

Review article

TRUST APPRAISAL IN A CONVENTIONAL e-MARKET ENVIRONMENT: A REVIEW

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ABSTRACT

The introduction of internet in the buying and selling of goods and services brought about e-markets. There are several benefits of conducting businesses online to both the buyers and the sellers. However, issues of trust and pricing are major challenges that limit the development of online businesses across the globe. Researchers have contributed several literature and models on solving the issue of pricing, but that of trust is yet to be fully explored. Trust issues arose due to the lack of physical verification as to whether the particular goods or services being paid for actually exist. Some researchers have tried to evaluate and proffer solutions to the limitation of trust in online businesses by developing various models, but the existing body of work relating to trust in e-market environment is insufficient to back this up. This review paper aims to contribute to the limited literature that exist on the aspect of trust in an e-market environment by exploring into detail; the existing approaches and directions of trust appraisal in a typical e-market environment.

KEYWORDS: e-market; trust; evaluation; review; appraisal; e-commerce;

I. INTRODUCTION

Electronic market, also called electronic commerce means the use of telecommunication devices to support customers, supply services, commodities, and management of business transactions and sustainability of bond between suppliers, customers and vendors [1]. Buying of goods or services over the internet has several advantages, examples of such advantages is the reduction in communications costs and low-cost technological infrastructure. Although, the advent of e-marketplaces has been of immense benefit to its users, several challenges such as pricing, trust and privacy issues are still major concerns. The need for trust in e-marketplaces

cannot be overemphasized. E-marketplaces offer a convenient way to compare prices and products from a single source rather than spending time contacting each individual supplier [2]. In e-market environments, when a buyer wants to buy a product, trustworthiness is a key factor in selecting a seller who sells this product [3].

Several researchers have worked on the growth of e-market using several approaches. See for example [4], [5], [6], to mention a few. Previous research works have established that online shopping is the function of a series of consumer evaluation and assessment of e-commerce sites. However, building and maintaining trust in the virtual environment is indeed a complex process and by extension takes time to fully achieve [7]. The authors in [8] mentioned trust and price as the major factors to consider when a customer is selecting the best seller to patronize. Several research works have been done on the area of pricing, see for example [9][10][11]. However, few works have tried to contribute to the area of trustworthiness in online businesses. This work aims to contribute to the theoretical background and body of knowledge on trust issues in e-market environment. The rest of this paper is organized as follows: **Section II** describes the background of e-market and its historical development, **Section III** peruses the issue of trust in e-market and existing approaches to solving the issue, **Section IV** discusses the implications of this review and finally offered some conclusions.

II. BACKGROUND

Electronic commerce is the exchange of information across electronic networks, at any stage in the supply chain, whether within an organization, between businesses, between businesses and consumers, or between the public and private sectors, whether paid or unpaid [12]. Electronic market or electronic commerce has several definitions; this is shown in **Table 1**: Various Definitions of e-commerce. As a result of the multiple definitions, different forecasts presented by various analysts are very widely spread.

Table 1: Various Definitions of e-commerce

S/N	DEFINITION	AUTHOR
1.	Electronic commerce or e-commerce refers to a wide range of online business activities for products and services.	Rosen, 2000 [13]
2.	Electronic commerce pertains to “any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact.	Eco, 2002 [14]
3.	E-commerce is associated with buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network.	Mesenbourg, 2010 [15]
4.	E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals.	Zorayda, 2012 [16]

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5. Electronic commerce is the trade of information across electronic networks, at any stage in the supply chain, whether within an organization, between businesses, between businesses and consumers, or between the public and private sectors, whether paid or unpaid Shahriari et al, 2015 [12]
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Statistics in [17] showed that the number of online shoppers in six key European markets has risen to 79.4 percent from 47.7 percent in recent years. This means that 159 million Europeans use the internet regularly for shopping purposes. The increased number of online shoppers triggered the study of the lingering factors that affects the online businesses.

The issue of examining what factors affect consumers to shop online brought about several research works, see for example [18][19][7]. Therefore, a framework is needed to structure the complex system on the effects of these different factors, and develop an in-depth understanding of consumers' attitudes toward internet shopping and their intentions to shop online [20]. Research in [21] mentioned trust as one of the factors. Trust has been a complex and multidimensional concept that is difficult to define and measure [22]. Trust can be defined as "the keenness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform the specific action expected by the "trustor" regardless of the ability to monitor or control the other party [23]. Trust has been identified as a key component in marketing and e-commerce literature [24] [25] [26]. The importance of trust cannot be over emphasized. Research in [27] described trust as a single most powerful relationship based marketing tool.

There are mainly five (5) types of online shopping models [28]; Business to Business (B2B), Business to Customer (B2C), Customer to Customer (C2C), Peer to Peer (P2P) and M-commerce. This is shown in **Figure 1: Types of Online Shopping Model**.

