

Exploring Trust in Mobile Commerce during Pandemic Crisis

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Abstract—Mobile commerce (m-commerce) is highly regarded because of its essential characteristics, for example, flexibility, personalization, ubiquity, identification, and dissemination. More so, in the current COVID19 pandemic crisis. COVID19 has drastically changed the world and possibly irreversibly. Business strategies and practices has to adapt to changes in the business environment. These changes generally promoted online business transactions and interactions, making m-commerce an essential business feature. However, there are inherent risks and disadvantages that cultivate anxiety in m-commerce and impacts negatively m-commerce adoption. This makes trust one of the key success factors of m-commerce. In this paper, we explore trust in m-commerce to generate knowledge considering a pandemic crisis context. This research-in-progress seeks to contribute by generating knowledge on emergent main players, such as, AliExpress, Alibaba's merchant showcase. In addition, expected contributions include validation of the theoretical construct of antecedents and consequence of trust in m-commerce considering a pandemic crisis context.

Keywords—Mobile commerce, Trust, Pandemic crisis, Alibaba

I. INTRODUCTION

Mobile commerce (m-commerce) is highly regarded because of its key characteristics, such as flexibility, personalization, ubiquity, identification, and dissemination [1]. Even twenty years ago, m-commerce promised businesses unprecedented market opportunities, increased productivity, and improved profitability [2]. M-commerce refers to business activities conducted using mobile devices, usually through the internet. Thus, mobile devices are the platform on which users perform various business activities with m-commerce service providers and other stakeholders, such as governments, mobile device manufactures, data conglomerates, and telecom providers. Consumers also enjoy many benefits of m-commerce, including convenience, speed of conducting business, and relative ease when comparing products and services.

The significance of m-commerce has been exacerbated by the current Coronavirus (COVID19) pandemic, which has (perhaps) permanently changed the m-commerce landscape with the emergence of new and altered business and consumer activities. In many countries, there was a “stay home” or “lockdown” policy from March 2020 until July 2021. Lockdown policies still remain in force in several countries. Consequently, business strategies and practices have had to adapt to environmental changes brought about by governments, regulators, and consumers [3]. These changes have driven many business activities online, making m-commerce essential for business survival and growth. Despite the potential benefits of m-commerce, there are inherent risks and issues, including identity theft, reputational damage, data leaks, hacks, regulatory changes, lost and/or wrong items delivered. These issues and risks can increase user anxiety

when using m-commerce and negatively impact on its adoption [4]. In addition, the World Health Organization has warned of an infodemic, involving false or misleading information about COVID19 being disseminated through digital mediums [5]. This causes confusion and encourages risk-taking behaviors. Consequently, trust has become one of the key success factors of m-commerce during the pandemic. Therefore, it is critical to develop solutions to issues of trust to ensure the continued success of m-commerce. To do so, there is a need to understand the factors influencing consumers’ trust in m-commerce [6].

Trust relates to one’s belief about the degree to which others are or will be concerned about their welfare and interests [7]. Antecedents of trust are factors influencing trust in m-commerce and, therefore, form the basis of using m-commerce. The consequence of trust determine continuity in m-commerce use [8]. Therefore, the antecedents and consequences of trust in m-commerce are crucial in generating sustainable m-commerce success. However, whilst there is extensive research on the antecedents and consequences of trust in m-commerce (e.g. [9], [1], [10], and [6]) none of these studies are within a pandemic context. Hence, there is a need for new m-commerce research examining the changing business environment within the context of a pandemic crisis. This is important because existing risks and issues associated with m-commerce are exacerbated by COVID19 whilst also creating new challenges [5]. Hence, the objectives of this paper are twofold. First, to explore consumers’ trust in m-commerce within the context of a pandemic crisis. Second, propose a model to foster consumer trust in m-commerce during a pandemic. Through these two objectives, we aim to achieve two primary goals. First, to develop a theoretical framework, forming the basis of future empirical research examining the behavioral outcomes of trust in m-commerce during a pandemic. Second, this study could provide key m-commerce stakeholders with an aid to enhance their understanding of trust. Given m-commerce involves interconnected and interacting components, including people, software, hardware, procedures, and data systems, these two objectives are framed within an information systems perspective to develop trust solutions in m-commerce [11].

