Perceived Trust and Payment Methods: An Empirical Study of MarkaVIP Company

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Abstract

This empirical study focused on investigating the perceived trust surrogated by a number of hypothesized factors and its effect on the choice of method of payment. The data were collected using a questionnaire, as the instrument for the primary data collection, with total collected back responses of 214 from customers of MarkaVIP. Structural equation modeling technique was used to fully analyze the data in order to determine what level of the relationship between the constituting factors of the perceived trust and the method of payment. The main findings were related to confirming the seven main hypotheses of the research that were related to testing if some factors were important to forming perceived trust by customers. Four factors (reputation, security, familiarity, and ease of use) were found to have a positive effect and the remaining three were not (privacy, size and usefulness). In addition, having perceived trust meant no preference to any method of payment by the customers.

Keywords

1. Introduction

Electronic commerce (E-commerce) emerged due mainly to the advent of the Internet and its many characteristics that ease real-time information interchange. Internet facilitated many business activities like: advertising, querying, negotiation, ordering and payment. When using this great facility, accuracy and security become critical in payment systems because all transactions will be completed through the network system [1]. The network system faces many threats even when all aspects of security are applied. For example, PayCash is an internet

payment system designed to preserve security and privacy. PayCash had special techniques to generate trustworthy records of transactions and fraud detection [2]. Trust issues that are necessary for an electronic payment system to be utilized as a common medium of financial transactions are: identification, authentication, accountability, authorization, and availability [3] [4]. Some payment systems like the ones on mobile can provide independence in time and place, remote payments, availability, and queuing avoidance [5] [6]. Currently, payment systems support environments where traditional payment systems could not function properly.

Experts usually divide payment systems into four categories: Credit Card Payment System, Online Electronic Cash System, Electronic Cheque System and Smart Cards based Electronic Payment System. The said categories can be distinguished based on what is being transmitted over the network and could be evaluated based on their requirements such as: security, acceptability, convenience, cost, anonymity, control, and traceability [7] [8]. Subsequent to Sumanjeet's (2009) stated methods of e-payment systems and their challenges, there had been a discussion covering different aspects including security measurements which had been suggested for these aspects as well as conducting possible solutions [7]. For example, when using debit cards, it is easier to perform many payment transactions for different pay services but, convincing the majority of customers to use this method of payment requires much convincing as people at large are still not satisfied and would prefer to perform payments physically which raise the consideration of trust factor in those plastic cards. One possible reason behind this is the lack of trust in some e-payment transactions due to frequent malfunctioning, potential fraud, and the unavailability of e-payment machines on demand which raises uncertainty among the public about the usefulness of such new technology [9]. However, some innovative technologies like web ATMs which deploy a card with an integrated chip along with a smart card reader on the Web, may steer the banking system for better changes that are acceptable and meet the expectations of the public, basically on the C2C model [10]. However, more work has to be done on security issues in order to persuade customer of the security and safety for sending sensitive information online. Therefore, focusing on some aspects of security like: privacy, encryption, authentication and authorization contributes to encouraging customers to make on-line payments and perform financial transactions electronically which help to enhance trustfulness. In e-commerce, physical sense of the product usually does not occur at the time of transaction. Therefore, issues of trust and acceptance become critical for the customer. Meanwhile, the main objectives of Electronic Payment System (EPS) are to enhance efficiency, assure security, gain customer convenience and facilitate ease of use [11].

On studying customer expectation with EPSs in Malaysia for example, factors that were found to mostly affect the firms' perceptions were flexibility followed by functionality, data management, privacy and security of EPS. Level of EPS prediction was found to be affected mostly by three main factors namely: functionality, privacy and security [12] [13]. On mobile payment, the customer behavioral intention is highly affected by the trust factor combined with the negative and positive valence of the actual use [14]. When considering the architecture of the payment system, it was clearly indicated that the smooth functioning and simplicity of the national payment highly affected the economy which raised the simplicity as another important factor [15]. The major banks in every country that are connected over a communication network, have to set up the global payment and settlement for the currency of that country, besides the need for having a robust banking system, tight risk control and sophisticated technology [16]. For mobile payments using Virtual Social Networks (VSN), other important factors arise which have to be added to the payment model such as: external influences, ease of use, usefulness, attitude, trust and risk as they might increase the intention of use by the customer [17].

2. Theoretical Background and Hypotheses Development

Gefen (2000) showed that trust and familiarity influence E-commerce. Based on a survey study, two main aspects of book selling on the internet were highly affected by the trust and familiarity of the internet vendor. These were inquiry and purchase aspects [18]. Moreover, the survey study model showed that E-commerce would be enhanced in a complex social environment, and that the behavioral intentions were highly affected by trust and familiarity. Tan and Thoen (2001) introduced a generic model of trust for E-commerce where one can start a transaction if he/she trusts the model over his/her own personal level of trust. This depends on individuals involved in the transaction and its type [19]. They argued for two main factors of transaction trust level being the other party trust and the control mechanisms trust. Both factors have objective and subjective aspects. The study focused on two main activities which were the electronic payment and the cross-border trading.

Chellappa and Pavlou (2002) studied the relationship between consumer perceived information security and

E-commerce trust transaction [20]. Their study was carried out on 179 consumer and the results showed a minimal effect of financial liability on customers' trust in E-commerce, while their research focus was on the role of perceived security in building E-commerce trust. Koufaris and Hampton-Sosa (2004) proposed a model to investigate the trust development in web-based company after the first visit by the customers [21]. Testing the model was carried out using a questionnaire. The outcomes proved that the perceived company reputation and the willingness to customize products and service have highly impacted the initial trust. Moreover, usefulness, ease of use, and security control were also found to have high impacts on the initial trust. No support for the presumed hypothesized effect where found on the initial trust.

