

E-Commerce Adoption Factors in Zanzibar: A Descriptive Study

Nurazean Maarop, Fuady Rashid Omar

*Advanced Informatics School, Level 5, Menara Razak, Universiti Teknologi Malaysia,
Jalan Sultan Yahya Petra (Jalan Semarak), 54100, Kuala Lumpur, Malaysia*

nurazean.kl@utm.my

Abstract. Zanzibar is a developing country and consists of two Islands namely Unguja and Pemba. The application and utilization of ICT has been an important effort for the country's economic development. Several studies have been conducted on E-commerce adoption but not yet in the case of Zanzibar. The objectives of this study are to explore the benefits of E-Commerce adoption and some relevant factors influencing the E-commerce adoption in the case of Zanzibar. The study considers several factors from Technological, Organization and Environment contexts to facilitate the understanding of the topic of concern. A questionnaire survey was conducted to collect data from 62 respondents in Zanzibar Town and the data were analyzed descriptively. The result shows that E-Commerce has benefited the users of the system. Based on the descriptive analysis, five main factors which are Level of Computerization, Education and Awareness, ICT Infrastructure, Government Support and Trust and Security are found to be important aspects in regard to E-commerce adoption. The finding will be useful for Government, Business Association and others who can utilize the research result for a successful E-commerce adoption.

Keywords: Technology Adoption, E-Commerce, Technology Use

INTRODUCTION

Zanzibar is a developing country and consists of two Islands Unguja and Pemba; the total land area is estimated to be 2643 sq. kilometre. The islands are lapped by the Indian Ocean water approximately 25 miles off the East Coast of Africa with approximate 1.3 million populations. A large number of its resident depends on business by export and import of goods to other country in the world [1].

Many study and research has been done regarding the adoption of E-Commerce in a Country or organization, however the research on E-Commerce adoption in Zanzibar has not yet been done.

The adoption of E-Commerce in developing countries differs greatly from developed countries. Developing countries often lack the necessary financial, legal, and physical infrastructures for the development of E-Commerce. In addition, developing countries often have different cultures and business philosophies, which limit the applicability and transferability of the E-Commerce models designed by Western countries [2]-[3]. Information technology penetration and E-commerce has been around Zanzibar for long time, but most of data were not done on Zanzibar alone but was taken

as Tanzania as whole. The internet penetration is still low especially in urban areas accessing and using the internet [4].

The adoption of E-commerce has brought a lot of benefit to businesses in numerous points of view, for example improved customer services, better inventory control, reduced costs, reduced cycle time, increase market reach, reduced operation costs, global connectivity, high accessibility, search costs, can avail best offers or discounts associated with purchase of products or services [5]. The aim of this research is explore the extent of Zanzibar's involvement in E-commerce and to important factors in association to adoption of E-Commerce in the case of Zanzibar.

BACKGROUND

There are a several studies that focus on E-commerce adoption in specific countries and developing countries but there has been no research conducted which focuses in E-commerce adoption in Zanzibar. Several findings from recent studies related to E-Commerce adoption are shown in Table 1.

TABLE (1). Related Studies of E-Commerce Adoption

Author and year	Key findings
Solaymani et al. [6]	The lower level of the Internet services costs motivates firms to adopt E-commerce. If the government provides free E-commerce facilities for SMEs it can encourage SMEs to adopt e-commerce.
Kabanda [7]	Organization level, lack of management support, Government reluctance to adopt E-commerce. E-commerce is becoming a reality through the development of mobile enabled trade websites.
Kurnia & Ali [8]	Difference in the social, economic, political and technological conditions of developing countries does not necessarily create barriers to the adoption. Each industry in specific country may have a unique position that requires a thorough assessment of the relevance of B2B e-commerce and appropriate strategies for adoption.
Alamro & Tarawneh [9]	CEO and employee's knowledge and attitude, customer pressure and quality of ICT consulting services, influence of government is inexistent or at least very limited. The importance of globalization, the open source movement and adoption by larger corporations as drivers of E-commerce Adoption In SMEs.
Ghobakhloo et al. [10]	Perceived relative advantages, compatibility of E-commerce, information intensity. Cost is not perceived to be a major barrier.
Halaweh [11]	The government, IT providers, Businesses and Banks must take the responsibility for increasing awareness of security instructions, features and usage in the E-commerce. Negative stories of credit card usage.
Datta [3]	In developing countries, facilitating conditions play a critical moderate role in understanding actual E-commerce adoption.
AlGhamdi et al. [12]	Impediments which include cultural, business and technical issues. Also facilitating factors like access to education programs and awareness building of E-commerce. Government support and assistance for E-commerce. Trustworthy and secure online payment options. Developing strong ICT infrastructure and provision of sample of E-commerce software for trial.
Li & Xie [13]	Managers should ask key question before make a final decision. Different firm positioning strategies will lead to different optimal E-commerce scale and adopting time. Business managers should spend some energy on building up a

	trust based corporate culture and a trust based transaction relationship, both within a firm and when cooperating with external partners.
Wang & Hou [14]	Globalization, the open source movement and adoption by big corporations have emerged as drivers of E-commerce adoption. CEOs characteristics and top management support have been found as the most significant factors influencing E-commerce adoption. Employees IS knowledge and attitude and resource constraints are important as well. CEOs and top management are starting taking into consideration employee's suggestion in E-commerce adoption and implementation decisions.
Gilaninia et al. [15]	Challenges of technical-financial are not obstacles whereas management, laws-legal and cultural-social challenges are obstacles.
Sultana et al. [16]	Security issues appeared as an obstacle in both pre and post adoption phase. Lack of time to improve E-commerce activities, synchronization of demand and supply, price war among competitors, need for extensive marketing effort. Payment related issue are explored and identified as post adoption barriers.

