The Effect of Technology, Organization Factors on E-Commerce Adoption among Palestinian SMEs

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Abstract

Background/Objectives: The goal of this research is to examine the elements which influence Small and Medium Enterprises (SME's) in developing countries in terms of E-Commerce (EC). The justification of this research is the lack of sound research on EC adoption by SME's in developing countries, as they lag behind developed countries although they have the capabilities. Additionally, few studies exist on this matter in Palestine, thus the study's results can be applied to similar countries. **Methods/Analysis:** The research incepted a model based on TOE framework, which has six proposed variables that affect EC adoption by SME's. The variables were divided into technological and organizational factors. 250 decisions makers in Palestine were surveyed; a Structured Equation Modeling (SEM) using Analysis of Moments Structures (AMOS) was utilized for validating the proposed model. **Findings:** It was found that technology factors and organization factors are the determinant elements that impact Palestinian SMEs in their adoption of EC. **Applications:** The findings in this research can increase the adoption level of EC among SMEs sector of Palestine.

Keywords: Electronic Commerce Adoption, Organization Factors, Palestine, Small and Medium Enterprises (SMEs), Technology Factors

1. Introduction

The exponential expansion of SME's has been contributing greatly to the global economy, whether in practical knowledge, advancement of business, or even offering specialized[1]. Furthermore, SME's were credit for the development of the Palestinian Economy[2].

The contribution of SME's to the private sector is manifested into improvement of residential plans and development, transforming industries as to adopt more modern models in developing the local economy. SME's contribute in wealth creation like in rich countries by generating employment opportunities, as in Palestine 99% of SME's are family-owned and run, and about 85% of work force is provided by SME's accounting for almost 55% of the country's GDP, contributing to vital sectors such as IT, Manufacturing, and agriculture sectors[2,3].

Be that as it may, few studies have examined the impacts of technological and organizational factors on EC adoption among Palestinian SMEs, driving a

researcher to think of this study as a focal core interest. In this manner, the exploration questions for this study were planned: Does Technological Factors (TCF) impact on EC Adoption (ECA) among Palestinian SMEs? Do Organizational Factors (ORF) impact on ECA among Palestinian SMEs?

2. Literature Review

Studies that aim at examining ECA by SMEs in developing countries are moderately restricted, particularly in Palestine. Such studies that can be utilized for examination are the investigation of ECA by SMEs in Malaysia[3–5], Saudi Arabian[6], Kuwait[7], Jordan[8], Nigeria[9], Indonesia[10], Iran[11]. Existing studies that were led in Palestine incorporate the studies by[12].

It can't be denied that there have been studies led in regards to ECA by developing countries, however, the greater part of these emphasis on substantial organizations[13–15]. Thinks about that attention on SMEs in

developing countries are seldom discovered[15–17]. As it is known, there is a contrast between developing countries and developed countries. These distinctions are from a monetary standpoint, as well as political, natural, social, and cultural. Hence, enquiries about discoveries acquired from developed countries can't be connected straightforwardly to developing countries. Additionally, large organizations are diverse in comparison to small organizations. SMEs are not only 'somewhat enormous business' and in this way, due to their size, they show special components and practices, for example, brought together administration control and decision making which would probably be hazardously disinclined, lacking assets, and just having a constrained offer of the business sector, all of which make it troublesome for the SME to apply 'expansive organization' procedure and particularly an EC strategy at first to satisfy the need of huge organizations in developed countries.

The circumstance illustrated above are the explanation behind this study to explore those variables that impact SMEs in developing countries in adopting EC. In such manner, Palestine was picked as the spot in which the exploration was led, Palestine is viewed as one of a developing countries that comprises of two primary districts, the West Bank and Gaza strip which are controlled by Palestinian authority, the aggregate land mass is roughly 6020 square kilometres with a populace of 4.68 million individuals[18]. Decades prior the Israeli occupation has brought about the nation to be bankrupted by destitution and financial flimsiness, putting individuals on a persistent battle to give essential needs which more than regularly are not met. The continuous settlements and land seizures added more weights to the economy, such as the politically-sanctioned racial segregation divider that encompasses a great deal of groups. Moreover, checkpoints and land seizure from Arabs living there, the pulverization of houses, curfews, and conclusion of whole regions have additionally added to the weights the general population and the economy has to endure[19]. The aforementioned reasons expanded the inclination to conquer the topographical hindrances by exploiting ICT. In any case, as ordinarily found in most developing countries, the adoption of EC by Palestinian SMEs is as yet lingering behind when contrasted with SMEs in developed countries.

3. Model and Hypothesis Development

The TOE framework[20] is utilized as the premise for the development of the model. The choice of applicable components was done taking into account the literature review. There are two gatherings of components incorporated into the proposed model, to be specific technology factors and organization factors (Figure 1). These two groups of components are viewed as internal variables that can be controlled by an organization. Environment factors are external elements that are not completely controlled by an organization, and the impact of these elements are not inspected in this study.

