new technologies if there are no alternatives (Rogers, 1962; Sila, 2015).

Igbaria's Model identifies inherent and external factors that lead to usage of computers (Igbaria et al, 1994). Perceived fun to use computers is regarded as an intrinsic motivator and perceived usefulness is regarded as extrinsic motivator for computer usage. In this framework other factors are also highlighted that lead for computer usage. They are anxiety about the computers and computer usage satisfaction (Venkatesh et al, 2003).

Theory of reasoned action was developed for psychological and sociological researches but it was later adopted to understand the IT usage behavior (Venkatesh et al, 2003). This framework is introduced by Fishbein and Azjen in 1975. This theory is used to explain cognitive behavior of individual towards computer usage by social norms, attitudes and intentions. Social norms is societies influence towards usage of computers. Attitudes are personal feelings and obligation towards usage of computers. Intention is individual decision of usage of computers (Fishbein & Ajzen, 1975). All these factors mentioned above impact the usage of computers.

Model of PC utilization (MPCU) forecast human behaviors that lead to computer usage. MPCU precisely assesses the direct impact, aiding circumstance, enduring concerns of usage, apparent concerns, social effects, difficulty and job fitting on computer usage. Most of the results of this framework identifies that job fitting, social causes, long term concerns and difficulty have a strong effect on computer usage (Thompson et al, 1991; Sila, 2015).

METHODOLOGY

From the above analysis of the literature review, the main challenges that lead to e-commerce usage by grass root companies are training, outdated technology, lack of trust, high cost and lack of expertise. Research tries to investigate whether the identified challenges impacts the usage of e-commerce sites in Sri Lanka or not. Moreover, the research tries to determine if there is a relationship and whether that trend would continue to the future or not as well. Correlation is used to determine the relationship and regression analysis is conducted to identify the future relationships. Independent variable for the conceptual framework are used as challenges of e-commerce usage which are: training, outdated technology, lack of trust, high cost and lack of expertise and e-commerce web site usage as dependent variable. Conceptual framework is shown as follows:

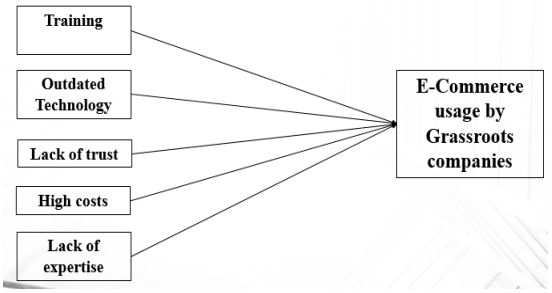


Figure 1: Conceptual framework

List of Hypothesis

H1: There is relationship between training and usage of ecommerce websites in Sri Lanka.

H0: There is no relationship between training and usage of ecommerce in Sri Lanka.

H2: There is a relationship between outdated technology and usage of ecommerce in SL.

H0: There is no relationship between outdated technology and usage of e-commerce in SL.

H3: There is relationship between lack of trust and usage of ecommerce websites in SL.

H0: There is no relationship between lack of trust and usage of ecommerce websites in SL.

H4: There is a relationship between high cost and usage of ecommerce websites in SL.

H0: There is no relationship between high cost and usage of ecommerce websites in SL.

H5: There is relationship between work expertise and usage of ecommerce in Sri Lanka.

H0: There is no relationship between work expertise and usage of ecommerce in Sri Lanka.

Total population, Sample and Sample selection

Total micro-businesses estimated to be in Sri Lanka is approximately 50,000. These micro businesses include bakers, florists, estheticians, local clothing manufacturers and tourism companies. From the total population, 150 sample is selected by using the technique of simple random sampling. Sample included a mixture of micro-businessmen such as bakers, estheticians, florists, clothing manufacturers and tourism companies. They are selected from areas such as Kandy, Kurunegala and Colombo due to the ease of access and convenience.

