

# Adopting B2B E-Commerce Among Palestinian Companies During Coronavirus (COVID-19)

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**Abstract** - Infrastructure Business-to-Business E-Commerce (B2B E-Commerce) in Palestine Exchange (PEX), especially managers and upper management, has recently emerged as a critical problem for emerging nations. However, maintaining (B2B E-Commerce) in today's technical, organisational, and environmental aspects is difficult owing to the various changes that occur within the industry. Critically, globalisation has become a significant contributor to organisational transformation, particularly in digital marketing. As a result, this research investigates the link between technical, organisational, and environmental variables and the adoption of B2B E-Commerce. During the coronavirus outbreak, trust among Palestinian company managers had a moderating role (COVID-19). Furthermore, the survey questionnaire was delivered to 39 Palestinian enterprises as part of the research sample. SPSS is used for data analysis (PLS-SEM). The study's results indicated a mixed bag: H1, H2, H3, H4 were significant, while H5, H6 were not. The results of this research will help policymakers in Palestinian firms develop regulations that will assure the quality of services provided to patients, particularly because the companies will have to compete with private enterprises during Coronavirus Pandemic (COVID-19). In this regard, the study's findings on the application of employee capacity between Palestinian enterprises, employee commitment, and IT must be taken seriously by Palestinian companies. When this is completed, it will go a long way toward assisting the directors of Palestinian enterprises and other government officials in general in properly implementing E-Commerce, which will ultimately boost the companies' performance during Coronavirus Pandemic (COVID-19).

**Index Terms** - Technological Factors, Organizational Factors, Environmental Factors, Coronavirus Pandemic

(COVID-19), B2B E-Commerce, Trust and Palestine Exchange (PEX).

## I. Introduction

ICT provides potential in digital marketing to strengthen and simplify relationships between customers, business partners, and suppliers. Furthermore, digital marketing makes the procedure simple. In general, IT may operate as a middleman in various transactions. However, the findings of this research point to the adoption of (B2B in EC).

Furthermore, although numerous components have been explored, the moderating role of trust has received less attention. The significance of these features has been overlooked in the literature. This is since studies have been used innovation theories with frameworks, including as the Diffusion of Innovation (DOI) Theory and the technology organization environment (TOE), have overlooked them [1]. Despite the fact that some academics recognised that the influencing factors may differ based on the potential adopter's channel status, variations in the perspectives of two sides of B2B E-commerce received surprisingly little attention in previous research. As a consequence, reviewing diffusion of innovation (DOI) theory and the technology organization environment (TOE) framework by concentrating on the moderating role of relationship attributes trust and investigating the discrepancies in views between the two sides of B2B E-commerce may help to explain some of the paradoxes found in prior research.

Prior research has looked at trust as a motivation, but only a small amount of support has been found [2]. While the motivational function of trust has not been well researched, an alternative position is to regard trust as characteristics that allow or impede (moderate) the involvement of other motivational variables rather than as motivating factors in and of themselves. The opinions mentioned above are congruent with those of [3]. They say that since B2B E-

commerce happens simultaneously between two independent organisations united in a symbiotic connection, the adoption of this technology is dependent on the nature of the trade partners' relationship, including trust. Furthermore, [4] suggest that future research should look at the extent to which structure influences adoption behaviours.

The Resource Dependency Theory (RDT) is used in this research to emphasise the moderating role of trust. It elucidates the purpose of the trust variable [5]. It offers two possible places of trust [6]. On the one hand, since trust entails some degree of uncertainty, reliant organisations would actively seek to reduce and regulate these uncertainties by inter-organizational agreements such as the implementation of B2B E-commerce [7]. Furthermore, since B2B E-commerce need an appropriate amount of power in order to entice trade partners to join, a dependent business is in a weaker position to do so successfully due to its lack of power and limited control over its decision-making.