The technology factors were basically adopted from the theory of diffusion of innovation. The adoption of advancements is impacted by three components: relative advantage, compatibility, and complexity[21]. Additionally, Organizational elements are internal elements that impact the adoption of EC. In this study three variables were recovered that constitute the organization factors, specifically: Top management support, IT readiness, and technology trust[22,23]. The hypotheses developed are based on the study model. H1: There is a direct positive relationship between TCF and ECA. H2: There is a direct positive relationship between ORF and ECA.
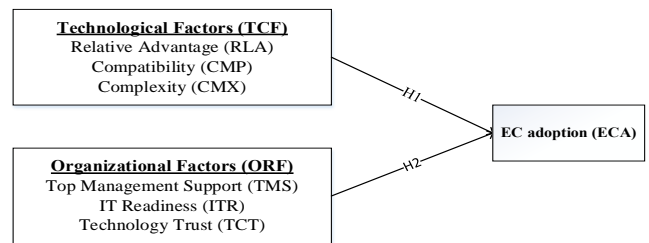

Figure 1. Research model.

4. Findings and Results

4.1 Evaluation of the Measurement Model

The measurement model indicates the connections that recommend how measured variables speak to a construct that is not measured straightforwardly[24]. It was evaluated with Confirmatory Factor Analysis (CFA). All items loadings are greater than 0.5 demonstrate that all loadings

are noteworthy at 0.001. All AVEs were above 0.5 and all CRs were above 0.6. In this manner, the outcomes support the convergent validity of the scales[24,25]. Also, all Alpha qualities are bigger than 0.7, uncovering great reliability[26]. Furthermore, based on the measurement model, for every factor, the square root of AVE is bigger than the correlation coefficients with different factors and that affirms adequate discriminant validity[27].

4.2 Evaluation of the Structural Model

The structural model (Figure 2.) which incorporates the testing of the hypothetical theory and the relationships between latent constructs through the utilized SEM techniques and the use of AMOS software. The result of goodness-of-fit indices of the study show the adequacy of the hypothesized model with: ($\chi2$ = 970.681, df = 656, $\chi2$/df = 1.480, CFI = 0.963, TLI = 0.960, IFI = .963, RMSEA = 0.044). However, all fit indices item meet the threshold requirement since the values are higher the suggested threshold value indexed by[28].

5. Discussion of Finding

The hypothesis H1 based on the result in Figure 2, it indicates that there is a direct positive relationship between TCF and ECA with a statistically significant value of 0.35. These values show that one-unit increase in the TCF will lead to 35% increase in the standard deviation of ECA, hence the result is in line with the finding of[29]. Hypothesis

H2 was develped in the basis that there is a direct positive relationship between ORF and ECA with a statistical significant value 0.37 indicating that one-unit increase in the ORF will lead to 37% increase in the standard deviation of ECA. This result similar to the finding.

6. Conclusion and Future Research

The real commitment of this study is to experimentally investigate the technological and organizational factors impacting SMEs' adoption of EC. The outcomes from the AMOS analysis demonstrated that SMEs in Palestine are influenced by several factors, which are Technology factors (relative advantage, compatibility, and complexity), organization factors (top management support, IT readiness, and technology trust). These factors can be utilized by EC sellers to figure out which SMEs they ought to focus with their items. On the off chance that these factors exist, then SMEs will be additionally eager to adopt EC. As there is no "one-size fits all" ICT arrangement crosswise over commercial enterprises and diverse sectors use ICT in an unexpected way[30], the finding of this study can be utilized to developed strategies to increase the level of ECA among SMEs in Palestine.

The key limitations of this study are as per the following. To start with, the study concentrated on a constrained topographical range, which makes it hard to sum up the outcomes to other Palestinian locales like
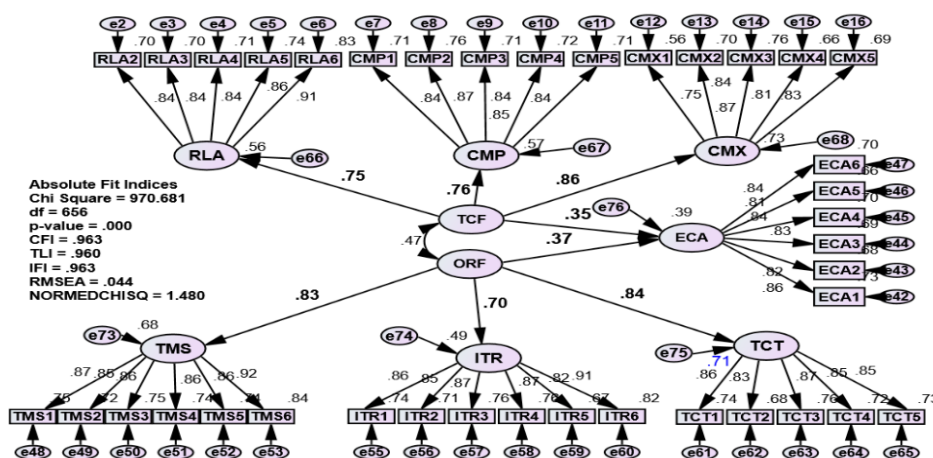

Figure 2. Structural model with standardized path coefficients.

Gaza strip. Besides, it is intriguing to take a gander at ECA from a cross-country viewpoint. Second, this study concentrated on ICTs sector only. It is fascinating to see whether firms in other industry sectors are impacted by the same factors. Thirdly, different variables, for example, culture factors should be coordinated in the TOE model to get a superior and more profound understanding of EC administrations adoption.

7. References

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