Liu and collaborators (2005) conducted a study based on a model that was concerned with the individuals' privacy and its relationship with the behavioral intention when initiating online transactions [22]. A total of 200 customers were investigated for two E-commerce sites that differed only in their privacy dimensions. The model was strongly supported by the study. Meanwhile, Tsiakis and Sthephanides (2005) implicated that the trust and security were two important and essential deciding factors for any E-payment system to be used as a medium for financial transactions [3]. Teo and Liu (2007) carried out a comparative study in the United States, Singapore and China to investigate the antecedents and consequences of consumer trust [23]. They discovered that reputation and system assurance of the Internet vendor had positive relationship with the consumer trust. The perceived risk was found to have a negative relationship with consumer trust while the relationship was rather positive with the attitude.

Kim and collaborators (2008) developed a theoretical framework to investigate the trusting process that a consumer uses when purchasing from a given site [24]. The suggested model was tested using Structural Equation Modeling technique (SEM). The data set was behavioral and data were collected via a web survey. The study outcomes showed that consumers trust and perceived risk strongly influenced their decisions when purchasing through the Internet. Moreover the study showed that trusting the Website was highly influenced by the consumer disposition to trust, reputation, privacy concerns, security concerns, the information quality of the Website, and the company's reputation. Meanwhile, the existence of a third-party mediator was found to have a relatively little impact on consumer trust.

In [25] discuss factors that influence E-payment system adoption and classified these factors into six dimensions; security, ease of use, trust, interporability, regularity issues, and added service. He concluded that, based on these factors much efforts are required in order to come up with a common trust between sellers and buyers for online shopping. Later on, in [26] the factors that affected the trust among the Virtual Community (VC) members and their impact on C2C websites or vendors were analyzed. Based on formation mechanism, they proposed a model of trust in VCs. The data used for testing the model were collected from Tao-bao VC. The results of the study showed that the important antecedents of trust between VCs members were; familiarity, perceived similarity, structural assurance, and trust propensity. Moreover, trust in the members ability was found to highly affect ability, integrity, and benevolence in the vendor/website. In addition, trusting the members integrity and benevolence stimulated purchase intention while, trust in vendor/website's ability has positively affected information regaining intention and the purchase intention. Kim and collaborators, (2010) indicted that the strong predictors of the intention to use mobile-payment were; perceived ease of use and usefulness [27].

Kim and collaborators (2011) conducted a structural equation model to examine the factors that affect trust, satisfaction, and loyalty in a tourism management system for online shopping in south-Korea [28]. Using the internet search, a 340 questionnaires were collected online. They concluded that navigation functionality and perceived security have positively affected trust while transaction cost had no effect on trust. Moreover, it was clear from the analysis of collected data that satisfaction had a positive impact on trust and that trust in turn, did affect customer loyalty in online shopping of tourism products and services.

Kim and Park (2012) studied and identified the main characteristics that affected Korean consumers trust in social commerce (s-commerce) [29]. The key factors of the reputation, size, information quality, transaction safety, communication, economic feasibility, and word-of-mouth (WOM) referrals were identified and the study assessed their impact on trust performance which translates into the actual purchase intentions and the WOM intentions. Data were collected from 371 s-commerce users who have all emphasized that all previous factors except economic feasibility highly affect trust. Meanwhile, trust had a large influence on purchase and WOM intentions. The study assists in developing successful s-commerce models. Maroofi and collaborators (2012) proposed a conceptual model that examines the consumer observation and impression about security and trust in e-payment system [30]. For testing this conceptual model, data were collected from a sample of 219 consumers in Iran. The investigation is considered a theoretical basis and provides practical guidelines for dealing with se-

curity of e-payment system. Rouibah (2012) conducted a theoretical model to investigate the influence of a set of variables namely; internet experience, personal innovativeness, familiarity, propensity to trust, and presence of third party seal, on intention when using e-payment system through the surrogated variables; perceived enjoyment, perceived risk and perceived trust [31]. Data were gathered from a sample of 150 online questionnered respondents and another paper-based questionnered sample of 200 respondents. The study focused on customer trust and perceived enjoyment for investigating the impact of the external variables (personal innovativeness, familiarity, propensity to trust, and presence of third party seal). This study might assist in encouraging online-payment websites trust and acceptance especially in Arab countries.

Lim (2013) explained the buyers process when making an online purchase from a digital market by developing a theory concerning the online buyer behavior [32]. Testing the theory was carried out by gathering data from mall-intercept systematic sampling, and analyzing them was made using structural equation modeling. The results showed that perceptions of value, ease of use, and the usefulness of online buying govern buyers attitude to online shopping. Moreover, the study found that, buyers experience had a very high impact on their online shopping trust. Jarollahi (2013) found that most of Northern Cyprus people agreed with all aspects of EPS [33]. The investigation in this dissertation was carried out with respondents from 18 different countries, and they all have agreed on EPS as an efficient and useful way for payment.

Aigbe and Akpojaro (2014) studied the relationship between vulnerability and security level and their effect on consumer or user confidence in EPS [34]. Nuri (2014) also studied the role of a set of factors like: profitable receipts, security receipts, hidden receipts, high quality service, high quality networks, internet quality, security and trust [35]. Security and trust were found to play an important role in attracting and gaining loyalty of customers. A new conceptual model was introduced after reviewing a number of studies in the literature. This model has proven the direct impact of said factors on customers acceptance of E-banking. The results showed that in order to establish the link and relationship with different organizations, e-banking was a necessary constituent.

Having reviewed some important and relevant studies related to antecedents and outcomes of customers' perceived trust, one can say that the majority of the studies focused on trust as a main factor. **Table 1** shows a summary of the literature review.