Considering the choices discussed before, it is possible to conclude that a high level of trust acts as a multiplier for the role of appropriateness-related components (technology organization environment (TOE), factors). Specifically, appropriateness difficulties, as well as the important need to regulate and reduce uncertainty surrounding key resources, motivate dependent organisations to embrace B2B E-commerce. It is also conceivable to argue that a high level of trust discourages the use of appropriateness-related criteria. Particularly, when paired with limits in the breadth and latitude of decision-making, appropriateness-related factors would limit the influence of appropriateness-related reasons in driving firms to adopt B2B E-commerce. In terms of trust's moderating impact, [6] suggest that trust may have two effects on behaviour (i.e., adoption behavior). Direct and moderating effects are examples of these. They emphasise that, although confidence has a moderating effect on behaviour, the prospective adopter would be encouraged to selectively observe and analyse signs that directly affect behaviour. According to [8], the presence of certain criteria is important, but it is insufficient to boost e-commerce adoption.

According to current studies, trust does not have a direct bearing on the decision to adopt [8]. As a consequence, trust may be better understood as a component impacting how a potential adopter prioritises its motivation to embrace B2B E-Commerce. Furthermore, diffusion of innovation (DOI) theory and the technology organization environment (TOE) demonstrate that technological, organisational, and environmental elements, rather than trust, drive adoption behaviour. In this scenario, trust motivates people to adopt since it informs them about the appropriateness of participating in a certain joint-action activity (i.e., B2B E-commerce adoption). As a consequence, high levels of trust among trading partners may lessen the possibility of opportunistic behaviour; it also lowers the degree of ambiguity in B2B E-commerce adoption when it is judged

an acceptable choice. Another key issue mentioned in the literature is the gap in opinions on B2B e-commerce adoption between marketing and purchasing departments. According to [9], distinct perspectives on B2B E-commerce deployment may exist on both sides of the transaction. The use of business-to-business is growing [10]. E-commerce has the potential to alter the current structure of business interactions. In many cases, a buyer's adoption of B2B may result of a considerable shift in negotiation power to their supplier. As a consequence, the factors influencing marketing and purchasing divisions, as well as B2B E-commerce adoption, may vary. As a result, this research aims to accommodate multiple points of view in order to identify how they vary. Current empirical analysis does not provide trustworthy data on the aforementioned areas. The question of whether trust modifies the relevance of certain technology organization environment (TOE) components remains unresolved. Furthermore, differences and similarities in the two viewpoints of B2B E-Commerce in terms of B2B E-Commerce adoption determinants must be explored. Those problems need further exploration, and this thesis enhances previous studies by addressing those concerns. While B2B E-commerce assists companies in gaining numerous competitive advantages and is a tool necessary for dealing with challenges in the global economy, the low level of adoption raises worries about the variables that motivate firms to embrace this technology.

It also raises questions regarding the factors that may prevent or aid in the manifestation of these impulses. The primary research issue, as seen in the previous reviews, is centred on one major research question: "Do relationship-related elements trust affect the impact of technical, organisational, and environmental factors on the firm's desire to embrace B2B E-commerce?" As a result, the following research questions have been developed for this study: 1. What is the link between technical factors and managers' adoption of B2B E-Commerce in Palestinian companies? 2. What is the link between organizational factors and managers' adoption of B2B E-Commerce in Palestinian companies? 3. What is the link between environmental factors and managers' adoption of B2B E-Commerce in Palestinian companies? 4. Does trust mediate the link between technical factors and the adoption of B2B E-Commerce among managers in Palestinian companies? 5. Does trust influence the link between organisational factors and the adoption of B2B E-Commerce among managers in Palestinian companies? 6. Does trust influence the association between environmental factors and the adoption of B2B E-Commerce among managers in Palestinian companies?

## 2. Literature Review

### 2.1 Technological Factors and E-Commerce B2B

The projected benefits of B2B EC to the business are relative advantages. Savings, faster decision-making, less marketing time, and increased efficiency and production are just a few of the advantages [11]. The benefits of adopting innovation are the most significant consideration when considering whether or not to embrace it [12]. Potential adopters will do implicit or explicit cost-benefit analyses, according to Diffusion Innovation Theory. They will embrace innovations that increase revenues above the previous approach.