Data collection, Questionnaire type, Data analyzing technique and time frame

Online questionnaire was used to collect the information to the research mainly due to capability of reaching a larger audience. Selected 150 grass root businesses had internet facilities, so it was convenient for them to fill the questionnaire online. Questionnaire was designed to have close ended questions, so that it was convenient for analysis as well as in a way it was stress-free to the grass root businessmen who is filling the questionnaire. All the questions are setup in a likert scale where 1= "Strongly agree", 2= "Agree", 3= "Neither agree nor disagree", 4= "Disagree" and 5= "Strongly disagree". This specific research was conducted during the time frame of 01st December 2018 to 31st January 2019. It was identified that most suitable technique to analyze data was IBM SPSS software where correlation and regression analysis was conducted.

Reliability test

Cronbach's Alpha test used to test the reliability of the outcomes of data from questionnaire and the variables mentioned. From the information generated in table 1, it was determined that 98% of data obtained were considered reliable and satisfactory in the questionnaire.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
.988	.989

Table 1: Cronbach's Alpha test

DATA ANALYSIS

Correlation analysis

Using SPSS, it could be easier to determine the Pearson correlation where it suggests that weather there is any relationship between independent and dependent variable. If person R value is positive, it suggests that relationship between variables are positive. If Pearson R value is negative, it suggests the relationship between variables are negative. Table 1 below depicts the type of relationship between variables according to coefficient range. Moreover, if Sig 2 tailed value is lesser than 0.05, it suggests that when one variable change the other variable will also change. If Sig 2 tailed value is more than 0.05, it suggests that there is no change.

Coefficient range	Interpretation
0.90 to 1	Very strong positive correlation
-0.90 to -1.0	Very strong negative correlation
0.70 to 0.90	High positive correlation
-0.70 to -0.90	High negative correlation
0.50 to 0.70	Moderate positive correlation
-0.50 to 0.70	Moderate negative correlation
0.30 to 0.50	Low positive correlation
-0.30 to -0.50	Low negative correlation
0.0 to 0.30 or -0.0 to -0.30	Negligible correlation

Table 2: Coefficient range and Interpretation

Regression analysis

Regression analysis is used to predict the outcome of a dependent variable which is e-commerce website usage of grass root level companies using independent variables such as training, outdated technology, lack of trust, high costs and lack of expertise. Regression analysis is a good indicator of measuring future outcome.

Relationship Analysis between training and utilization of ecommerce websites

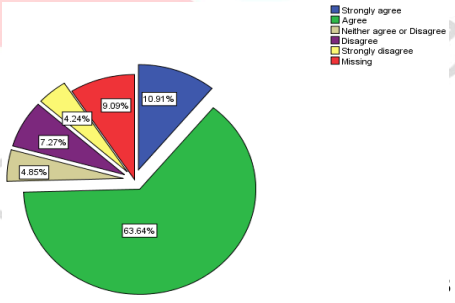
Correlations

		Training has effect on utilization of ecommerce sites	Challenges has effect on utilization of ecommerce sites
Training has effect on utilization of ecommerce sites	Pearson Correlation	1	.953**
	Sig. (2-tailed)		.000
	N	150	150
Challenges has effect on utilization of ecommerce sites	Pearson Correlation	.953**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3: Correlation between training and utilization of ecommerce websites

From the Table 3, it could be seen that Pearson R value is 0.953 where coefficient ranges lie from 0.90 to 1 which depicts very strong positive correlation between the training and e-commerce site usage. For instance, if appropriate training is provided people tend to use e-commerce websites. Sig (2-tailed) value is also lesser than 0.05 that is 0.00 which suggest when level of training changes E-commerce website usage also changes similar amount.



effects on e-commerce website utilization

According to figure 2 identified 63.64% majority of the grass root businesses believe that training is a necessity for E-

commerce website usage. Furthermore, 7.27% disagree and 4.24% strongly disagree that training is a necessity for utilization of e-commerce websites. Therefore, it is understood that training is considered important for e-commerce websites utilization by grass root businesspeople.