To achieve the goals of this study, eleven main hypotheses are developed. These hypotheses are:

H1: Perceived reputation has a positive effect on trust.
H2: Perceived privacy has a positive effect on trust.
H3: Perceived size has a positive effect on trust.
H4: Perceived security has a positive effect on trust.
H5: Perceived usefulness has a positive effect on trust.
H6: Familiarity with the web has a positive effect on trust.
H7: Perceived ease of use has a positive effect on trust.
H8: Perceived trust has a positive effect on purchase intention to use EPS.
H9: Perceived trust has a positive effect on actual purchase using credit cards.
H10: Perceived trust has a positive effect on actual purchase using cash on delivery.
H11: Perceived trust has a positive effect on actual purchase using PayPal.

Figure 1 demonstrates the research's conceptual framework and the hypothesized relationships between the adopted constructs.

3. Research Methodology

3.1. Instrument Development

As the current research aims at exploring the impact of key antecedents of customers' perceived trust on purchase intention to use EPS, actual purchase using credit cards, actual purchase using cash on delivery, and actual purchase using PayPal; it is designed as an empirical study in which relationships between variables would be tested using multifaceted scales adopted from several previous researches. The basis for data collection and analysis is a field study in which respondents answered all items on a five point Likert-scales ranging from 1 (strongly disagree) to 5 (strongly agree). Furthermore, elements used to consider each of the constructs were primarily obtained from prior research. These elements provided a valuable source for data gathering and measurement as their reliability and validity had been verified through previous research and peer reviews. The variables of Perceived Reputation (PR) and Perceived Size (PS) were adapted from [36] [37]. Perceived privacy (PP) was adapted from [20]. Perceived Security (PC) and Perceived Trust (PT) were adapted from [38]. Perceived

Table 1. Literature review summary.

Study title	Year and author	Data source	Intrested factors	Results
The role of familiarity and trust	[18]	Survey	Trust and familiarity on E-comerce	Customer behavioral intentions are highly affected by trust and familiarity.
Toward a Generic Model of Trust for Electronic Commerce.	[19]	NA	Trust on payment and cross-border trading.	A generic model of trust for E-commerce to start a transaction over personal level of trust.
Perceived information security, financial liability and consumer trust in electronic commerce transactions	[20]	The study was applied on 179 consumer	Security and E-commerce trust	Minimal effect of financial liability on customers' trust in E-commerce
The development of initial trust in an online company by new customers	[21]	Questionnaire in the field of study	Trust development in web-based company after their first visit	Perceived company reputation,willingness to customize products, usefulness, ease of use, and security had a high impact on the initial trust and service highly impact initial trust.
Beyond concern-a privacy-trust-behavioral intention model of electronic commerce	[22]	200 subjects were investigated by two E-commerece sites differe in privacy dimensions	trust-behavioral intention of E-comerece	The model was strongly supported by the study
The concept of security and trust in electronic payments	[3]	NA	Trust and security in E-Payment system	Trust and security are important and essential for any E-payment systems.
Consumer trust in e-commerce in the United States, Singapore and China	[23]	Samples from United States, Singapore and China	Antecedents and consequences of consumer trust	Reputation and system assurance of the Internet vendor have positive relation to consumer trust. The perceived risk is in negative relationship with consumer trust. while it has a positive relationship with attitude
A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents	[24]	Data set is a behavioral data collected via a web survey	Trusting process that a consumer use when purchasing from a given site	Trusting the Website is highly affected by consumer disposition to trust, reputation, privacy concerns, security concerns, the information quality of the Website, and the company's reputation. Meanwhile, the existance of a third-party has a little impact on consumer trust.
The study on the influential factors of electronic payment system adoption	[25]	NA	Security, easeof use, trust, interporability, regularity issues, and added service	A lot of effort should be done to come up with a common trust between sells and buyers of online shopping.

Continued

From virtual community members to C2C e-commerce buyers: Trust in virtual communities and its effect on consumers' purchase intention	[26]	Data used in testing the model was collected from Tao-bao VC	Familiarity, perceived similarity, structural assurance, and trust propensity	-Important antecedents to trust between VCs members are: familiarity, perceived similarity, structural assurance, and trust propensity. -Trust in members ability highly affects ability, integrity, and benevolence in the vendor/website. -Trusting the members intigerity and enevolence stimulates purchase intention while, trust in vendor/website's ability positively affects information regaining intention and purchase intention
An empirical examination of factors influencing the intention to use mobile payment	[27]	NA	Ease of use and usefulness.	Strong predictors of the intention to use mobile-payment are: perceived ease of use and usefulness.
The effect of perceived trust on electronic commerce: Shopping online for tourism products and services in South Korea.	[28]	Using the internet search a 340 questionnaires were collected online	Factors that affect trust, satisfaction, and loyalty	They conclude that navigation functionality and perceived security positively affects trust while transaction cost had no effect on it. Moreover, it is also been obvious from the analysis that satisfaction had a positive impact on trust and trust in turn, affect customer loyalty in online shopping of tourism products and services.
Effects of various characteristics of social commerce (s-commerce) on consumers' trust and trust performance	[29]	Data was collected by 371 s-commerce users	Factors that affects Korean consumers trust in (s-commerece), mainly: reputation, size, information quality, transaction safety, communication, economic feasibility, and word-of-mouth (WOM) referrals	-Factors except economic feseability are highly affect trust. -Trust had big influence on purchase and WOM intentions
Survey of Customers' Conceptions of Security and Trust in E-Payment System	[30]	Data was collected from a sample of 219 consumers in Iran	Security and trust in e-pyment system	A conceptual model that examines the consumer observation and impresstion about security and trust in e-pyment system

