

E-Commerce Adoption in Egypt Insights from COVID-19 and Beyond

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Abstract

This Paper aims to review IT adoption literature to gain insights on E-Commerce adoption in Egypt, while focusing on various impacts of COVID-19 pandemic on E-Commerce and related e-services considering these impacts in Egypt. IT adoption literature was reviewed concerning E-Commerce adoption levels highlighting evidence from Egypt. Impact of COVID-19 on economy, e-commerce and related e-services was reviewed both on seller and consumer side. Impact of COVID-19 on e-commerce and related e-services in Egypt was then reviewed. Actions taken by Egyptian government in this essence in response to COVID-19 was addressed. Finally, recommendations to leverage e-commerce during COVID-19 crisis and beyond are addressed.

Index Terms—E-Commerce, E-Commerce adoption, E-Services, E-payment, COVID-19.

I. INTRODUCTION

It has been well established, in ICT adoption literature, that ICT won't be effective unless it is used [1]. The last three decades have witnessed a massive revolution in technology use at both individual and organizations level with several organizations replacing the manual system of operation with modern technologies and computer powered machines [2].

Current research efforts of individual adoption regarding system use results in two main research streams; User Satisfaction and Technology Acceptance [3]. On the other hand, researchers examined many factors to specifying main adoption determinants. One of the most important frameworks of IT adoption, “Technology–Organization–Environment” TOE, identified and categorized factors intervening in the adoption of IT into four groups; contextual, organizational factors, management, and the factors related to the nature of technology and its impact, including the specific factors of e-commerce [4].

Since the 90s, number of organizational models emerged such as e-commerce virtual store, e-procuring, e-auctioning, virtual communities of users and consumers with common interests, collaboration platforms, e-brokerage, third party marketplaces, supply services, etc.[5]

The emergence of Internet technologies had changed the way of communication and also the nature of business, in which E-

Commerce is one of the prominent examples [6]. E-commerce is perceived to offer many benefits enabling business process reengineering or supporting industry value chain integration initiatives such as just-in-time inventory, continuous replenishment, and quick response retailing. [7]

This paper is organized as follows. Section II represents Conceptual Framework of E-commerce adoption. Section III reviews E-Commerce adoption literature showing E-Commerce adoption level. Section IV addresses E-commerce adoption in Egypt. Section V represents the Impact of COVID-19 on Economy. Section VI reviews the Impact of COVID-19 on E-commerce. Section VII focuses on the Impact of COVID-19 on E-commerce in Egypt. Section VIII addresses Recommendations to leverage e-commerce during COVID-19 crisis and beyond. Finally, Section IX shows Conclusions.

II. CONCEPTUAL FRAMEWORK OF E-COMMERCE ADOPTION

According to [8], E-commerce model is a staged progression of usage that begins from simple initial adoption technology-based activities to an advanced degree of use of more complex and integrated technologies. The initial stage usually involves a simple static website, followed by a dynamic online presence that allows a two-way communication channel between the firm and its suppliers and customers, then electronic transaction as the

next stage where firms have online order systems and online payments, and the final stage is electronic collaboration [8].

The level of e-commerce adoption differs depending on organization type, and its culture of supporting innovation and use of technology, or they could be considered a barrier to adopt (B2B) or (B2C) e-commerce [9].

III. DETERMINANTS OF E-COMMERCE ADOPTION

Based on TOE framework, six determinants of e-Commerce adoption were identified by [6]: perceived benefits, perceived barriers, top management, organization readiness, competitor pressure and government support.

Another study [4] identified factors of E-Commerce adoption derived from organizational and technological adoption theories, and based on TOE framework. *Organizational or internal factors* are; Organizational readiness, Cost, Organizational ITC, Size of the company, Innovativeness. *Environmental factors* are; Buyers and sector, Government's support, Competitions, Complexity e-commerce country. *Technological factors* are; Perceived risk, Relative advantage, Observability, Compatibility, Ease of use.

E-readiness of organization proposed by [10] is an important determinant of e-commerce adoption, they supported the existence of internal SME factors and external factors.

IV. E-COMMERCE ADOPTION: INSIGHTS FROM EGYPT

According to [11], Egypt has a handful of e-marketplaces and e-commerce and related platforms.

However, it was shown in [12] that most of SMEs in Egypt have widely adopted the most common e-commerce technologies as additional marketing tools to display company's products and services information, rather than as an e-commerce platform to enable online transactions.

The effect of different levels of B2B e-commerce adoption on gaining and sustaining competitive advantage in both US and Egyptian manufacturing small and medium-sized enterprises is investigated in [13]. The findings reveal that the higher the level of B2B e-commerce SMEs adopt, the higher the level of competitive advantage they gain. The findings also reveal that SMEs focused more on growth as this allowed them to continue competing in the global market.