Regression analysis training requirement for e-commerce utilization

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.103	.058		1.786	.076
	Training has effect on utilization of ecommerce sites	.915	.024	.953	38.195	.000

a. Dependent Variable: Challenges has effect on utilization of ecommerce sites

Table 4: Regression analysis training requirement for e-commerce website utilization

Table 4 could arrived the equation of Y=0.915X+0.103 where X is the opinions from the grass root businessmen about the necessity of training and Y is the utilization of e-commerce websites. With the equation, it could be identified in future also grass root businessmen believe proper training is necessary for e-commerce website usage.

Relationship Analysis between outdated technology and utilization of ecommerce websites

Correlations

		Outdated technology has effect on utilization of ecommerce sites	Challenges has effect on utilization of ecommerce sites
Outdated technology has effect on utilization of ecommerce sites	Pearson Correlation	1	.960**
	Sig. (2-tailed)		.000
	N	150	150
Challenges has effect on utilization of ecommerce sites	Pearson Correlation	.960**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5: correlation between outdated technology and utilization of e-commerce websites

According to Table 5, Pearson R value is 0.960 which show a very strong positive correlation between outdated technology and e-commerce usage. This implies that outdated technology leads to lack of usage of e-commerce and better technology leads to more usage of e-commerce. Moreover, Sig (2-tailed) value of 0.000 is lesser than 0.05 means when technology is improved, e-commerce utilization also changes significantly.

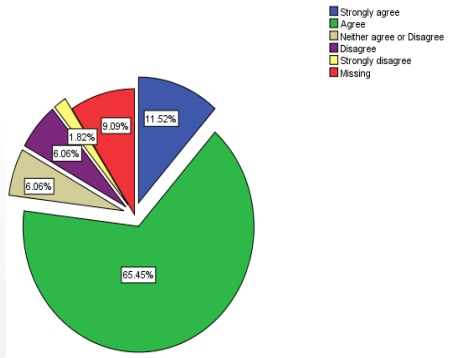


Figure 3: Viewpoints technology has effects on e-commerce website utilization

According to the viewpoint of grass root businessmen, 65.45% agree and 11.52% strongly agree that technology has an effect on usage on e-commerce websites. Only, 6.06% disagree and 1.82% strongly disagree that technology is necessary for e-commerce usage. Overall, technology is considered necessary for e-commerce usage.

Regression analysis technology for e-commerce utilization

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.163	.059		-2.764	.006
	Outdated technology has effect on utilization of ecommerce sites	1.083	.026	.960	41.660	.000

a. Dependent Variable: Challenges has effect on utilization of ecommerce sites

Table 6: Regression analysis technology requirement for e-commerce website utilization

According to table 6, regression equation Y=1.083X-0.163 could predict that grass root businessmen would still have the opinion that technology is

necessary for them to use e-commerce website for daily activities.

Relationship Analysis between trust and utilization of ecommerce websites

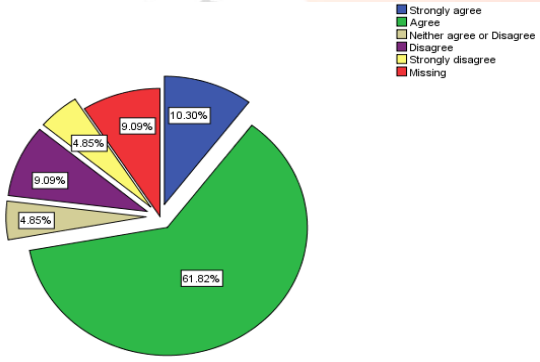
Correlations

		Lack of trust has effect on utilization of ecommerce sites	Challenges has effect on utilization of ecommerce sites
Lack of trust has effect on utilization of ecommerce sites	Pearson Correlation	1	.922**
	Sig. (2-tailed)		.000
	N	150	150
Challenges has effect on utilization of ecommerce sites	Pearson Correlation	.922**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7: Correlation between trust and e-commerce website usage

Table 7 depicts Pearson R value is 0.922 which indicates very strong positive correlation between trust and usage of e-commerce websites. This suggest that lack of trust among grass root businessmen lead to lack of usage of e-commerce. Further, better trust among grass root businessmen leads to higher usage of e-commerce sites in Sri Lanka. Moreover, Sig. (2-tailed) value is 0.000 which is lesser than 0.05 implies that when trust among grass root businessmen changes, e-commerce website usage also changes significantly.



on e-commerce website utilization

According to figure 4, it could be seen that grass root businessmen 61.82% agree and 10.30% strongly agree on the view that trust is necessary for e-commerce utilization. Moreover, 9.09% grass root businessmen disagree and 4.85% strongly disagree that trust is necessary for e-commerce usage. Overall, grass root businessmen believe that trust is necessary for e-commerce website utilization.