Continued

Trust Factors Influencing Intention to Adopt Online Payment in Kuwait	[31]	Data was gathered by a sample of 150 online questionnered respondents and another paper-based questionnered sample of 200 respondents	Trust factors like: Perceived enjoyment, perceived risk and perceived trust	Encouraging online-payment websites trust and acceptance specially in Arab countries
Toward a theory of online buyer behavior using structural equation modeling	[32]	Gathering data from mall-intercept systematic sampling	Perceptions of value, ease of use, and the usefulness of online buying	-Factors govern buyers attitude to online shopping. -Buyers experience had a very high impact on their online shopping trust
Customers' Trust of Electronic Payment System Use in Northern Cyprus	[33]	Respondents from 18 different countries	Trust in EPS.	most of Northern Cyprus people agreed with all aspects of EPS.
Analysis of Security Issues in Electronic Payment Systems	[34]	NA-Survey	vulnerability and security level	Reveals that electronic payment systems with authentication mechanisms involving two or more authentication factors tend to be more secured, reduced fraud vulnerability, and boost users' confidence in using electronic payment systems
A study of role of the factors influencing the acceptance of E-banking	[35]	NA	profitable receipts, security receipts, hidden receipts, high quality service, high quality networks, internet quality, security and trust	-Security and trust play the main role in attract and gain loyalty of customers. -A new conceptual model was introduced after passing over multiple studies. -This model proofs the direct impact of mentioned factors on customers acceptance of E-banking.
A Structural Equation Modeling Approach for Determining Antecedents and Outcomes of Customers' Perceived Trust: An Empirical Study of MarkaVIP Company	This research paper	Survey	Perceived reputation, Perceived privacy, Perceived size, Perceived security, Perceived usefulness, Familiarity with the web, Perceived ease of use, Perceived trust, Purchase intention to use EPS, Actual purchase using credit cards, Actual purchase using cash on delivery, Actual purchase using PayPal	-confirming the seven main hypotheses of the research that were related to testing -Four factors (reputation, security, familiarity, and ease of use) were found to have a positive effect -The remaining three were not (privacy, size and usefulness). -having perceived trust meant no preference to any method of payment by the customers.

usefulness (PU) was adapted from [39]. Familiarity with the web (FW) was adapted from [18]. Perceived ease of use (PE) was adapted from [40]. Purchase intention to use EPS (PI), Actual purchase using credit cards (AP), Actual purchase using cash on delivery (AO), Actual purchase using PayPal (AR) were adapted from [26] and

[29]. **Table 2** shows the measured constructs and the items measuring each of those constructs.

3.2. Research Subjects and Data Collection

Empirical data for this study were collected through a paper-based survey in Jordan. Specifically, a survey questionnaire was used to gather data for hypotheses testing from MarkaVIP Company. MarkaVIP Company was considered suitable as they trade only on-line, have many customers and accept the different forms of payments that the research intended to investigate. Prior to implementing the survey, the instrument was reviewed by three lecturers specialized in the Management Information Systems (MIS) discipline in order to identify problems with wording, content, and question ambiguity. After some changes were made based on their suggestions, the modified questionnaire was piloted on five customers who shopped from MarkaVIP regularly. Based on the feedback of this piloting stage, minor edits were introduced to the survey questions, and the questionnaires were distributed to the sample customers, who had prior experience with MarkaVIP. After eliminating incomplete surveys, 214 eligible surveys were obtained. The demographic data of the respondents are reported in **Table 3**.

Overall, the sample consisted of slightly more females (55.1%), age of 18 years-less than 30 years (87%), less than 5 times shopping from MarkaVIP (56.5%) and 23.4% shopping from MarkaVIP 20 times and more, spent less than $100 (45.3%), followed by 25.7% who spent $300 and more, and most of the participants had under $5000 household income per year (44.9%), followed by 22.4% did not want to explore their yearly income.

4. Research Results

The theoretical framework was tested using SEM techniques by utilizing Analysis of Moment Structures (AMOS) 20 software for data analysis. SEM can be divided into two sub-models: a measurement model and a structural model. While the measurement model defines relationships between the observed and unobserved variables, the structural model identifies relationships among the unobserved/latent variables by specifying which latent variables directly or indirectly influence changes in other latent variables in the model [41]. Furthermore, the structural equation modeling process consisted of two components: validating the measurement model and
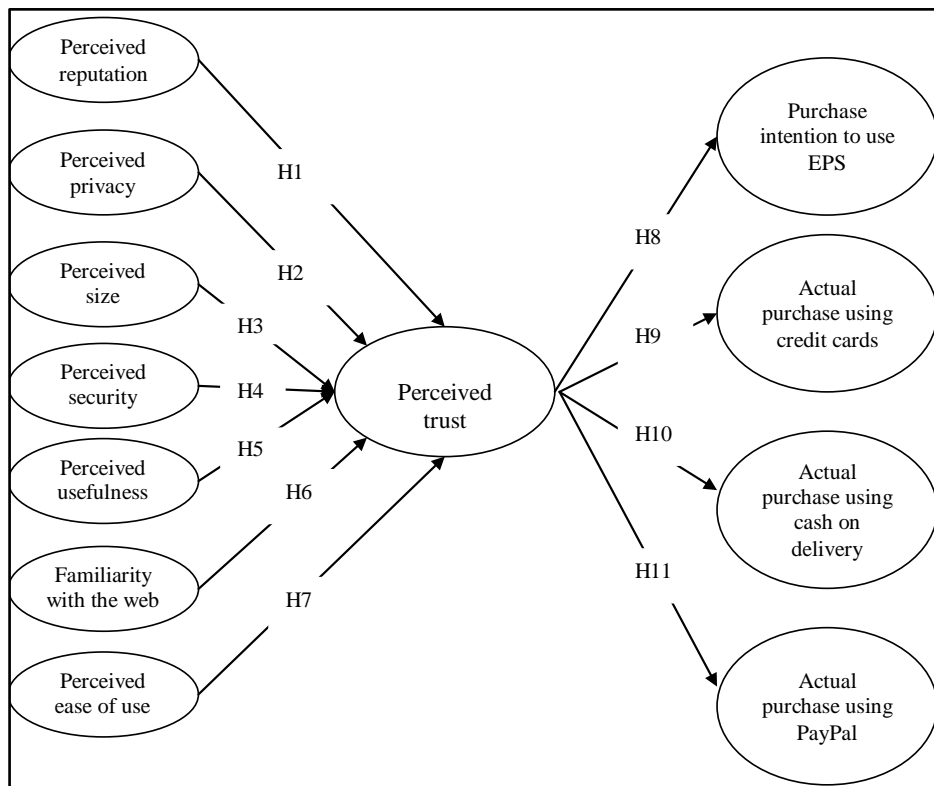

Figure 1. Research model.