Similarly, findings of [14] revealed that e-commerce companies have many opportunities to enhance its competitiveness in Egypt. As well as it was cleared that the main factors of e-commerce that enhancing companies' competitiveness are the strong ICT infrastructure in Egypt, Qualified and skilled human resources, logistics which distinguishes Egypt because of its location, strong legal and regulatory environment and Innovation, as well as the competitive strategy.

V. THE IMPACT OF COVID-19 ON ECONOMY

In 11 March 2020, World Health Organization (WHO) announced that the disease caused by the novel coronavirus COVID-19 outbreak can be characterized as a pandemic [15].

During this outbreak, most people prefer to stay at home and prefer buy product online [16]. The outbreak initiated in the economic sector, resulting in both supply and demand shocks that were rapidly transmitted to financial markets. And it aggravated pre-existing global and regional panics involving oil price disturbances, trade war tensions and distracted supply chains, as well as intense Middle East political disruptions [17].

For Egypt, it is further complicated as the country is currently undergoing a radical program to reform longstanding monetary and fiscal problems as well as persisting structural imbalances, this crisis involves many vulnerable sectors, such as tourism and foreign financial flows, as well as a manufacturing sector, Egypt has been excessively exposed to continuing episodes of domestic political disruptions, starting from the 2011 revolution, through a set of successive political cycles, the country is still struggling with fragile socio-economic and welfare status, and finally it continues to suffer from weak credibility and modest institutional performance that affect economic variables and public expectations, especially during times of abrupt uncertainty [17].

VI. THE IMPACT OF COVID-19 ON E-COMMERCE AND RELATED E- SERVICES

Digital transformation has created and brought wing of sustainability [18]. The digital transformation of trade and society at large has accelerated during the COVID-19 crisis [19]. Thus, the pandemic induced not only the workforce but the consumers to make the digital transformation. The pandemic only accelerates the transition of the consumption culture into the online hemisphere [20]

The flight to digital and omnichannel continues, and many intend to stay post-crisis [21]. E-commerce became a substitute source and considered top in COVID-19 pandemic, and e-retailers provides goods that usually consumers bought in superstore traditionally [22]. According to [23] The COVID-19 crisis is likely to have long-lasting effects on e-commerce. It is accelerating an expansion of e-commerce towards new firms, customers and types of products, likely involving a long-term shift of e-commerce transactions from luxury goods and services to everyday necessities [23]. The increase in B2C sales is particularly evident in online sales of medical supplies, household essentials and food products [24]. As in the Pandemic situation everything is shut down while most of the brick-and-mortar pharmacies continue to function in lockdown [25].

Mobile banking is a best option to stay away from COVID-19 infection [26]. E-Banking involves consumers using the Internet to access their bank account and to undertake banking transactions [27]. Actually, E-banking services and related E-payment services are pillars to support e-commerce. Currently, many banks offer e-banking systems [27].

E-commerce is emerging as a major pillar in the COVID-19 crisis, as it can help increase the acceptance of prolonged physical distancing measures among the population [28]. Furthermore, even the late adopters, who never used online shopping before, are prompted to shop online as there is no alternative when sheltering in-place [20].

The response to the COVID-19 pandemic is intensifying the push to digitalization [19].

In Arab region, for example, Dubai-based Majid Al Futtaim which operates 27 shopping malls has seen a surge in online sales, with a 59% year-on-year increase in online customers in March 2020. Saudi Arabian retailer BinDawood Holding has seen a 200% increase in its online sales since the escalation of the COVID-19 crisis [29].

Then, COVID-19 impact can be assessed either on consumer side or on supplier side, which will be addressed as follows.

A. Consumer Side

During the outbreak, consumers are shifting their spending to essentials and seeking value across purchases [21]. Consumers are likely to become accustomed to new ways of shopping. In addition, other behaviors and past times of consumers will shift [30]. According to [29], Post COVID-19, shoppers will return to the malls, but not at the same levels as before, as online shopping habits will have become more routine [29].

Upon investigating the changes in consumer behavior across categories while the nation went into lockdown, Results of [16] revealed that, some aspects of consumer behavior and marketing response will have changed permanently and brands that recognize that and prepare for it will emerge stronger from the disruption. Results showed significant correlation between age group and buying habits of consumer during covid-19. It was also concluded that, as people spend more time at home and are discouraged from going out, the virus will lead to a continued increase in consumers shopping online [16].

B. Supplier Side

As consumers avoid shopping malls in response to COVID-19, online retailers and e-commerce platforms are poised for growth. The pandemic is forcing the closure of ‘bricks-and-mortar’ retailers around the world as consumers switch to online shopping [29].

Retailers of essential goods are experiencing increased demand opportunities for serving consumers at home, while facing challenges of inventory, supply chain management, delivery, and keeping their facility a safe environment [30]. On the other hand, retailers of non-essential goods are facing a significant drop in sales and have to adopt new ways to reach and engage customers who are shopping from their home, just to sustain themselves. Some manufacturers and retailers are even pivoting and changing their product mix to suit the demand arising from the COVID-19 crisis (e.g., shoe manufacturers creating facemasks) [30].