According to this survey, organisations' executives are more willing to use B2B EC if they believe it would benefit them. As a result, this study poses the hypotheses as:

**Hypothesis1:** *Technological factors (TF) leads to greater intention to adopt B2B E-Commerce among Palestinian companies' managers.*

### 2.2 Organizational Factor and B2B E-Commerce

A company's capacity to effectively accept, utilise, and profit from information technology is referred to as organisational readiness [5]. B2B EC technology adoption necessitates changes to the company, personnel, processes, and structure [13]. Furthermore, in order to properly implement B2B EC, businesses must ensure that the nature of the technology change and the firm's goals are in sync. Concentrate on two concepts that impact the decision to use B2B EC as part of the organisational readiness process.

As a consequence, organisations who are more technologically advanced are better positioned to take advantage of B2B EC technology. As a result, Organizational Readiness, which includes financial capital and IT complexity, is a critical core aspect in determining the future resources necessary to execute B2B EC. As a consequence, arrive to the following hypothesis:

**Hypothesis2:** *Organizational factors (OF) leads to greater intention to adopt B2B E-Commerce (B2B E-C) among Palestinian companies' managers.*

### 2.3 Environmental Factors And The Relationship B2B E-Commerce

The tension caused by the possibility of losing a competitive edge is referred to as "competition pressure." Companies are being pushed to implement B2B E-C due to this pressure [14].

Adoption of new technology may impact the corporate environment, change the laws of competition, and provide new opportunities to outperform competitors. It can alter the competitive environment [15].

Businesses are under pressure from competitors to react to client expectations quicker, with shorter lead times and more personalization [2]. Internal and exterior structures should be installed, integrated, and reconfigured to meet the demands of a constantly changing market. Using B2B EC technology, businesses will strengthen their relationships

and synchronise their operations with downstream and upstream stakeholders. To put it another way, many companies regard B2B EC as a structured business process innovation that may help them achieve a competitive edge over their competitors.

Businesses will invest in breakthrough technologies to obtain a strategic edge over their rivals as long as they exist in a competitive market. The dissemination rate of B2B EC is thought to be high in a highly competitive environment. As a consequence, this study proposes the following hypothesis:

**Hypothesis 3:** *Environmental factors (EF) leads to greater intention to adopt B2B E-Commerce (B2B E-C) among Palestinian companies' managers.*

### 2.4 The Moderating Role of Trust And The Relationship B2B E-Commerce

The readiness of one firm to have faith in and depend on a trade partner is referred to as trust. It occurs when one party has a firm belief in the other partners' dependability and honesty. The necessity of high levels of confidence in inter-organizational contacts is stressed by researchers [16].

They also believed that maintaining a strong buyer-supplier relationship was more vital than creating breakthrough technologies on its own. According to the report, B2B EC cannot function without confidence. In a large body of research, trust has been identified as a factor that promotes B2B EC adoption [17]. In many adoption studies, the evidence for a direct effect is weak: recent research indicates that trust has little direct influence on adoption choices. Trust, according to [18], may have a moderating effect for B2B EC adoption. Trust's moderating role has received little empirical attention, but it has gotten a great deal of theoretical attention in conceptual research.

Furthermore, the trust of a prospective adopter pushes him or her to commit the required resources in the adoption process. This is due to the fact that in an exploitative context, the new partner would not have to account for the possibility of a let-down. As a result, the following three hypotheses are proposed:

**Hypothesis 4:** *Trust (T) moderate the relationship between Technological factors (TF) and adopt B2B E-Commerce (B2B E-C) among Palestinian companies' managers.*

**Hypothesis 5:** *Trust (T) moderate the relationship between Organization factors (OF) and adopt B2B E-Commerce (B2B E-C) among Palestinian companies' managers.*

**Hypothesis 6:** *Trust (T) moderate the relationship between environmental factors (EF) and adopt B2B E-Commerce (B2B E-C) among Palestinian companies' managers.*

## 3. Research Methodology and Framework

To construct the research framework, this study employs generally used theories and models in adoption research, such as the diffusion of innovation (DOI) theory and technology organization environment (TOE). The TOE

framework and the diffusion of innovation (DOI) theory emphasize the effect of technical, operational, and environmental aspects on the acceptance of innovative ideas.