Table 2. Constructs and measurement items.

Construct	Measurement items	Adapted from
Perceived reputation (PR)	PR1: MarkaVIP is very popular online shopping site. PR2: MarkaVIP is very reliable online shopping site. PR3: MarkaVIP is very honest online shopping site. PR4: MarkaVIP is known to be concerned about customers.	[36] and [37]
Perceived privacy (PP)	PP1: I am confident that I know all parties who collect the information I provide during a transaction with MarkaVIP. PP2: I know what information I need to provide during a transaction with MarkaVIP. PP3: I believe I can subsequently verify the information I provide during a transaction with MarkaVIP. PP4: I believe that MarkaVIP will not disclose my information without my consent.	[20]
Perceived size (PS)	PS1: MarkaVIP is a very large company. PS2: MarkaVIP is one of the industry's biggest suppliers on the Web. PS3: MarkaVIP is a big player in the market. PS4: MarkaVIP has regional and global presence.	[36] and [37]
Perceived security (PC)	PC1: I think MarkaVIP EPS is secured. PC2: I think the information relating to user and EPS transactions in MarkaVIP are secure. PC3: I believe inappropriate parties will not be able to view the information I provide during a transaction on MarkaVIP. PC4: I do not fear hacker invasions into MarkaVIP EPS.	[38]
Perceived usefulness (PU)	PU1: Shopping from MarkaVIP improves my shopping performance. PU2: Shopping from MarkaVIP increases my shopping productivity. PU3: Shopping from MarkaVIP increases my shopping effectiveness. PU4: Shopping from MarkaVIP is very useful.	[39]
Familiarity with the web (FW)	FW1: Overall, I am familiar with the MarkaVIP site. FW2: I am familiar with searching for items on MarkaVIP site. FW3: I am familiar with the process of purchasing from MarkaVIP site. FW4: I am familiar with buying products from MarkaVIP site.	[18]
Perceived ease of use (PE)	PE1: Learning to use MarkaVIP site would be easy for me. PE2: My interaction with MarkaVIP site is clear and understandable. PE3: It would be easy for me to become skillful when using MarkaVIP site. PE4: I find MarkaVIP site easy to use.	[40]
Perceived trust (PT)	PT1: I believe that my transactions with MarkaVIP site are likely to be safe. PT2: My transactions with MarkaVIP site are likely to be reliable. PT3: Many things may not go wrong with my transactions with MarkaVIP site. PT4: MarkaVIP site will promptly inform me if any problems occur with my transaction. PT5: I am confident that my transactions with MarkaVIP site will be transparent.	[38]
Purchase intention to use EPS (PI)	PI1: I am likely to purchase products from MarkaVIP site. PI2: Given the opportunity, I would consider purchasing products from MarkaVIP site in the future. PI3: It is likely that I will actually purchase products from MarkaVIP site in the near future. PI4: Given the opportunity, I intend to purchase products from MarkaVIP site.	[26] and [29]
Actual purchase using credit cards (AP)	AP1: I make online purchase frequently from MarkaVIP site using Credit Cards. AP2: I make online purchases intensively from MarkaVIP site using Credit Cards. AP3: Overall, I have made many online purchases from MarkaVIP site using Credit Cards. AP4: In the future, I am planning to continue purchasing products using Credit Cards from MarkaVIP site.	[26] and [29]

Continued

Actual purchase using cash on delivery (AO)	AO1: I make online purchase frequently from MarkaVIP site using Cash on Delivery. AO2: I make online purchases intensively from MarkaVIP site using Cash on Delivery. AO3: Overall, I have made many online purchases from MarkaVIP site using Cash on Delivery. AO4: In the future, I am planning to continue purchasing products using Cash on Delivery from MarkaVIP site.	[26] and [29]
Actual purchase using PayPal (AR)	AR1: I make online purchase frequently from MarkaVIP site using PayPal. AR2: I make online purchases intensively from MarkaVIP site using PayPal. AR3: Overall, I have made many online purchases from MarkaVIP site using PayPal. AR4: In the future, I am planning to continue purchasing products using PayPal from MarkaVIP site.	[26] and [29]

Table 3. Demographic data for respondents.

Category	Frequency	Percentage %
Gender		
Male	96	44.9
Female	118	55.1
Total	214	100
Age		
18 years - less than 30 years	186	87.0
30 years - less than 40 years	21	9.8
40 years - less than 50 years	2	0.9
50 years and above	5	2.3
Total	214	100
Shopping from MarkaVIP (during last year)		
Less than 5	121	56.5
5-less than 10	25	11.7
10-less than 20	18	8.4
20 and more	50	23.4
Total	214	100
Money spent (during last year)		
Less than $100	97	45.3
$100-less than $200	40	18.7
$200-less than $300	22	10.3
$300 and more	55	25.7
Total	214	100
Household income (per year)		
Under $5000	96	44.9
$5000-less than $10,000	31	14.5
$10,000 and more	39	18.2
Do not want to say	48	22.4
Total	214	100

fitting the structural model. While the former is accomplished through confirmatory factor analysis, the latter was accomplished by path analysis with latent variables [42].

Table 4 shows different types of goodness of fit indices in assessing this study initial specified model. It demonstrates that the research constructs fit the data according to the absolute, incremental, and parsimonious model fit measures, comprising chi-square per degree of freedom ratio (x^2/df), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). The researchers examined the standardized regression weights for the research's indicators and found that all indicators had a high loading towards the latent variables. Moreover, since all of these items did meet the minimum recommended value of factor loadings of 0.50; and RMSEA less than 0.10 [43], they were all included for further analysis. Therefore, the measurement model showed a better fit to the data (as shown in Table 3). For instance, x^2/df and RMSEA was 1.803, the IFI = 0.86, TLI = 0.84, CFI = 0.85; and RMSEA 0.061 indicated better fit to the data considering all loading items.