In summary, there are some factors which appear to play a very important role in the adoption of E-commerce in a country. These include trust, local culture, security, legal issues, setup cost, government role, top management support, online payment methods, delivery issues, ICT infrastructure and education and awareness in a country. Based on the literature review, the researcher can say that "E-commerce adoption is influenced by Environment, Firm (organizations) and E-commerce technology" thus Technology-Organization-Environment Framework (TOE) [17]) can be useful as the starting point of studying E-commerce adoption in Zanzibar.

METHODOLOGY

The data were analyzed descriptively using sixty-two (62) returned samples from questionnaires which were distributed to relevant E-Commerce Business-to-Business users. In prior to that, the pilot study was conducted with an intention to avoid complexity of the questionnaire. The reliability of questionnaire scale was examined by using Cronbach's alpha coefficients and all Cronbach's alpha values were above 0.70, indicating high reliability. The questions were broken down into six categories as in Table 2.

TABLE (II). Question Category

Category	Question number	Category	Number of items
1	6-10	Adoption	5
2	11a-11h	Perceived benefits	8
3	12a, 12c, 12i, 12m	Technological context (A)	4
4	12g, 12h, 12k	Environment context (B)	3
5	12b, 12d, 12e, 12f, 12j, 12l	Organization context (C)	6

RESULT

The descriptive findings of the study are as shown in Table 3. Likert scale was used to descriptively measure the importance of factors in relation to E-Commerce adoption in Zanzibar. Five point scale were used to major the important factor in such a way, the mean score could be calculated to determine the important factor. In this regard scale 1 represents “Not Strongly Agree” and scale 5 represents “Strongly Agree”.

The table below shows the descriptive result of the individual variable employed in the study. The result has been organized by displaying the frequency of the responses based on scale 5 – “Strongly Agree”.

TABLE (III). Descriptive Result of Factors in Relation to E-Commerce Adoption in Zanzibar

Factor	Item (N=62)	Frequency	Percentage on Scale 5 (Strongly Agree)
Acceptance of E-Commerce	No Intention to Use	12	19.4 %
	Intend to Use	27	43.5 %
	In Use	23	37.1 %
Perceived Benefit	Improve Communication	48	77.4%
	Improve information exchange	49	79.0%
	Increase Services	50	80.6%
	Expand Market	49	79.0%
	Reduce cost	52	83.8%
	Reduce cost web purchase	48	77.4%
	Improve Competitive position	49	79.0%
	Attract new investment	50	80.6%
Technological Context	Level of Computerization	55	88.7%
	Concern on Internet Security	43	69.4%
	ICT Infrastructure	50	80.6%
Organizational Context	Education and Awareness	55	88.7%
	Suitability of Business	43	69.4%
	Top Management Support	46	74.2%
Environmental Context	Pressure from Supplier	40	64.5%
	Cost of E-Commerce	48	77.4%
	Cost of Internet	41	66.1%
	Legal, Contracts & Liability Concerns	44	71.0%
	Present of ICT Consultant & Support	47	75.8%
	Payment & Delivery Issue	51	82.3%
	Trust and Security Issue	50	80.6%
	Government Support	49	79.0%

Based on the descriptive result, the individual acceptance of E-Commerce in Zanzibar is encouraging as only 19.4% participants do not intend to use E-Commerce. E-Commerce has been perceived beneficial as a means to deliver business capacity and capability. Technological Context and in particular level of computerization are considered important in relation to E-Commerce Adoption in Zanzibar. In regard to Organization Context, continuous effort should be upheld to encourage continuous adoption of E-Commerce. In regard to environmental context, improvement in payment mechanism should be considered to attract more adopters of E-Commerce in future.

CONCLUSION

This study was conducted upon deductive approach based on previous E-commerce adoption and intended to address factors of E-commerce adoption in the case of Zanzibar with various variables in TOE framework. The suggested adoption factors could make important contribution to the country. Education Awareness, level of computerization, payment delivery system and poor ICT infrastructure act as major factors in adoption of e-commerce and serve as a needed condition for e-commerce whereas Role of Government, trust and security, play a dominant role in E-commerce. Overall, descriptively five main factors which are Level of Computerization, Education and Awareness, ICT Infrastructure, Government Support and Trust and Security have shown significant importance in the adoption of e-commerce in a country. Further an enhanced study involving model validation can be conducted to address the important relationships of each factor towards E-Commerce Adoption.

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