II. THEORETICAL FOUNDATIONS

Digital footprints are increasing primarily through mobile technologies in the current pandemic. This means that businesses need to be prepared to serve customers through digital means. Nevertheless, m-commerce is still in its initial phase of development, and the majority of customers are novice users [6]. Whilst m-commerce offers several business opportunities and advantages, such as saving time, customization, and flexibility [12], they are only possible if there is trust in m-commerce [2]. M-commerce consumers are

the trustors, and m-commerce providers are the trustee. If a trustee deceives a m-commerce consumer, it could limit the adoption and usage of m-commerce. It could also drive consumers to purchase from competitors. Trust in the adoption of m-commerce is influenced by several factors, such as usability of m-commerce websites, the usability of mobile devices, reliability of wireless services, the trustworthiness of product vendors, information quality, product quality, and the effect of culture and security of mobile transactions [13]. [8] suggested three categories of antecedents and consequences of trust in m-commerce technology: (1) acceptance factors, (2) quality factors, (3) risk factors. We extend these three categories by also including the pandemic context [14], and mobile disposition (see Figure 1: Research Model).

A. Technology acceptance factors

Technology acceptance factors include perceived risk, perceived enjoyment, perceived ease of use, perceived usefulness, perceived behavioral control, subjective norms, which have been highlighted in past research as antecedents of trust in m-commerce [15]. We focus on perceived usefulness and perceived ease of use as the most critical determinants for system use [16]. Perceived usefulness refers to the extent to which a system supports job performance [17]. Perceived ease of use refers to the degree to which using a system is regarded as free from extra effort by the user, considering their level of skill and knowledge [6]. Perceived usefulness and perceived ease of use are derived from the technology acceptance model (TAM), criticized for a lack of adaptive nature in a dynamic business environment [18]. However, perceived usefulness and ease of use fit well for this research because it investigates factors that enhance consumers' trust in m-commerce and its consequences in a pandemic context [19]. Hence:

Hypothesis 1. Technology acceptance positively influences trust in m-commerce in a pandemic.

B. Quality factors

The notion of quality has gained importance with [20][21] research. According to SERVQUAL, quality of service is the gap between a customer's expectations for a service offer and the customer's perceptions of the service received. The SERVQUAL measure is an attitude measure linked to satisfaction with the use of the service. The theory was subsequently adapted in the information systems function by [22] and [23] to measure the quality of service. Quality factors in m-commerce include system quality, information quality, and service quality. System quality is based on overall performance and perceived by the user [24]. From a mobile perspective, quality includes the platform's visual appeal and how easy it is for diverse users to navigate. This is embedded in both the interface design and functionality of m-commerce platforms. Information quality is based on factors such as correctness, timeliness, adequacy, and relevance. Information quality in m-commerce is essential because it relates to the benefits of system accessibility anywhere and anytime. Service quality is the system's ability to provide reliable, consistent, responsive, assured, and customized offerings to users. Quality factors in m-commerce increase users trust in a system [25] in a pandemic context [26]. Hence:

Hypothesis 2. Quality positively influences trust in m-commerce in a pandemic.

C. Risk factors

Although the use of information technologies in the context of risk management is a significant concern, it has increased during the pandemic [5]. Since the 1990s, researchers have proposed a risk analysis process that provides managers with clearer insights into the overall risk associated with information technology in their organization [27]. Strengthening information security management programs can reduce an organization's exposure to risk from future attacks, thereby, improving revenue generation [28]. Perceived risk, perceived security, structural assurance, and perceived privacy positively influence users' trust in m-commerce [8]. M-commerce includes users providing personal and financial information [29]. In providing this information, m-commerce consumers perceive risk as their subjective evaluation of incurring losses. Perceived security relates to consumers' subjective evaluation of the safety of the information they have provided an organisation. Perceived risk can be minimized, and perceived security can be increased by providing legal and technological structures that provide user security through structural assurance. Structural assurance includes guarantees, promises, and insurances policies offered by m-commerce service providers, as well as regulations for consumer safety [1]. Perceived privacy refers to consumers' perception that the personal and financial information they provide when using m-commerce platforms is not shared with third parties [30]. Hence:

Hypothesis 3. Risk negatively influences confidence in m-commerce in a pandemic.