4.1. Measurement Model

Confirmatory factor analysis (CFA) was conducted to check the properties of the instrument items. Indeed, having the final measurement model for all constructs, the next phase was to evaluate them for unidimensionality, reliability, and validity. The outcomes of the measurement model are presented in Table 4, which encapsulates the standardized factor loadings, measures of reliabilities and validity for the final measurement model.

4.1.1. Unidimensionality

Unidimensionality is the extent to which the study indicators deviate from their latent variable. An examination of the unidimensionality of the research constructs is essential and is an important prerequisite for establishing construct reliability and validity analysis [44]. Moreover, in line with Byrne (2001), this research assessed unidimensionality using the factor loading of items of their respective constructs [41]. Table 4 shows solid evidence for the unidimensionality of all the constructs that were specified in the measurement model. All loadings were above 0.50, which is the criterion value recommended by [43]. These loadings confirmed that 49 items were loaded satisfactory on their constructs.

4.1.2. Reliability

Reliability analysis is related to the assessment of the degree of consistency between multiple measurements of a variable, and could be measured by Cronbach Alpha coefficient and composite reliability [45]. Some scholars (e.g. Bagozzi and Yi, 1988) suggested that the values of all indicators or dimensional scales should be above the recommended value of 0.60 [46]. Table 5 indicates that all Cronbach Alpha values for the twelve constructs exceeded the recommended value of 0.60 (Bagozzi and Yi, 1988) demonstrating that the instrument is reliable [46]. Furthermore, as shown in Table 5, composite reliability values ranged from 0.79 to 0.83, and were all greater than the recommended value of more than 0.60 (Bagozzi and Yi, 1988) or greater than 0.70 as suggested by Holmes-Smith (2001) [47]. Consequently, according to the above two tests, all the research constructs in this study are considered reliable.

4.1.3. Content, Convergent, and Discriminant Validity

Although reliability is considered as a necessary condition of the test of goodness of the measure used in research, it is not sufficient [48] [49], thus validity is another condition used to measure the goodness of a measure. Validity refers to the extent to which an instrument measures is expected to measure or what the researcher wishes to measure [50]. Indeed, the items selected to measure the seven antecedent variables (perceived reputation, perceived privacy, perceived size, perceived security, perceived usefulness, familiarity with the web, and perceived ease of use) besides the other variables (*i.e.* perceived trust, purchase intention to use EPS, actual purchase using credit cards, actual purchase using cash on delivery, and actual purchase using PayPal) were

Table 4. Measurement model fit indices.

Model	X^2	df	p	X^2/df	IFI	TLI	CFI	RMSEA
Final model	1912.856	1062	0.000	1.803	0.86	0.84	0.85	0.061

Table 5. Properties of the final measurement model.

Constructs and indicators	Std. loading	Std. error	Square multiple correlation	Error variance	Cronbach alpha	Composite reliability	AVE
Perceived reputation					0.878	0.83	0.56
PR1	0.818	***	0.669	0.664			
PR2	0.900	0.059	0.811	0.266			
PR3	0.830	0.062	0.689	0.468			
PR4	0.693	0.062	0.480	0.684			
Perceived privacy					0.785	0.80	0.51
PP1	0.601	***	0.362	0.843			
PP2	0.798	0.157	0.637	0.539			
PP3	0.711	0.141	0.505	0.237			
PP4	0.653	0.147	0.426	0.248			
Perceived size					0.768	0.79	0.50
PS1	0.722	***	0.521	0.541			
PS2	0.683	0.105	0.467	0.436			
PS3	0.664	0.104	0.441	0.450			
PS4	0.618	0.096	0.382	0.414			
Perceived security					0.724	0.80	0.50
PC1	0.622	***	0.387	0.458			
PC2	0.590	0.133	0.348	0.384			
PC3	0.629	0.146	0.396	0.445			
PC4	0.677	0.158	0.458	0.309			
Perceived usefulness					0.794	0.80	0.50
PU1	0.595	***	0.354	0.636			
PU2	0.701	0.083	0.491	0.423			
PU3	0.788	0.084	0.621	0.434			
PU4	0.742	0.087	0.550	0.499			
Familiarity with the web					0.789	0.82	0.55
FW1	0.819	***	0.291	0.499			
FW2	0.832	0.077	0.325	0.199			
FW3	0.757	0.069	0.684	0.622			
FW4	0.730	0.066	0.677	0.288			
Perceived ease of use					0.862	0.83	0.56
PE1	0.819	***	0.672	0.510			
PE2	0.832	0.093	0.693	0.346			
PE3	0.757	0.096	0.573	0.510			
PE4	0.730	0.094	0.533	0.573			

Continued

Perceived trust					0.773	0.82	0.50
PT1	0.652	***	0.425	0.419			
PT2	0.703	0.111	0.494	0.410			
PT3	0.686	0.120	0.471	0.460			
PT4	0.600	0.127	0.360	0.471			
PT5	0.579	0.117	0.336	0.366			
Purchase intention to use EPS					0.831	0.80	0.50
PI1	0.767	***	0.588	0.545			
PI2	0.804	0.143	0.647	0.484			
PI3	0.739	0.134	0.546	0.574			
PI4	0.659	0.138	0.434	0.606			
Actual purchase using credit cards					0.866	0.81	0.52
AP1	0.767	***	0.588	0.651			
AP2	0.854	0.070	0.730	0.436			
AP3	0.796	0.069	0.634	0.558			
AP4	0.730	0.069	0.533	0.672			
Actual purchase using cash on delivery					0.840	0.80	0.50
AO1	0.784	***	0.615	0.775			
AO2	0.791	0.140	0.625	0.535			
AO3	0.818	0.138	0.669	0.445			
AO4	0.636	0.137	0.405	0.491			
Actual purchase using PayPal					0.888	0.82	0.55
AR1	0.822	***	0.675	0.742			
AR2	0.837	0.070	0.700	0.509			
AR3	0.847	0.069	0.717	0.460			
AR4	0.757	0.074	0.573	0.494			