Relationship-related elements are not considered by the technology organization environment (TOE) or the diffusion of innovation (DOI) theory [19]. The significance of relational context, especially trust, is another insight provided by RDT. Despite the significance of such factors, there is limited agreement on characterising trust's role in B2B EC adoption models. Although previous study has shown that trust directly impacts the choice to use B2B EC, researchers have suggested that these characteristics may play a facilitating function by allowing other motivating reasons to take centre stage. Therefore, this research includes the function of trust as moderators in the suggested framework. Both are predicted to have a moderating role in improving the predictive and explanatory power of technology organization environment (TOE) adoption models, yielding findings that will be beneficial to academics and practitioners. Figure 1 depicts the study's research framework.

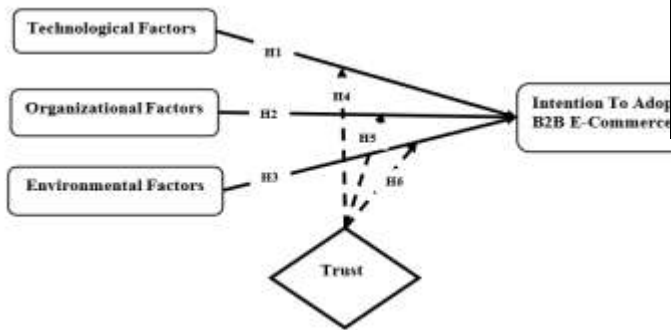


Figure 1. The proposed Study framework

### 3.1 Nature of Study

Exploratory, and descriptive method, with hypothesis-testing research are all options. Exploratory use in this study to examine a new topic, while descriptive research used to describe the characteristics of a phenomenon. The variation in the dependent variables is examined during hypothesis testing [20]. The kind of research conducted is defined by the research's purpose. The study is a hypothesis-testing study since it focuses on predicting the components that significantly account for variance in an organization's intention to utilize B2B EC.

### 3.2 Unit of Analysis

This research aims to discover whether the company's desire to implement B2B EC differs from its primary customer and supplier. To that purpose, this research examines each viewpoint independently. On the other hand, since a unit of analysis is the unit to which data is assigned for statistical analysis and hypothesis testing, each perspective is considered as a separate unit of analysis [21].

### 3.3 Population and Sampling Procedures

Companies that are presently non-B2B EC adopters are eligible for this research since it focuses on their objectives to adopt. Companies that qualify for B2B EC research must have a significant volume of transactions and extensive supply chain and channel management expertise. Companies with many workers these traits are more likely to be present in companies with high registered capital, high sales turnover, and high registered capital.

In the first step, the researcher looked for firms in the PSE's five key industries: banking, finance, industrial, and utilities. The financial industry has the biggest trading volume, while the services industry has the highest market capitalization. Furthermore, the researcher filtered the list to only include active businesses and deleted duplicates. This method decreased the number of firms in the sample to 39. Table 1 shows a list of firms.

Table 1 shows a list of businesses.

Sector	No. of Companies	Market Capitalisation (US\$m)
Insurance	6	601.4
Banking	8	91.7
Industry	5	426.8
Investment	11	179.2
Services	9	1076.2
Total	39	2375.4

### 4. Result of Hypotheses Testing

The findings of the study hypothesis are summarized in Table 2. The major effect was examined independently without a moderator in the first stage. Furthermore, the first hypothesis, technical factors (TF) and B2B E-Commerce, is positive and significant, indicating that H1 is supported. Furthermore, there is a positive and substantial association between organisational factors (OF) and B2B E-Commerce, supporting H2. Furthermore, there is a positive and substantial association between environmental factors (EF) and B2B E-Commerce, supporting H3. Furthermore, the interaction model's moderating function of Trust (T) has been begun. As indicated in Table 2, the conclusion has verified that one of the hypotheses, H4, is positive and significant. Furthermore, H5 examines the function of Trust (T) in mediating the relationship between OF \* T and B2B E-Commerce. Furthermore H6. EF \* T -> Business-to-Business E-Commerce are not significant.