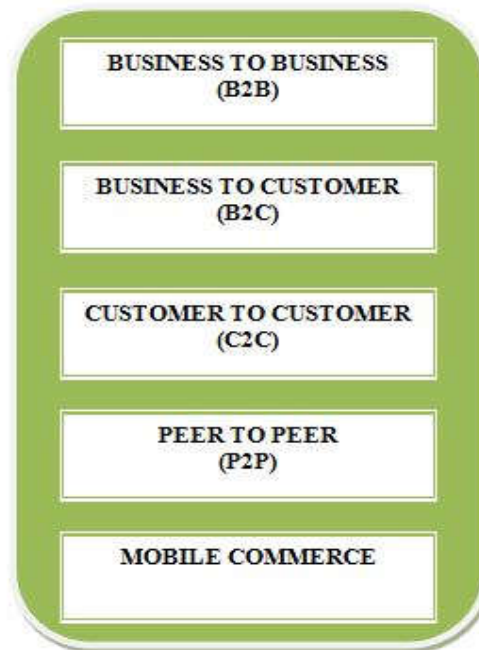


Figure 1: Types of Online Shopping Model

Business to Customer (B2C): This model involving business and consumers. This is the most common online shopping segment. In this model, online businesses sell to individual consumers. The basic concept behind this type is that the online retailers and marketers can sell their products to the online consumer by using crystal clear data which is made available via various online marketing tools [29]. **Business to Business (B2B):**

In this form, the buyers and sellers are both business entities and do not involve an individual consumer. It is like the manufacturer supplying goods to the retailer or wholesaler [30]. **Customer to Customer (C2C)**: it facilitates the online transaction of goods or services between two people. Though there is no visible intermediary involved but the parties cannot carry out the transactions without a platform [31]. **Peer to Peer (P2P)**: It is a technology in itself which helps people to directly share computer file and computer resources without having to go through a central web server [32]. **M-Commerce**: It refers to the use of mobile devices for conducting the transactions. The mobile device holders can contact each other and can conduct the business [33].

Several frameworks on e-commerce have described and investigated customers' previous online purchase experience as the major motivation for purchasing online. A more detailed frame work is shown in **Figure 2**: Framework for electronic commerce (Source: Qin, 2010 [34]).

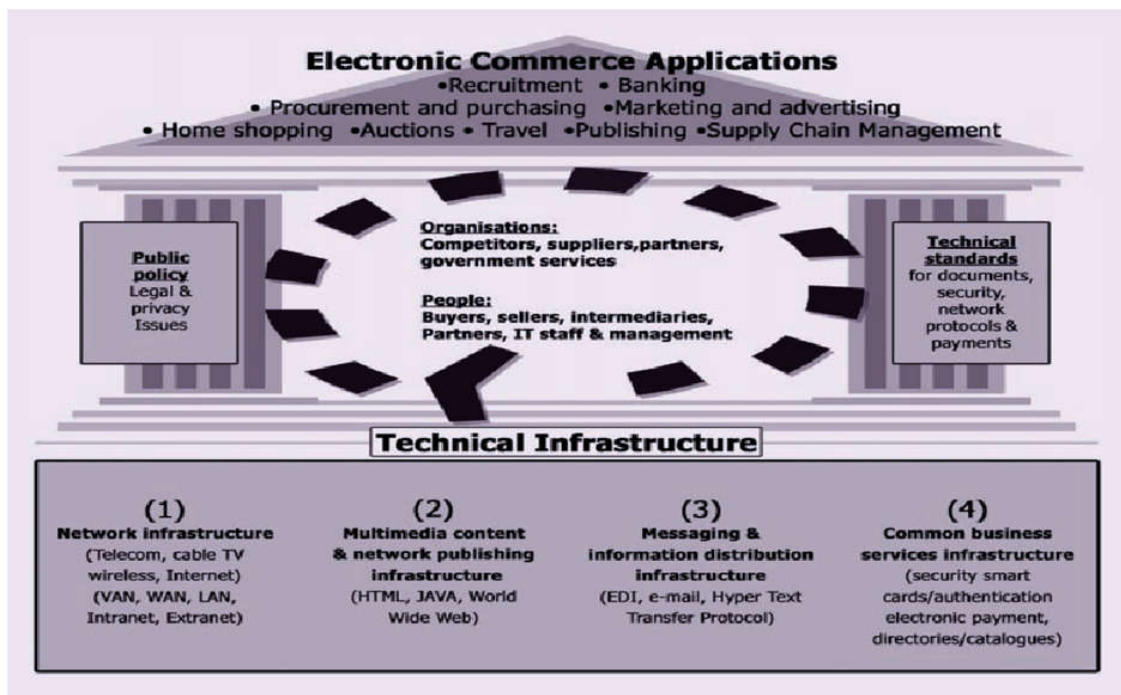


Figure 2: Framework for electronic commerce (Source: Qin, 2010 [34])