validated and reused from previous researches. Therefore, the researchers relied upon a pre-used scale that was developed from other researchers for enhancing the validity of the scale. In addition, the questionnaire items were reviewed by three instructors of the Business Faculty at the University of Jordan. The feedback from the chosen group for the pre-test contributed to enhanced content validity of the instrument. Moreover, in order to enhance the content validity of the instrument, five customers who shopped from MarkaVIP regularly were asked to give their feedback about the questionnaire, thus confirming that the knowledge presented in the content of each question was relevant to the studied topic [51].

In addition, as convergent validity test is necessary in the measurement model to determine if the indicators in a scale load together on a single construct; discriminant validity test is another main requirement to verify if the items developed to measure different constructs are actually evaluating those constructs. As shown in **Table 5**, all items were significant and had loadings more than 0.50 on their underlying constructs. Moreover, the standard errors for the items ranged from 0.059 to 0.158 and all the item loadings were more than twice their standard error. Discriminant validity was considered using several tests. First, it could be examined in the measurement model by investigating the shared average variance extracted (AVE) by the latent constructs. The correla-

tions among the research constructs could be used to assess discriminant validity by examining if there were any extreme large correlations among them which would imply that the model has a problem of discriminant validity. If the AVE for each construct exceeds the square correlation between that construct and any other constructs then discriminant validity is occurred [52]. As shown in **Table 5**, this study showed that the AVEs of all the constructs were equal or above the suggested level of 0.50, implying that all the constructs that ranged from 0.50 to 0.56 were responsible for more than 50 percent of the variance in their respected measurement items, which met the recommendation that AVE values should be at least 0.50 for each construct [46] [47]. Furthermore, as shown in **Table 6**, discriminant validity was confirmed as the AVE values were more than the squared correlations for each set of constructs. Thus, the measures significantly discriminate between the constructs.

4.2. Structural Model and Hypotheses Testing

Following the two-phase SEM technique, the measurement model results were used to test the structural model, including paths representing the proposed associations among research constructs. In addition, in order to examine the structural model it is essential to investigate the statistical significance of the standardized regression weights (*i.e.* t-value) of the research hypotheses (see **Table 7**); and the coefficient of determination (R^2) for the research endogenous variables as well. The coefficient of determination for perceived trust, purchase intention to use EPS, actual purchase using credit cards, actual purchase using cash on delivery, and actual purchase using PayPal were 0.30, 0.28, 0.15, 0.20, and 0.13 respectively, which indicates that the model does moderately account for the variation of the proposed model. Also, as shown in **Table 6**, several antecedents of customers' perceived trust on MarkaVIP Company were accepted (*i.e.* H1, H4, H6, and H7) while H2, H3, and H5 were rejected. However, the effects of customers' perceived trust on purchase intention to use EPS, actual purchase using credit cards, actual purchase using cash on delivery, and actual purchase using PayPal were all significant; therefore, H8, H9, H10, and H11 were supported.

5. Discussion and Conclusion

Investigating methods of payments has always been an issue of concern for researchers. Why would some potential buyers continue to prefer performing physical payments? The issue of trust or lack of it was a major consideration especially in e-payments. This was attributed to a number of factors including malfunctioning, potential fraud and unavailability of e-payment means. Researchers pursued the matter of interest by carrying out more researches to understand the lack of trust concerns by potential users.

This research constitutes an addition to the area of security and trust as it has focused on studying perceived

Table 6. AVE and square of correlations between constructs.

Constructs	PR	PP	PS	PC	PU	FW	PE	PT	PI	AP	AO	AR
(PR)	0.56											
(PP)	0.49	0.51										
(PS)	0.45	0.47	0.50									
(PC)	0.51	0.45	0.46	0.50								
(PU)	0.45	0.50	0.44	0.48	0.50							
(FW)	0.47	0.52	0.40	0.46	0.49	0.55						
(PE)	0.48	0.46	0.43	0.45	0.49	0.52	0.56					
(PT)	0.51	0.49	0.49	0.44	0.46	0.52	0.50	0.50				
(PI)	0.50	0.48	0.49	0.47	0.49	0.53	0.46	0.41	0.50			
(AP)	0.27	0.27	0.23	0.34	0.28	0.28	0.42	0.32	0.20	0.52		
(AO)	0.52	0.43	0.44	0.47	0.42	0.50	0.41	0.41	0.40	0.20	0.50	
(AR)	0.10	0.14	0.12	0.28	0.23	0.32	0.18	0.25	0.26	0.50	0.21	0.55

Note: Diagonal elements are the average variance extracted for each of the twelve constructs. Off-diagonal elements are the squared correlations between constructs.

trust surrogated by perceived reputation, perceived privacy, perceived size, perceived security, perceived usefulness, familiarity with the web and perceived ease of use. The impacts of the perceived trust on purchase intention to use EPS, on actual purchase using credit cards, on actual purchase using cash on delivery and on actual purchase using PayPal were also studied.

The following **Table 8** summarizes the results of hypotheses testing:

1) H1: Perceived reputation has a positive effect on trust.

This hypothesis was supported which seemed relatively logical considering that one would expect some additional trust by the customer when the seller (MarkaVip in our case) had a good reputation as online business. The results concurred with the findings of Gefen (2000) who carried out a survey to study the role of familiarity and trust and found that the customer behavioral intentions were highly affected by those two main factors [18].

2) H2: Perceived privacy has a positive effect on trust and H3: Perceived size has a positive effect on trust.