On another level, Virtual Reality (VR) and Augmented Reality (AR) techs are expected to open new opportunities for personalized shopping experiences online. Also, Managers might enable online reviews and encourage consumers to provide feedback to help reduce the uncertainty involved in making purchases online [20]. Moreover, Employees can be reshuffled and reskilled, allowing growing sectors to manage the surge in demand, and preparing employees for new roles [29].

VII. THE IMPACT OF COVID-19 ON E-COMMERCE AND RELATED E-SERVICES: INSIGHTS FROM EGYPT

Given the many uncertainties, it is difficult to quantify the likely impact of the COVID-19 outbreak on the Egyptian economy [24].

Since the outbreak of COVID-19, Egyptians have been using digital platforms to work, study, and shop like never before, and this trend is expected to gain momentum in the future [31].

The National Telecom Regulatory Authority (NTRA) Report on the Indicators of the Usage of E-wallets of Mobile Phones highlights that there are 13.5 million e-wallets throughout the country. They carry out 4.8 million e-transactions per month. In these transactions, there are three most used services by subscribers; depositing and withdrawing cash from the e-wallets of the mobile phones currently amounts to 35% of the total number of transactions per month, transfers amounting to 33% of the total number of transactions per month, and charging mobile phone balance currently amounts to a rate of 26% of the total number of transactions per month [32].

As for the geographical distribution of holders of the e-wallets of mobile phones nationwide, it should be noted that the users come from all governorates of the country. In addition, the service is widely used by all age groups in the society with a relative increase of those of 26-50 years of age [32].

Egyptian government took number of actions in response to COVID-19 pandemic on its early stages.

First Central Bank of Egypt has launched several initiatives and incentives for the use of e-banking services and means of e-payment. Central Bank of Egypt (CBE) decisions and initiatives

included in circular dated 15 March 2020 regarding the precautionary measures to counter the effects of COVID-19 are; replacement of cash services with either transfers or bank checks while any consequent fees are canceled, commissions on POS, ATMs, and E-wallets transactions are cancelled for 6 months, daily limits of debit and credit cards are raised, and encouraging fulfillment of banking services through E-banking and E-payment services [33]

Central Bank of Egypt (CBE) decisions and initiatives included in circular dated 20 March 2020 following up the precautionary measures to counter the effects of COVID-19 are; issuance of E-wallets for free for 6 months, as well as any virtual card issued based on these wallets, permission of electronic issuance of E-wallets, daily and monthly limits are raised for a payment via E-wallets, permission of transfers between any bank account and any E-wallet of another bank, issuance of prepaid card for free for 6 months, especially contactless cards once a bank can issue these types of cards, the use of QR code and request to pay services on the POS machines, registration of banks' customer in E banking service for free for 6 months, and exemption of contactless payments and E-services, and E-wallets from any commissions [34].

As claimed by [30], that some manufacturers and retailers are even pivoting and changing their product mix to suit the demand arising from the COVID-19 crisis, number of Egyptian retailers

are changing their activities in response to COVID-19 pandemic. For example, Uber and Careem are offering delivery services during lockdown [35], [36]

VIII. RECOMMENDATIONS TO LEVERAGE E-COMMERCE DURING COVID-19 CRISIS AND BEYOND

According to [22], public and private sectors in developing countries must collaborate and work together to promote the enhancement of the digital ecosystem.

The World Bank Group, Trade and COVID-19 Guidance Note [28] highlights 13 key measures that governments can take in the short term to support e-commerce during the ongoing crisis. The first group of measures aims to help more businesses and households to connect to the digital economy during the crisis. The second group of measures aims to ensure that e-commerce can continue to serve the public in a way that is safe, even during the COVID-19 lockdown. The third group of measures aims to ensure that the government's e-commerce strategy during the crisis is clearly communicated, implemented, and coordinated with other policy measures.

IX. CONCLUSIONS

During pandemic, Social distance influenced all aspects of life, including social and economic dimensions. Digital transformation plays an important role to avoid COVID-19

infection. This includes E-commerce and related e-services, which are major pillars in the COVID-19 crisis.

This review reveals number of concluding remarks. First, this pandemic affected economies of all countries. Demand for essential goods may increase while that of non-essential goods will reduce sharply. This is likely to hinder growth for many economies and may cause poverty. Second, E-commerce is emerging as a major pillar in the COVID-19 crisis. COVID-19 impact can be assessed on both consumer side and supplier side. Third, Impacts of COVID-19 may fall into three interrelated categories; domestic impacts, effect global impacts, and outcomes of increased uncertainty and risks. Egyptian government took number of actions in response to COVID-19 pandemic on its early stages. Central Bank of Egypt has launched several initiatives and incentives for the use of e-banking services and means of e-payment. NTRA has launched several initiatives and coordinated efforts with various government bodies to encourage and urge the use of digital means to carry out and conduct financial transactions electronically.

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