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# The Role of Electronic Marketplace Quality in Building Online Trust

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## Abstract

*Despite the relevance of generating trust in electronic marketplace settings, research addressing the impact of electronic marketplace characteristics on trust is still limited. The few works focusing on the relationships between the electronic marketplace and trust only pay attention to a limited subset of institution-based functions and services. In this paper we extend these works by focusing on the relationships between the overall impression of the electronic marketplace and trust in an electronic marketplace setting. We position our paper in the field of electronic marketplace research and introduce the concept of electronic marketplace quality. Building upon e-commerce literature, we elaborate on the relationships between electronic marketplace quality and trust. Next, we discuss a conceptual model relating electronic marketplace quality to trust in the market maker (intermediary trust), trust in the population of sellers (seller trust) and consumer purchase attitudes and intentions. We conclude with forthcoming measurement instrument development and planned data collection.*

## 1. Introduction

Since the rise of the Web, increasing attention has been paid to the potential of the online medium to function as electronic marketplace. The ability of the Internet to bring large numbers of buyers of sellers together, and to facilitate online exchanges, has triggered researchers to explore the concept of electronic marketplaces (EMs) into detail. Attention has been paid to the impact of EMs on existing markets and on market structure (e.g. Sarkar et al., 1995, 1998), functions of EMs have been reported and discussed (Bailey and Bakos, 1997; Bakos, 1998) and overviews of types of electronic intermediaries have been provided (Sarkar et al., 1995).

More recently, researchers have focused on understanding and predicting consumer purchase behavior at EMs. Given the uncertainty of purchasing on distance from relatively unknown sellers, trust is considered to be a crucial factor for purchasing at EMs

(Pavlou and Gefen, 2002). Empirical explorations conducted so far, provide strong support for this assumption (see Pavlou and Gefen, 2003; Verhagen and Tan, 2004; Verhagen et al., 2004). Next to underlining the relevance of trust as online purchase determinant, trust scholars have recognized that the dyadic nature of purchasing at online stores does not hold for purchasing at EMs. Whereas two parties are involved in purchasing at online stores (the buyer and the seller), purchasing at EMs demands for three parties to be taken into account: buyers, sellers and the intermediary operating the system. This implies that consumer purchasing at EMs is not only affected by trust perceptions of the seller but also by trust perceptions of the intermediary or market maker<sup>1</sup>. In the literature this has been acknowledged by introducing the concepts of seller trust (trust in the population of sellers) and intermediary trust (trust in the intermediary operating the system) (cf. Pavlou and Gefen, 2003). Research findings demonstrate that seller trust is likely to function as direct determinant of consumer purchase attitudes and consumer purchase intentions, whereas intermediary trust can be labeled as seller trust determinant (Pavlou and Gefen, 2003; Verhagen and Tan, 2004).

While the relevance of trust in EM settings has widely been recognized, relatively little attention has been paid to the role of intermediary and sellers in generating trust. Being owner of the EM, intermediaries facilitate the online exchange environment by applying various functions and services. Examples of these functions and services include reputation mechanisms, matching services, personalization options, authentication features, quality assurance, payment processing and secure communications (Bailey and Bakos, 1997; Bakos, 1998; Sarkar et al., 1998). Sellers add to this facilitated environment by providing sales related functions and services like, for example, product selection, product descriptions, and contact and shipping information. The buyer's overall impression of the functions and services provided by intermediary and sellers is referred to as *EM quality* (cf. Yang et al., 2005). It refers to the perceived quality of the mediated environment accounted for by both market maker and sellers.

The relationships between EM quality and trust have received attention in the literature and are starting to be explored empirically. The majority of empirical works has focused on but a select subset of EM functions and services, mostly consisting of institution-based functions and services accounted for by the intermediary like feedback mechanisms (Pavlou, 2002; Pavlou and Gefen, 2003), escrow services, credit card guarantees (Pavlou and Gefen, 2002; Pavlou and Gefen, 2003), privacy statements (Palmer et al., 2000) and monitoring services (Pavlou, 2002). These works contribute to the e-commerce field by demonstrating that perceptions of EM characteristics do significantly add to trust, hereby providing valuable insights to research and practice.

Despite the contributions, we believe studies so far have been hampered in two ways. First, due to the explicit focus on institution-based functions and services the overall impact of EM quality on trust has not been addressed. It is conceivable that other dimensions of EM quality significantly contribute to trust as well. Second, while scholars have considered the impact of institution-based components of EM quality on perceptions of seller trust, the relationships between EM quality and intermediary trust are relatively unexplored. As revealed by trust scholars (e.g. Pavlou and Gefen, 2003; Verhagen and Tan, 2004), however, consumer purchasing at EMs is subject to perceptions of both seller trust and intermediary trust. We believe that if we truly want to understand the interrelationships between EM quality, trust and consumer purchasing at EMs, both trust types have to be taken into account.