Both hypotheses were not supported which indicated that customers did not pay much attention to the issues of privacy and size of company. The MarkaVip had reputation and perhaps customers assumed that others who had made purchases from the company helped develop this reputation which would have meant a not small company that cared about retaining customers and gaining their trusts. This implied that the later customers

Table 7. Summary of proposed results for the theoretical model.

Research proposed paths	Coefficient value	t-value	p-value	Empirical evidence
H1: Perceived reputation → perceived trust	0.071	2.071	0.038	Supported
H2: Perceived privacy → perceived trust	0.004	0.096	0.924	Not supported
H3: Perceived size → perceived trust	0.036	0.862	0.389	Not supported
H4: Perceived security → perceived trust	0.260	6.038	0.000	Supported
H5: Perceived usefulness → perceived trust	0.033	0.817	0.414	Not supported
H6: Familiarity with the web → perceived trust	0.098	2.727	0.006	Supported
H7: Perceived ease of uses → perceived trust	0.248	6.408	0.000	Supported
H8: Perceived trust → purchase intention to use EPS	0.706	9.006	0.000	Supported
H9: Perceived trust → actual purchase using credit cards	0.362	3.345	0.000	Supported
H10: Perceived trust → actual purchase using cash on delivery	0.639	7.352	0.000	Supported
H11: Perceived trust → actual purchase using PayPal	0.309	2.664	0.008	Supported

Table 8. Summary of hypotheses testing.

Hypothesis	Empirical evidence
H1: Perceived reputation → perceived trust	Supported
H2: Perceived privacy → perceived trust	Not supported
H3: Perceived size → perceived trust	Not supported
H4: Perceived security → perceived trust	Supported
H5: Perceived usefulness → perceived trust	Not supported
H6: Familiarity with the web → perceived trust	Supported
H7: Perceived ease of uses → perceived trust	Supported
H8: Perceived trust → purchase intention to use EPS	Supported
H9: Perceived trust → actual purchase using credit cards	Supported
H10: Perceived trust → actual purchase using cash on delivery	Supported
H11: Perceived trust → actual purchase using PayPal	Supported

(lagers) trusted the experience of the initial risk takers; otherwise, it would have resulted in giving the company bad reputation. Chellappa and Pavlou (2002) studied the perceived information security and its effect on trust [20]. Their conclusion was that it had minimum effect. The reputation might have been the influencing factor not to pay attention to the size of the company by the customer. Koufaris and Hampton-Sosa (2004) have also concluded that the company reputation and privacy concerns have affected the trust [21].

3) H4: Perceived security has a positive effect on trust.

This hypothesis was supported which meant that customers paid attention to the important of security was a primary factor that influenced their trust. This was a common finding by the majority of studies (e.g. Tsiakis and Sthephanides, 2005; Kim *et al.*, 2008; Kim and Mirusmonov, 2010) [3] [27] [28].

4) H5: Perceived usefulness has a positive effect on trust.

The hypothesis was not supported. Respondents were asked if shopping from MarkaVip improved their performance, increased their shopping productivity, increased their shopping effectiveness or if at all shopping from MrkaVip was useful. Obviously was in contradiction with the findings of Koufaris and Zicklin (2002) who reported that the perceived usefulness did affect trust [39].

5) Hypotheses H6 and H7 were supported. This meant that respondents envisaged that familiarity with the web and perceived ease of use had positive effects on perceived trust. In addition, all remaining hypotheses H8-H11 were also supported which meant that the Perceived trust did have positive effects on purchase intention to use EPS, actual purchase using credit cards, actual purchase using cash on delivery and on actual purchase using PayPal.

The common observation is that the perceived trust would mean making the purchase regardless of the method of payment (using EPS, credit cards, cash on delivery or using PayPal). Trust therefore would imply acceptance which also seems to be a common theme in the findings of most relevant prior researches.

Each of the elements of the construct in this study was obtained from prior research, which provided a valued source for data gathering and measurement. Therefore, the reliability and validity of these elements have been verified through previous research and peer reviews. The data were collected from customers of MarkaVip using a paper-based a questionnaire with a sample size 214 from an unknown population of the customers of MarkaVip. The questionnaire was reviewed by lecturers specialized in Management Information Systems (MIS) in order to identify problems with wording, content, and question ambiguity. The modified questionnaire was then piloted on five customers who had shopped from MarkaVip regularly. The final questionnaire was distributed. Structural equation modeling technique was used to analyze the data and study the causal relationships.

As discussed above, eight of the eleven hypotheses were supported. The perceived reputation and security as well as usefulness and ease of use were all important factors with influence on perceived trust. However, perceived privacy, size and usefulness were found not to have similar effects on perceived trust. As for the methods of payment, the customers did not differentiate in their attitude to using any of them once the trust for the company was perceived.

Contributions of this study are useful for academia, MarkaVip and perhaps other similar companies. Results of the analysis may help establish a distinctive strategy to gain trust and ultimately improve performance. The results demonstrate that customers are after gaining trust and are more concerned with particular factors that are worth focusing on by companies.

However, the study has some limitations. The first limitation is that this research is the first attempt for clearly investigating the trust factors in the Jordanian/Arabic context. Secondly, this study used a sample of customers who were willing to participate and respond regarding their attitudes. The proposed theoretical research model might be applied among other groups or customers in other countries in the region. Thirdly, although the response rate for this research was adequate for the primary conditions of statistical analyses, the percentage of those who did not respond was still observable. Therefore, descriptive statistics, confirmatory factor, unidimensionality, reliability, content, convergent, and discriminant validity have to be further investigated and confirmed by other researchers. Finally, the results from this survey were limited to Jordan and to MarkaVip customers in particular. Potential cultural limitation may exist and future research in different cultural contexts might shed further light if we are to be able to generalize or may be having to modify the research model. Therefore, it might be wise to interpret the results of this study with some caution.

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