Regression analysis trust for e-commerce utilization

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.217	.072		3.002	.003
	Lack of trust has effect on utilization of ecommerce sites	.839	.029	.922	29.018	.000

a. Dependent Variable: Challenges has effect on utilization of ecommerce sites

Table 8: Regression analysis trust for e-commerce website utilization

According to table 8, regression analysis equation can be derived as Y=0.839X+0.217. Equation suggest that grass root businessmen believe that trust is necessary for them in future to improve the usage of e-commerce websites.

Relationship Analysis between cost and utilization of ecommerce websites

Correlations

		High cost has effect on utilization of ecommerce sites	Challenges has effect on utilization of ecommerce sites
High cost has effect on utilization of ecommerce sites	Pearson Correlation	1	.956**
	Sig. (2-tailed)		.000
	N	150	150
Challenges has effect on utilization of ecommerce sites	Pearson Correlation	.956**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Table 9: Correlation between cost and ecommerce website usage

From the information identified in table 9, Pearson R value is 0.956 which suggest a very strong positive correlation between cost and usage of e-commerce websites. This implies that high cost leads to lack of usage of e-commerce websites by grass

root businesses. Moreover, less cost leads to higher usage of e-commerce sites. Additionally, it could be seen in Figure 11 Sig. (2-tailed) value is 0.000 which is lesser than 0.5 implies when cost changes, the usage of e-commerce sites changes significantly.

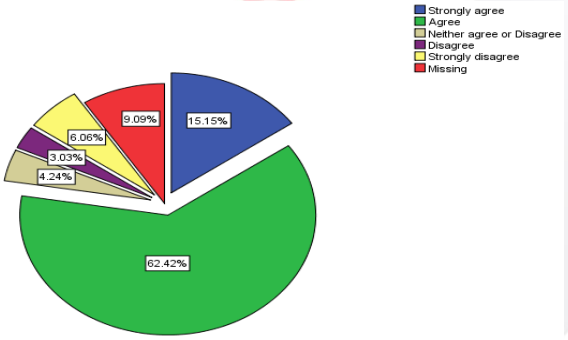


Figure 5: Viewpoints that cost has effects on e-commerce website utilization

According to figure 5, it can be analyzed that 62.42% grass root businesses agree and 15.15% strongly agree that cost impact the usage of e-commerce websites. Moreover, lesser percentage of grass root businessmen disagree by 3.03% and strongly disagree by 6.06% about the cost impact the usage of e-commerce websites from the sample population. Therefore, cost is believed to be a significant factor that contribute to the e-commerce usage by grass root businesses.

Regression analysis cost for e-commerce utilization

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.248	.052		4.732	.000
	High cost has effect on utilization of ecommerce sites	.885	.022	.956	39.787	.000

a. Dependent Variable: Challenges has effect on utilization of ecommerce sites

Table 10: Regression analysis cost for e-commerce website utilization

From the regression analysis of table 10, following equation can be derived: Y=0.885X+0. 248. With the equation, it can predict that there is a trend in future that grass root businessmen believe that cost is an important factor in e-commerce website usage.

Relationship Analysis between work expertise and utilization of ecommerce websites

Correlation

		Work of expertise has effect on utilization of ecommerce sites	Challenges has effect on utilization of ecommerce sites
Work of expertise has effect on utilization of ecommerce sites	Pearson Correlation	1	.968**
	Sig. (2-tailed)		.000
	N	150	150
Challenges has effect on utilization of ecommerce sites	Pearson Correlation	.968**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Table 11: Correlation between work expertise and ecommerce website usage

Based on table 11, Pearson Correlation of 0.968 determines very strong positive correlation between work expertise and e-commerce usage. This suggest lack of work expertise by grass root businesses leads to lack of usage of e-commerce sites. Moreover, High work expertise by grass root businesses leads to higher usage of e-commerce sites. Additionally, Sig. (2-tailed) value is determined as 0.000 which is also lesser than 0.05 indicates when work expertise of grass root businesses improve greatly, e-commerce website usage will change significantly.