In this paper we address the overall impact of EM quality on perceptions of seller trust and intermediary trust. We review the literature on EMs and elaborate on EM quality.

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<sup>1</sup> In this paper the terms intermediary and market maker are used interchangeably.

Next we discuss empirical works relating EM functions and services to trust and arrive at overall statements concerning the impact of EM quality on both intermediary trust and seller trust. We conclude with the introduction of a conceptual model and elaborate on forthcoming measurement instrument development and data collection.

## **2. Literature Review**

### **2.1. Electronic Marketplaces**

E-commerce research shows a wide range of meanings of the word "electronic market" (see e.g. Grieger, 2003). This is reflected in three different research streams.

The first stream studies electronic markets from an abstract, economic point of view and focuses on the impact of information technology (IT) on the structure of commercial activity. Researchers pertaining to this research stream view an electronic market as an IT enabled coordination mechanism. Building upon transaction costs economics (e.g. Coase, 1937; Williamson, 1985), these researchers have argued that IT reduces the coordination and control costs of economic activity, hereby favoring the usage of an electronic market mechanism as coordination structure over more hierarchical mechanisms (Malone et al., 1987). Although researchers extended this conceptualization to coordination structures that are neither purely hierarchical nor purely market driven (e.g. Clemons et al., 1993), there is relatively much consensus that IT, and electronic networks such as the Internet in particular, contribute to the rise of electronic markets.

The second research stream also regards the electronic market as an IT enabled, new form of economic coordination. But instead of comparing such a coordination mechanism with hierarchical alternatives at a rather abstract level, research within this stream centers on the roles and functions of the various types of electronic intermediaries that exist in the market (e.g. Sarkar et al., 1995). Intermediaries that have been discussed include online stores, infomediaries, and payment and distribution companies. Various scholars provided preliminary overviews of the different roles of such intermediaries. A literature study conducted by Bailey and Bakos (1997), for example, revealed four important roles of intermediaries: aggregating buyer demand or seller products to achieve economies of scale or scope, preventing parties from behaving opportunistically (i.e. generate trust), facilitating information transfer and transactions, and matching buyers and sellers. Comparable overviews of intermediary roles have been constructed by Sarkar et al. (1995), Bakos (1998) and Grover and Teng (2001).

Finally, the third research approach focuses on electronic markets from a *system perspective*. This stream has a narrower focus than the two perspectives described above and views electronic markets as electronic market systems or *electronic marketplaces* (EMs) (Bakos, 1991, p. 296). From the system perspective an electronic market can be defined as an online environment with specific boundaries that is operated by a particular intermediary. Whereas in the second research stream the term "intermediary" refers to a broad category of agents that are active in the economic domain, the system perspective views the intermediary as a specific company that is responsible for the organization and operation of the particular EM environment. Scholars pertaining to the system perspective have started to explore the impact of EM characteristics on consumer purchase behavior. In particular, attention has been paid to the relationships between perceptions of trust and consumer purchase attitudes and intentions of EM participants (see Pavlou, 2002; Pavlou and Gefen, 2002; Verhagen and Tan, 2004). Next to explaining and predicting the impact of trust on purchase behavior, researchers started to address the relationships between attributes of the EM and trust, as will be discussed in detail in later sections of this paper.

Since our objective is to study the impact of the overall perception of a specific EM, run by a single intermediary, on trust and consumer behavior, we adopt the system perspective in this paper. Based on the works of Bakos (1991), Pavlou and EL Sawy (2002), Grieger (2003) and Christiaanse et al. (2004), an EM is defined here as an Internet based environment that is supported and enabled by a combination of IT and various procedures and regulations, in which buyers and sellers can meet and engage in exchange related behavior. We specifically focus on EMs that facilitate transactions between consumers (C-to-C).

## 2.2 EM Quality

To enable and facilitate online purchasing the intermediary operating the EM provides a variety of functions and services. These functions and services, that together constitute the online trading environment, can be both explicit and implicit in nature (Sarkar et al., 1995). Examples of explicit functions and services include website design, reputation mechanisms, matching services, security measures, price mechanisms, tutorials, bulletin boards and feedback forms. Implicit functions and services are less 'tangible' like guarantees, customer support, payment services and privacy policy. Although an extensive overview is lacking, intermediary functions and services have received substantial attention in the electronic marketplace literature (e.g. Sarkar et al., 1995; Bailey and Bakos, 1997; Bakos, 1998; Schubert & Ginsburg, 2000; Grover and Teng, 2001; Pavlou, 2002; Pavlou and Gefen, 2003).