Researchers in [35], discussed e-loyalty and e-satisfaction, and were able to deduce that; a dissatisfied customer is more likely to look for information on alternatives and more likely to yield to competitors' advances than a satisfied customer. Also, a dissatisfied customer is more likely to resist attempts by his or her current retailer to develop a closer relationship and more likely to take steps to reduce dependence on that retailer. It was stated that the higher the level of e-satisfaction, the higher the level of loyalty, which invariably leads to increase in trust level.

The forces that fuels electronic commerce was discussed in details in [16], and economic forces, market forces and technology forces were listed. **(i) Economic forces**: One of the most obvious benefits of e-commerce is economic efficiency resulting from the reduction in communications costs, low-cost technological infrastructure, speedier and more economic electronic transactions with suppliers, lower global information sharing and advertising costs, and cheaper customer service alternatives. Economic integration is either external or internal. External integration refers to the electronic networking of corporations, suppliers, customers/clients, and independent contractors into one community communicating in a virtual environment (with the Internet as medium). Internal integration, on the other hand, is the networking of the various departments within a

corporation, and of business operations and processes. This allows critical business information to be stored in a digital form that can be retrieved instantly and transmitted electronically. Internal integration is best exemplified by corporate intranets. **(ii) Market forces:** Corporations are encouraged to use e-commerce in marketing and promotion to capture international markets, both big and small. The Internet is likewise used as a medium for enhanced customer service and support. It is a lot easier for companies to provide their target consumers with more detailed product and service information using the Internet **(iii) Technological forces:** The development of Information and Communication Technology is a key factor in the growth of e-commerce.

Trust is essential to the success of transactions on e-marketplaces for two major reasons [36]. First, e-commerce often requires the sharing of sensitive personal, corporate, and financial information among transacting parties, secondly, activities in e-commerce is a function of a customers' past experience.

In the traditional dyadic (one-to-one) sense, trust has been defined as a belief that the seller will behave according to the consumer's expectations by showing integrity and benevolence [37].

III. EXISTING APPROACHES

Several frameworks exist on solving e-market issues. Example of this is in [4], where the authors developed a cognitive buying decision-making process in Business to Business (B2B) e-commerce model. B2B buying includes interactions between manufacturers, and primary producers, as well as wholesalers and retailers, and it involves a wide range of stakeholders who are involved in purchasing processes [38]. Making decisions in online businesses depends on trust. There are several other approaches to decision making in e-commerce, such as; The Generalised Vickrey Auction [39], which was used to satisfy optimal auction's properties during decision-making when there was no shill bidding. Two steps were considered for determining the right decision, using winners on the buyers' side to build coalitions and winners on the sellers' side using the results from the buyers' side. Another is in Cheng et al. (2014) [40], where a decision-making model based on trust and reputation was proposed. In this model, variable weights and a satisfaction principle were incorporated to solve the problem of high-risk transactions by making use of the k-means clustering technique to eliminate unfair rating scores. Other techniques that have been used in decision making in e-market includes; hybrid genetic algorithm, Analytic Hierarchy Process, The Fuzzy Analytic Hierarchy Process [41], The Feedback based Diagnosis System [42], Elimination Et Choix Traduisant la REalité (ELECTRE) and Preference Ranking Organisation Methods for Enrichment Evaluations [43].

Research in [7] investigated specific determinants or factors that influence consumer online trust in the Business to Consumer e-commerce with a focus on Ekaterinburg, Russian Federation consumers, and studied constructs such as security, perceived privacy, perceived third party assurance, perceived reputation, perceived familiarity and perceived website quality and their relationship with online trust in the B2C context were studied.

Top motivators for shopping online as shown in **Figure 3: Top Motivators for Online Shopping** includes cash back guarantee, cash on delivery, fast delivery, substantial discounts compared to retail, and access to branded products, while the limitations include inability to touch and try products before purchase, fear of faulty products, apprehension of posting personal and financial details online and inability to bargain [44]. All these limitations are encompassed under trust issues.



Figure 3: Top Motivators for Online Shopping

Several research works have tried to discuss several factors affecting online shopping in e-marketplaces. Reports such as [45], [46], [47], have highlighted the fear of taking risks due to inadequate security as a major cause of distrust in e-marketplaces. Research in [48], carried out a study whose objective was to analyze the perception of risk in the purchase of a certain group of goods and services, and the category of product in which the perception is greater at the instant of purchase. According to the author, the risk that the consumer experiments when making a decision at the moment of acquiring certain goods and services can vary. In other words, the value of risk was prejudiced.

