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IMPEDING BARRIERS FOR E-COMMERCE ADOPTION IN LIBYA

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ABSTRACT

Advances in electronic transaction have uniquely transform business transaction strategies through convenient and low cost medium. Though electronic commerce (e-commerce) has found its way into many organization globally, numerous studies reported that its adoption have been constrained by inefficient operation and lack of infrastructural facilities. These barriers have been recognized to have affected the size and profitability of companies that solely depend on electronic-based transaction for all business activities. E-commerce is a profit oriented transaction strategy that facilitates faster and wider business transaction from broad contexts of economic value and value creation via internet. Owing to the need to improve the effectiveness of business transaction network, this paper reported the barriers towards e-commerce adoption in Libya. These barriers represent the obstacles that prevent the successful adoption of e-commerce based economy in Libya. The viability and implementation concerns associated with the adoption of e-commerce application were reported. Result confirmed that barriers exist however; opportunities are within reach to enhance effectiveness and efficient e-commerce integration into organization in Libya. The outcome of this research could be integrated as apart of Libya's strategic economic plan that harnesses the potentials of e-commerce.

Keywords: *E-Commerce, Insecurity, Electronic Infrastructure, E-Commerce Adoption*

1. INTRODUCTION

Electronic business transaction has been noted as effective business strategies over the last decade [1]. E-commerce is a form of economic activity conducted through the use of electronic channel, spanning electronic markets, hierarchies and business networks [2]. Based on this definition, organizations content provision on the internet represents commitment to participation in e-commerce based transaction.

However, the emergence of e-commerce provides wider networks and enhances strategic corporations [3, 4] with focuses on achieving competitive internal network and external relationship. E-commerce based transaction increases profitability through convenient and reliable business network [5] which aims at improving products and services for specified market segments, provision of new link for business partners using the same technological medium, linking of external relationship with internal processes and building of flexible and sophisticated telecommunication infrastructure [6].

E-commerce enables instant access across the globe through telecommunication facilities [7]. The use of telecommunication facilities promotes wider business access globally however; the adoption of e-commerce could yield enormous growth with increase access to product and services through the use of electronic devices in delivering of products and services in a cost-effective and efficient manner. Sophisticated services provided through e-commerce extend beyond marketing efforts but offers additional value and profit to customers [8].

E-commerce transaction strategies allow instantaneous and efficient flow of information within an organization which is instrumental to economic transformation especially for Libya however; supportive reasons for e-commerce adoption exist [9]. E-commerce requires low start-up and running costs for ordering of product and services through automated technology [10, 11, 12]. Its adoption enables the delivery of products and payment receivement process through automated

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payment system such PayPal or credit card which are verified online to facilitate immediate payment. Global accessibility of the internet facilitates businesses exposure and the advertisement of thousands of products at reduced cost. Cheaper services plays major role in inspiring organizations to adopt e-commerce yet fear of insecurity stand as one of the most threatening factors.

2. LIMITATIONS FOR E-COMMERCE IMPLEMENTATION

The complexity in the present day business transaction is confronted with myriad of weaknesses and conditions that requires the collaboration of information technology system to improve the quality of business transaction at profitable scale and lesser risk [5]. Information technology-based transaction otherwise known as e-commerce enables instant access across the globe however; the success of e-commerce lies much on the effective functioning of telecommunication infrastructure [7].

Integration of e-commerce into a functioning organization leads to the restructuring of the entire business setting [13]. Other barriers such as payment method, deliveries of finished goods, insecure credit cards billing and insufficient knowledge of the service cost contends with the technological advances in e-commerce adoption [14]. Insecurity over online transaction determines e-commerce level of acceptance [15] and has a direct effect on the customer although this varies between individuals or organization [16].

E-commerce has been widely known as an ideal tool for transforming business operation, its adoption have been constrained by numerous challenges coupled with scanty research on the possibilities of integrating it into trade system. Among these challenges include lack of trust on online services, insecurity of personal information, lack of infrastructure and poor knowledge of its operation has contributed to its stunted growth over the past decade [1].

Other limiting factors that hinders e-commerce implementation in Libya includes high illiteracy rates, low income per capita and lack of reliable payment systems to support online business transactions coupled with cultural influence to online transaction [17]. These barriers collectively impede wider acceptance of e-commerce adoption among many organizations.

It is essential that these barriers are tackled to enable successful adopted of e-commerce. Study on the evaluation and assessing of the basic components reveals their weaknesses and strengths. With the identification of the weaknesses and strengths, the possibilities for better planning and implementation of e-commerce to reap its numerous benefits are visible [18]. Based on the needs to overcome the barriers associated with e-commerce adoption, this research work investigates eighteen (18) commonly noted potential barriers from previous literature, especially for economic environment similar to Libya.

3. POLICY INTERVENTION ON E-COMMERCE ADOPTION

Adoption of e-commerce can potentially boosts the economic state of the Libya by providing convenient, faster and cost effective medium for business transaction. Integration of electronic mediums into business processes enhances overall business performance with customizable business outfit that facilitates range of transaction [19]. To promote wider acceptance of e-commerce among the developing countries, especially Libya, policy intervention are necessity to reduce the high cost of internet access and to ensure secured network [20].