Using the online exchange environment facilitated by the intermediary, sellers also provide several functions and services that enable and facilitate online purchasing. Remarkably these functions and services have received relatively little attention in the field of electronic marketplace research. Given the resemblance between selling in mediated environments and selling via non-mediated environments (e.g. online stores), the following functions and services are hypothesized as appropriate examples of by sellers provided functions and services in an EM context: products, product information, seller information, communication services and information about settlement and fulfillment (Burke, 2002; Wolfinbarger and Gilly, 2003; Yang et al., 2005). We emphasize that like the intermediary functions and services, also the functions and services provided by seller can be explicit or implicit.

Together the functions and services provided by the intermediary and the sellers determine the overall quality of the EM as environment of online exchange. The buyer's overall impression of the functions and services provided by both intermediary and sellers is what we refer to as *EM quality*. EM quality is defined as the complex of a buyer's evaluative perceptions of explicit and implicit functions and services provided by the intermediary and the sellers at the EM.

## 2.3. Relating EM Quality to Trust in EM Settings

Research has shown that trust is an important determinant of online purchase behavior in general (e.g. Jarvenpaa et al., 2000; Pavlou, 2002; Van der Heijden et al., 2003), and of purchasing at EMs in particular (Pavlou and Gefen, 2002, 2003; Verhagen et al., 2004). Compared with purchasing at an online store setting, however, purchasing at EMs is subject to perceptions of two parties: the seller and the intermediary operating the system (Verhagen and Tan, 2004). Consequently, in an EM setting consumer purchasing is not only influenced by the perceived trustworthiness of the seller but also by the perceived trustworthiness of the intermediary operating the system. Accordingly, the literature distinguishes between two different trust concepts: seller trust (trust in the population of

sellers) and intermediary trust (trust in the intermediary operating the EM) (cf. Pavlou and Gefen, 2003). Drawing on Pavlou and Gefen (2003), intermediary trust is defined as the buyer's subjective belief that he can depend on the intermediary that operates the EM when engaging in a transaction. Following Pavlou and Gefen (2003) and Verhagen and Tan (2004) seller trust refers to the buyer's subjective belief that sellers will perform potential transactions according to his confident expectations, irrespective of his ability to fully monitor them. The target of seller trust is the population of sellers on the EM rather than an individual seller on the EM. Empirical results indicate that seller trust is likely to operate as an important antecedent of consumer purchase attitudes and consumer purchase intentions, whereas intermediary trust is likely to be an antecedent of seller trust (Pavlou and Gefen, 2003; Verhagen and Tan, 2004).

Given the relevance of trust as determinant of consumer purchasing in EM settings, researchers have started to explore its antecedents. In particular, attention has been paid to the relationships between functions and services provided by the intermediary, and trust. For example, Pavlou (2002) addressed the relationships between monitoring, accreditation, legal bonds, feedback mechanisms and cooperative norms, and trust in sellers on an EM. Similarly, Pavlou and Gefen (2003) explored the influence of feedback mechanisms and escrow services on seller trust. Although both studies contribute to the current research field, they did not consider intermediary trust (see Pavlou, 2002) or only presented intermediary trust as a concept without further investigating the relationships with the functions and services provided at the EM (see Pavlou and Gefen, 2003). More importantly, both works only focused on a select subset of EM functions and services, institutional functions and services in particular, and did not address the overall impact of the functions and services provided by intermediary and sellers, on intermediary trust and seller trust.

In this study we focus on the relationships between EM quality and intermediary trust and seller trust. We believe relating this overall impression of EM functions and services to both trust types is likely to contribute to the existing body of knowledge for three reasons.

First, both intermediary and sellers apply a multitude of functions and services that together form the EM environment. It is conceivable that next to the institutional functions and services referred to above, other EM functions and services contribute to trust perceptions as well. For example, both the provided navigation structure and the provision of various forms of purchase related information have been associated with perceptions of trust in various online settings (cf. Koufaris and Hampton-Sosa, 2004). Our research will demonstrate whether, how and to what extent these functions and services contribute to perceptions of trust in EM settings as well.