Moorman *et al.* [49], proposed a multilevel characteristic model which illustrates the antecedents and consequences of users' trust in e-commerce. In this regard, the authors in [50], developed a multidimensional trust formation model in B-to-C e-commerce, Based on the B-to-C market structure and the interactions of four entities, we argue that trust formation can be described in terms of six dimensions: consumer behavioural, institutional, information, product, transaction, and technology as shown in Figure 4: A process-oriented multidimensional trust formation model (Source: Kim *et al.*, (2005) [37] The research concluded that practitioners are more likely concerned with the issues related to application levels of trust building from e-merchant viewpoints.

Authors in [51] carried out a detailed review on trust in e-marketplaces, taking olx.com.ng as case study. The work deduced that buyers are often uneasy about conducting transactions with unknown sellers through the online functions provided in an e-market, and concluded that both sellers and buyers in the e-market like OLX.ng are ready to trust one another only if there is guarantee of timely delivery of goods in good condition on the seller's side and if there is payment guarantee without fraud on the part of the buyers.

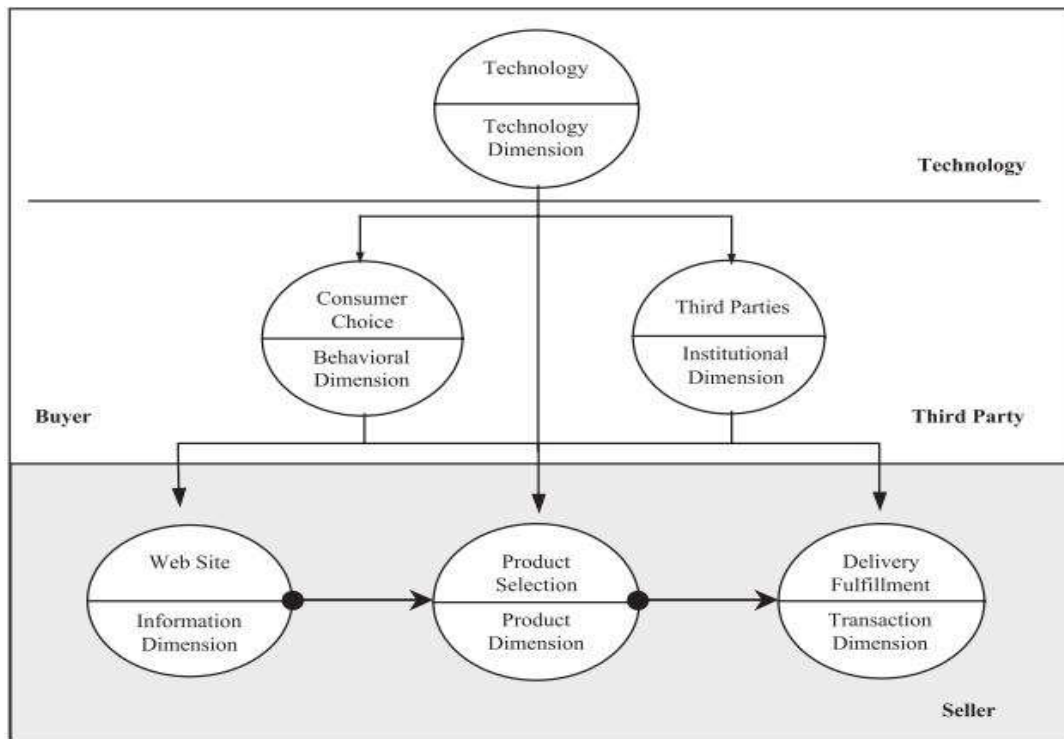


Figure 4: A process-oriented multidimensional trust formation model (Source: Kim et al., (2005) [37])

Some researchers have also found evidence that the lack of protection of privacy is the biggest barrier to the participation of consumers in electronic commerce [52], [53], [54]. A more detailed research was carried out in [55] that examined how the perceived risk influences the role of changes in cost and consumer loyalty towards e-marketplaces. It was affirmed that higher perceived risk towards e-marketplaces by customers affects the relationship between changes in costs and customer loyalty. Authors in [1] carried out a study on consumers' perception on trust, with on Pakistan, and studied four consumers' perception factors namely: perceived site quality, users' web experience, perceived technical trustworthiness and word of mouth seeking. The research concluded that website quality, design and information presentation to customers plays a vital role in generating trust.

IV. CONCLUSION

We have been able to discuss some problems and benefits that can arise from the lack or presence of trust in e-marketplaces. This paper developed a theoretical background for other researchers that may be willing to work on the challenges being faced by e-marketplaces by discussing some existing approaches that has been adopted in proffering solutions to such challenges.

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