Table 2: Hypotheses results

No.	Hypothesis	Path Coefficient	Standard Error (STERR)	T.Value	P. Value	Decision
H1	TF -> B2B E-C	0.576	0.374	.1238	.0141	Supported
H2	OF-> B2B E-C	1.436	0.375	3.464	0.100	Supported
H3	EF-> B2B E-C	0.353	0.306	3.577	0.011	Supported
H4	TF * T->	-0.790	0.441	1.176	0.131	Supported

	B2B E-C					
H5	OF* T -> B2B E-C	0.432	0.374	0.678	0.482	Not Supported
H6	EF* T -> B2B E-C	-0.143	-0.543	1.759	0.442	Not Supported

Note. \*p < 0.1; \*\*p < 0.05; \*\*\* p < 0.01

### 5.1 Theoretical Implications

By separating the two sides of B2B, to deepen and differentiate the understanding of B2B EC dissemination factors. In the meantime, the TOE framework was tested in the context of trust as moderating to capture the constraints and opportunities that may influence the meaning and occurrence of adoption behaviour, as well as the functional relationship between underlying factors. The understanding of the relationship between TOE components and adoption intention becomes more sensitive to the context of trading partner relationships as a result of including trust as a moderator in the TOE framework.

### 5.2 Conclusion and Future Study Recommendation

B2B EC may be used to identify technical aspects (such as Relative Advantage and complexity), managers should consider this while making business decisions during (COVID-19) pandemic. B2B EC paybacks should be approached with caution by managers who aren't sure whether their operational environment can handle them. Consequently, managers should be more proactive in analysing B2B EC to verify that it is a suitable match.

The results also suggest that managers of B2B interactions should pay particular attention to the nature of their relationships with their supply chain partners when addressing B2B EC in Coronavirus Pandemic (COVID-19). The quality of the relationship has a greater influence on corporate customers. Thus, marketing managers need to be aware of this. They should put their efforts into developing techniques to lessen the dangers associated with having a high degree of certainty in their systems. To ease B2B EC adoption, marketing managers could provide advantages and incentives to their business clients, since buying confidence has a more significant impact on adoption difficulties.

Many variables have been examined in the literature to explain B2B EC adoption, however the findings reached are widely disagreed upon. Two possible explanations for the discrepancies in the findings regarding the influence of TOE components, trust, are offered in this study. In addition, this study examines the differences and similarities in adoption variables between the two sides of B2B EC. During a Coronavirus outbreak, marketing and purchasing behave quite differently, from product and component information to inventory levels and delivery monitoring, the company's e-commerce platform should give precise, full, and real-time data. Customers may also monitor their products, handle returns, and pay online, in addition to paying and checking out fast and simply. A online business should also have the proper framework in place to handle complicated orders. Also, during the COVID-19 pandemic, product information,

price, and inventory levels should be appropriately reported in the online shop since demand for specific goods is expected to alter and fluctuate. The repercussions of the COVID-19 pandemic may remain for a long time, and e-commerce in products and services will need to continue to adapt to the new environment. Short-term options for getting a web shop up fast and long-term changes in client behaviour During the SARS outbreak, there was a comparable increase in the usage of teleworking services and B2B e-commerce. Similarly, COVID-19 has the potential to accelerate society's digitization and the establishment of legislation and norms to control online commerce and marketing. Furthermore, the COVID-19 pandemic has shown that e-commerce may be a valuable tool/solution for customers during times of crisis. However, the pandemic has also underlined the necessity of digital marketing. The research, on the other hand, contributes to a better knowledge of technology adoption challenges.

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