Second, since existing studies have not paid attention to the antecedents of intermediary trust at all (cf. Pavlou and Gefen, 2003), a study relating EM quality to intermediary trust is likely to produce new insights to the e-commerce field. Previous research has found that the perceived quality of a party's offerings is an antecedent of the perceived trustworthiness of that party (e.g. Kennedy et al. 2001; Gounaris, 2005; Harris and Goode, 2004). Accordingly, the overall impression of EM functions and services is expected to have a positive impact on intermediary trust. The rationale is that the while using the EM, the (potential) buyer gets an impression of the EM. Since it is the intermediary that applies and offers substantial part of these functions and services, a positive evaluative perception of these functions and services will be transferred to the intermediary and will strengthen the (potential) buyer's belief that the intermediary's actions during the actual transaction will also be of high quality (cf. Hennig-Thurau and Klee, 1997; Koufaris and Hampton-Sosa, 2004).

Third, except for the few studies relating institutional functions to perceptions of seller trust (e.g. Pavlou, 2002; Pavlou and Gefen, 2003), the impact of EM functions and

services on seller trust has not been addressed. It has widely been recognized that the quality of the online purchase environment has an impact on trust perceptions of the party to be purchased from (see e.g. Van der Heijden et al., 2003). Institutional functions, however, only account for part of quality perceptions of the online environment (cf. Wolfenbarger and Gilly, 2003; Yang et al., 2005). It is well conceivable that next to institutional functions, other functions and services will affect the trust perception of the population of sellers as well. A service like the option to communicate with sellers in a presales phase, for example, is likely to convey trust in sellers (cf. McKnight and Chervany, 2002). Similarly, a function like price mechanisms that result in a clear and binding final price is likely to convey seller trust because it assures buyers that sellers are prevented from claiming a higher price than initially agreed upon. By exploring the impact of the overall impression of EM functions and services on seller trust, our study extends works in the field of e-commerce (see e.g. Pavlou, 2002; Pavlou and Gefen, 2003), and is likely to add new insights into purchase behavior in EM settings.

### **3. Method and Research Program**

#### **3.1. Conceptual Model**

Our conceptual model is depicted in figure 1. Following other research on online purchasing (e.g. Moon and Kim, 2001; Shim et al., 2001; Verhagen and Tan, 2004) the backbone of our model is formed by the Theory of Reasoned Action (TRA). According to this theory, an individual's overt behavior is determined by his intention to perform the particular behavior. This intention is antecedent by the individual's attitude toward the behavior. The relationships between the behavior, the intention and the attitude are assumed to be strong and positive (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Sheppard et al., 1988).

The TRA states that variables that are not part of the theory, the so-called external variables, do not add to the predictions of intentions over and above the attitude (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980). Research in the field of online purchasing confirms that the impact of external variables on the purchase intention is likely to be mediated by an attitudinal component (e.g. Jarvenpaa et al., 2000; Van der Heijden et al., 2003).

The concepts of EM quality, intermediary trust and seller trust are included in the model as external variables. In line with works in the field of trust and e-commerce (e.g. Pavlou and Gefen, 2003; Verhagen and Tan 2004), seller trust is included in the model as positive determinant of the attitude towards purchasing, whereas seller trust is positively affected by intermediary trust. This mediated structure has been confirmed in recent research of purchasing behavior at an EM (Verhagen and Tan, 2004). Both trust types will be conceptualized as beliefs (cf. Gefen and Silver, 1999; Pavlou and Gefen, 2003; Gefen et al., 2003). The concept of EM quality is related to both intermediary trust and seller trust in the model. Building upon the works discussed in the previous section (e.g. Hennig-Thurau and Klee, 1997; Gounaris, 2005), we expect EM quality to affect both intermediary trust and seller trust positively. Conform the TRA, and building upon the work of Cronin and Taylor (1992; 1994), EM quality is conceptualized as attitude toward the object, whereas the object refers to the particular EM under study.