Moreover, e-commerce is an efficient tool for sustainable economic growth however; its primary processes such as the production processes which include procurement, processing of payments ordering and replenishment of stocks; customer-focused processes including promotion, sales over the internet, processing of purchase order for customers, payments and customer support. Internal management processes such as employee services, training and recruiting, video-conferencing and internal information sharing could be enhanced through the initiation of appropriate e-commerce based policy [21, 22].

4. METHODOLOGY

Based on the limiting barriers associated with e-commerce adoption in the developing countries, this study was conducted in various e-commerce-based organizations in Libya. Literature study that was conducted prior to data collections that provided substantial information on the dominant adoption barriers to e-commerce adoption that was discovered. Furthermore, a survey (98 respondents) was conducted on e-commerce based organization in Tripoli, Libya.

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5. RESULT AND DISCUSSION

Research finding showed that the competitive advantages of e-commerce have been constrained be numerous factors. Greater percentage of the organizations in Libya failed to adopt e-commerce practices as a result of fraud associated with internet transaction. This result was consistent with numerous literature studies [14, 15, 16]. The order of barriers that hinders the adoption of e-commerce is ranked in Figure 1. Table 1 shows the percentage for each barrier in ascending order. Table 2 illustrates the descriptive statistics while Table 3 illustrates the reliability statistics derived from the outcome of the survey. The reliability statistics are shown in Table 3 was quantitatively consistent at cronbach's alpha of .864 which confirmed that the e-commerce adoption barriers exist among the organization in Libya. In conformity to the result reported in this paper, a study by Kalanje [23] reported that the main barriers for e-commerce adoption in most developing countries are related to lack of knowledge about its benefits and the values it adds to businesses organization. Issues pertaining insecurity associated with internet transaction and trust is also representation in related previous studies [24, 25, 26 and 27]. The findings of this research work are consistent and relevant with the barriers that hinders the adoption of e-commerce among organizations in other developing countries. Thus, the findings are focuses towards Libya's strategic plans for a successful e-commerce adoption among its business organizations.

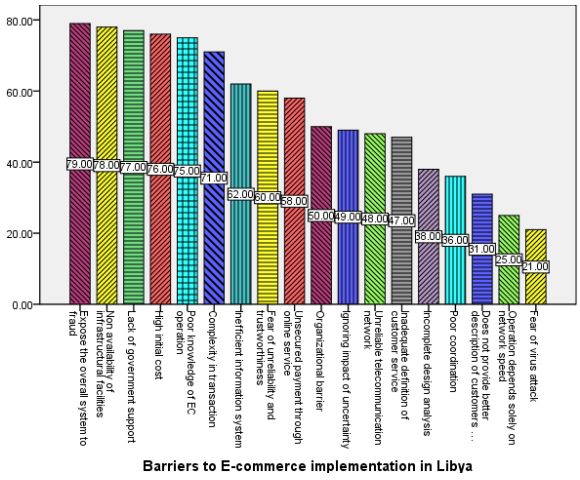

Figure 1. Ranking of barriers to e-commerce adoption the developing countries using Libya as a case study

Table 1. Ranking order and the percentage description of the respondents toward the barriers associated with e-commerce adoption in Libya

No.	Barriers	Respondents	Percentage (%)
1.	Exposes the overall system to internet fraud	79	8.07
2.	Non availability of infrastructural facilities	78	7.97
3.	Lack of government support	77	7.86
4.	High initial cost	76	7.76
5.	Poor knowledge on EC operation	75	7.66
6.	Complexity in transaction	71	7.25
7.	Inefficient information system	62	6.33
8.	Fear of unreliability and trustworthiness	60	6.13
9.	Unsecured payment through online services	58	5.92
10.	Organizational barriers	50	5.11
11.	Ignoring impact of uncertainty	49	5.01
12.	Unreliable telecommunication networks	48	4.90
13.	Inadequate definition of customer service	47	4.80
14.	Incomplete design analysis	38	3.88
15.	Poor coordination	36	3.68
16.	Does not provide better description of customers prescription	31	3.17
17.	Operation depends solely on network speed	25	2.55
18.	Fear of virus attack	21	2.15

Table 2. Descriptive statistics of the barriers towards e-commerce adoption in Libya

Mean	54.50
Std. Deviation	19.13
Minimum	21
Maximum	79

Table 3. Reliability statistics of e-commerce barriers

Mean	42
Std. Deviation	8.48
Cronbach's alpha	.864

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6. CONCLUSION

In this research project, an extensive investigation on the barriers constraining the adoption of e-commerce among business organization in Libya is conducted. Furthermore, the literature study focuses on the research issues pertaining on the adoption of e-commerce among developing countries that shares similar business environment with Libya. Besides that, a survey was conducted to discover the issues that prevent a successful adoption of e-commerce in Libya. The literature study and survey shares certain common findings. This provides an insight about the similarity regarding the business environment in Libya with other developing countries. The factors are ranked and listed in Figure 1. In-order to formulate a detail implement plan for adoption of e-commerce, the Libyan government need to focus at each factor and generate means to overcome each obstacles. The success of the e-commerce's adoption in Libya also depends on external factor that affects the nature of the business environment within Libya itself.

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