D. Disposition – ubiquity and individual factors

Ubiquity refers to the ability of consumers to conduct m-commerce anywhere and at any time. This is one of the values consumers derive when using of mobile technologies. This is even more valuable in a pandemic context where crowding is discouraged and social distancing promoted. The ubiquity attribute of m-commerce makes it plausible and favorable in pandemic crisis, such as COVID19.–This minimization of temporal and spatial constraints adds value to m-commerce, making it a valuable channel of accessing services. Disposition to trust refers to a general tendency to trust others [31]. A person's disposition to trust is a stable characteristic of one's personality and governs how they view the trustworthiness of every other entity they encounter [32]. This disposition to trust is formed by personal experiences, background, and personality types [33]. Therefore, the formation of trust in m-commerce. Hence:

Hypothesis 4. Disposition positively influences trust in m-commerce in a pandemic.

E. Behavioural outcomes

The behavioral outcomes of trust in m-commerce include attitude, user satisfaction, behavioral intention, and loyalty [8]. Consumers' positive attitude toward m-commerce leads to good behavioral intentions in the context of technology acceptance and continuance [34]. User satisfaction is formulated from the continued use of a system. If users are

not satisfied with a system, they will discontinue unless there is a monopoly, meaning that the system is the only channel to the desired service or product. Attitudes influence user behavior, and behavioral intention influences the actual behavior to use a new technology (Davis et al., 1989). From using technology, loyalty and user satisfaction are developed [18]. Trust has a positive impact on customers' loyalty [35] and this is even more important in a pandemic because of the infodemic issue. Hence:

Hypothesis 5. Trust in m-commerce positively influences consumer behavior in a pandemic.

III. METHODOLOGY

This research is based on a consolidating theory, harmonizing quality factors, risk factors, disposition, and the technology acceptance model. This model is based on [8], who highlight the antecedents and possible consequences of trust in m-commerce. Following the objectives of our study, we plan to collect data through a survey of young people (aged 18-34) living in France and the U.K. This age group, referred to as Generation Z, spends significantly more time accessing internet services through mobile devices rather than desktop computers [36]. Consequently, the survey will be distributed to students in French and English universities to ensure we reach people aged 18-25. The questionnaire will also be distributed through e-commerce forums targeting people aged 25-34. The constructs of the research model will be evaluated through Likert scales with seven points and several items ranging from "strongly disagree" to "strongly agree". As we have already specified previously, the constructs that make up our model are presented by [8].

The study will focus on Generation Z's use of the AliExpress mobile application. In terms of the number of buyers, Aliexpress ranks well among the top ten on Médiamétrie for the Federation of e-commerce (Fevad) of the most frequented sites. The Alibaba site even climbed to fifth position behind Amazon, Cdiscount, FNAC, and Rakuten in the marketplace category. Aliexpress already has a better penetration rate in France and the UK than eBay.

Alibaba also provides services for Chinese tourists in France and the UK through the development of the Alipay payment application, accepted by many European businesses. In addition to Chinese products, the marketplace is gradually opening up to third-party merchants. In Spain, Alibaba even opened an Aliexpress store. Competition with Amazon, which is also opening points of sale, is becoming more and more head-on. However, Alibaba is often mistakenly called the "Chinese Amazon". The shortcut is easy, as both e-merchants dominate e-commerce. Indeed, Alibaba connects buyers and sellers on its marketplace, like eBay. Its annual business volume is \$ 547 billion. The site has over 20 million active sellers. The number of monthly mobile users is 507 million. Forty million packages are shipped every day.

The empirical data will be analyzed with the PLS path modeling of XLSTAT. We plan to analyze the research model by interpreting the measurement elements of the model by estimating the validity and reliability of the different constructs that form the research model and by estimating the structural research model. This approach allows conclusions

to be drawn regarding the paths conjectured between the constructs of the proposed research model.

IV. EXPECTED CONTRIBUTIONS

We intend to achieve our two primary goals by contributing to the empirical foundations of a pre-established but not validated theoretical framework. The existing literature does not make it possible to confirm the behavioral outcomes of trust in mobile commerce empirically. A significant contribution could be the importance of SERVQUAL (Service Quality) as an antecedent of the trust placed in the use of a mobile e-commerce application. Second, this study could provide key m-commerce stakeholders with an aid to enhance their understanding of trust. Young people are increasingly using the AliExpress mobile application, and it is crucial to understand how to position yourself on this intermediation platform. The results could be invaluable for small traders who want to stand out on AliExpress in this time of crisis. E-commerce, bitten by mobile use, is currently the only means of survival for several confined businesses.

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Figure 1 Research Model