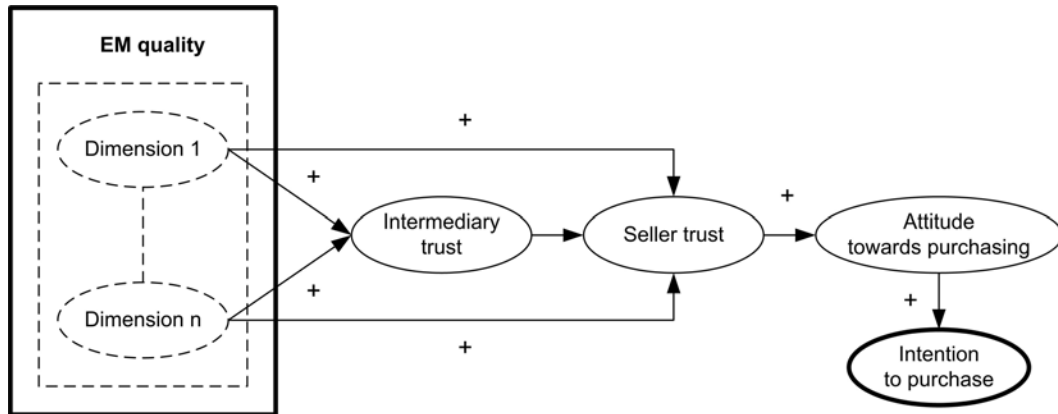


Figure 1: Conceptual model (adapted from Ajzen and Fishbein, 1980; Pavlou and Gefen, 2003; Verhagen and Tan, 2004)

### 3.2 Method and Measurement Instrument Development

To test and validate the conceptual model, we plan to use a quantitative technique. Quantitative techniques are most appropriate when the research aims to describe and predict the phenomenon under study (Yin, 1994). In particular we will apply the survey technique which is most appropriate when the purpose of the research is to relate variables (Creswell, 1994).

The scales for the behavioral attitude and intention will be taken from Van der Heijden et al. (2003) and Verhagen and Tan (2004). The scales for intermediary trust and seller trust will be based on Pavlou and Gefen (2003) and Verhagen and Tan (2004). To the best of our knowledge there is no established instrument to measure EM quality. Moreover, given the different nature of an EM versus other website types, the instruments for measuring website quality that have already been developed (e.g. Wolfinger and Gilly, 2003; Yang et al., 2005) are not applicable to our research setting (cf. Yang et al., 2005). Therefore, we will adopt the process of measurement instrument development. Building upon the works of Osgood et al. (1967), Mindak (1961), Dickson and Albaum (1977) and Churchill (1979), we will construct a tailormade semantic differential scale. The semantic differential is selected as being one of the most common scaling device to measure consumer opinions and attitudes (Dickson and Albaum, 1977), as well as the overall meaning of a concept (Mindak, 1961). Although mostly applied to store images, the method is applicable to any content area (Osgood et al., 1967; Dickson and Albaum, 1977). The specific advantages of a semantic differential are: its ability to quickly and efficiently collect both intensity and direction of the opinions and attitudes, it provides a comprehensive picture of the meaning to be measured, it is easily repeatable and quite reliable, and it avoids stereotyped responses and ambiguity of statements (Mindak, 1961, pp. 28-29).

Since the standardized semantic differentials put forward in the literature (e.g. Osgood et al., 1967) lack flexibility and appropriateness to the specific concept to be studied (Mindak, 1961; Dickson and Albaum, 1977) a tailormade scale will be developed. The proposed process of measurement instrument development consists of the following steps:

- 1) Definition of the concept. The EMQ concept has been defined in previous sections.
- 2) Collection of items. Descriptors will be derived from items commonly reported in the literature (cf. Hawkins et al., 1974). A subjective content analysis of EMs will be



applied to collect additional items (cf. Mindak, 1961). Adjectives will be based on the work of Osgood et al. (1967) (cf. Dickson and Slevin, 1975).

- 3) Focus group sessions with experts. A focus group session will be applied to judge about the applicability of the items proposed, to judge the wording of the descriptors and adjectives, and to suggest additional items (free association). The experts will include academic researchers in the field of IS and Marketing and practitioners working for an EM in the Netherlands. The question types included in the focus group sessions will be derived from the works of Mindak (1961) and Dickson and Albaum (1977).
- 4) Construction of draft questionnaire.
- 5) Test of linguistic contrast and translation. A convenience sample of 40 students will be used to test the linguistic contrast of the adjectives and descriptors. Respondents will write down the contrasts/antonyms of the adjectives and descriptors (cf. Dickson and Albaum, 1977). After the linguistic contrast test, the questionnaire will be translated into Dutch. Both backward and forward translation will be applied.
- 6) Pretest to purify the measurement instrument. To purify the instrument and to study reliability and validity, a convenience sample of approximately 100 friends and colleagues will be used. Respondents will be instructed to study two EMs, and to fill in an online questionnaire.
- 7) Data collection.

### 3.3 Planned Data Collection

Data collection is planned for the first half of this year. Online surveys will be held amongst (potential) buyers at two well-known Dutch EMs. One EM is known for its investments in EM functions and services that inform and protect buyers. The other EM mainly brings buyers and seller together, without paying too much attention to EM functions and services that protect buyers from detrimental behavior. Data will be collected and results reported.

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