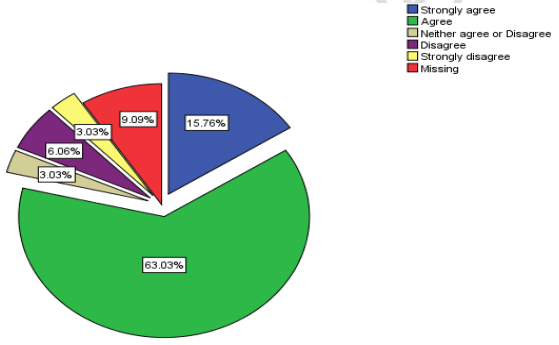


Figure 6: Viewpoints that Work expertise has effects on e-commerce website utilization

From the data from figure 6, it can identify that 78.79% of grass root businessmen believe that work expertise is necessary for e-commerce website utilization whereas 9.09% grass root businessmen disagree that work expertise is necessary for e-commerce utilization. Overall, work expertise and knowledge is considered a necessity for grass root businesses to effectively adopt e-commerce websites.

Regression analysis Work expertise for e-commerce utilization

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.085	.048		1.781	.077
	Work of expertise has effect on utilization of ecommerce sites	.985	.021	.968	46.704	.000

a. Dependent Variable: Challenges has effect on utilization of ecommerce sites

Table 12: Regression analysis work expertise for e-commerce website utilization

After analyzing the information in table 12, it can easily arrive at the equation Y=0.985X+0.85. This equation is evident that grass root businessmen also believe that work expertise is necessary for e-commerce utilization in future development of their business operations.

DISCUSSION

After analyzing all the information in this study, it clearly indicates training, outdated technology, lack of trust, high costs and lack of expertise are the main challenges that impact the e-commerce usage by grass root businesses. Firstly, with the data analysis, it clearly suggest that better training is required to encourage grass root businesses to adopt e-commerce websites. Lack of training might lead them less understanding about how to use the required systems, processors facilities and infrastructure required for the e-commerce. From the opinions obtained from the grass root businesses, it is clearly evident that they need necessary training to use e-commerce websites. This is clearly shown from the data by obtaining Pearson R value of 0.953 and Sig. (2- tailed) value of 0.000 which is lesser than 0.05. Furthermore, it was realized that grass root businesses would consider training a necessity in future for e-commerce usage. This was identified using the regression equation Y=0.915X+0.103. Secondly, Grass root businesses consider technology as a necessity for e-commerce usage. Outdated technology would lead them not to accept e-commerce websites for daily business purposes. This can be mainly because outdated technology would not support the sophisticated business requirements. With the data analysis from the questionnaire, it clearly shows that there is a high requirement of technology to use the e-commerce websites. This was indicated with showing a Pearson R value of 0.960 and also from grassroots businessmen opinions showing 76.97% agreeing that technology is a necessity for e-commerce usage. Additionally, technology requirement is going to be a future requirement as well this was indicated from the regression analysis equation Y=1.083X-0.163.

Thirdly, grass root businesses believe it is difficult to trust the e-commerce websites mainly due to security issues and misuse of business data. There can be also lack of faith on countries regulatory framework in relation to e-commerce. From the data analyzed, it clearly demonstrates that there is a correlation between lack of trust and e-commerce usage by showing a Pearson r value of 0.922. Moreover, 72.12% of grass root businesses agree that lack of trust is an issue for them when they use e-commerce

websites. The trend of lack of trust from grass root businesses on e-commerce website usage is continue to the future as well, the trend can be identified using the equation Y=0.839X+0.217. Fourthly, High cost is an issue for the grass root businesses in adopting to the e-commerce websites. High cost of infrastructure and cost of upgrading are the main issues that prohibit from adopting e-commerce websites by grass root businesses. Having a very high person R value of 0.956 suggest that grass root businesses consider cost as a main factor that prohibit them from using e-commerce sites. Grass root businesses views also support by agreeing 77.57% that cost as the main factor which forbid them from using e-commerce sites. Finally, to work with the sophisticated systems grass root businesses consider work expertise as a requirement. Lack of work expertise with required knowledge would forbid grass root businesses from using e-commerce websites. Besides, with Pearson R value of 0.968 demonstrates a clear indication that work expertise is a requirement for e-commerce website usage by grass root businesses. Additionally, 78.79% grass root businesses believe work expertise is necessary for them to use e-commerce website and also trend of requiring work expertise to perform e-commerce task and adopt will be a future requirement according to regression equation Y=0.985X+0.85.

CONCLUSION

Main focus of this research is to identify the challenges that impact grassroots businesses that forbid from usage of e-commerce websites. Many literatures were referred and analyzed in order to arrive at the conceptual framework. To test and understand weather the challenges really impact grass root businesses from not using e-commerce, quantitative analyzing technique was used. Firstly, correlation techniques was used using IBM SPSS software in order to determine whether identified challenges such as: training, outdated technology, lack of trust, high costs and lack of expertise really have any relationship with e-commerce website usage. Moreover, regression analysis was conducted to determine whether if any particular trend was identified and is going to continue to the future as well. From most of the obtained information, it was determined that grass root businesses consider training, outdated technology, lack of trust, high costs and lack of expertise as major challenges for e-commerce usage by grass root businesses. Additionally, it was determined that grass root businesses will consider identified challenges as major challenges for the future as well in adaptation of e-commerce websites. Major concern is needed to be focus by relevant authorities in order to support grass root businesses to overcome the challenges identified. If particular attention is not given, grass root businesses would drive away by e-commerce implementation. Grass root businesses growth and profitability would completely come to a standstill due to catering to limited crowd. Their competitiveness with the international market will also decrease. When grass root businesses overall domestic production decrease, countries economic growth will also decline. Therefore, relevant authorities need to take necessary steps in order to cater to the identified challenges and also help them to succeed in the international market.

RECOMMENDATION

Based on the findings, relevant authorities need to improve training, outdated technology, lack of trust, high cost and lack of expertise in order to improve the e-commerce usage. Firstly, training can be improved by government allocating funds to organize regular

seminars, workshops and training programs to educate and update grassroots businesses to adopt to the current technology. Secondly, trust can be enhanced by organizing awareness programs about the benefits of usage of e-commerce sites and the amount of security received when doing online business. Moreover, regulatory framework can be implemented by government in order to protect valuable business data from misuse by hackers and frauds. Thirdly, outdated technology can be improved by providing micro-finance to grassroots businesses with easy payment methods to facilitate with changing technology. Additionally, government should take necessary steps to make available the internet coverage to all areas of Sri Lanka.

Fourthly, purchasing cost of infrastructure and necessary facilities need to be affordable to customers. Government need to place emphasis on cost in order to make e-commerce technologies affordable to grass root businesses. Government need to reduce taxes on purchasing basic infrastructure equipment to setup. To reduce cost relevant authorities should encourage free open source software to manage business transactions. Other actions relevant authorities to manage cost are: introduce highly secure payment gateways at affordable cost, reduce transaction fees for grass roots businesses and allow an online system to sell grassroots products with low delivery charges. Finally, to cater to the challenge of lack of expertise by the grass root businesses relevant authorities should implement a system where professionals from establish e-commerce sites like Kapruka, Daraz.lk and Ikman.lk engage with grassroots businesses regularly in supporting to adopt to the technology. Therefore, it could be understood that Sri Lankan government and other parties involved should take necessary actions immediately in order to cater to the challenges incurred by grass root businesses. If necessary actions are taken, then it can motivate and encourage Sri Lankan grass root businesses to improve the domestic production that intern lead economic development and growth of Sri Lanka.

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