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Understanding the Factors Influencing Adoption of E-Commerce



Abstract: - The introduction of E-commerce (EC) and its phenomenal rate of expansion can be directly attributed to the bursting of the "dot-com" bubble and the advancement of information technologies. EC, which entails conducting business on the internet, is changing the face of commerce as we know it. However, there is evidence to show that consumers are cautious about transacting with online sellers due to unknown vendor activity. Researchers and practitioners alike must be able to rely on one another. Concerns about safety, such as the possibility of having financial or other sensitive information taken by hackers, may also discourage customers from making purchases online. Other factors, such as people's perspectives on humanity, their level of Web expertise, their willingness to try new things, etc., also influence the rate at which individuals adopt e-commerce. In this paper, we will examine the key concerns surrounding electronic commerce, draw connections between various elements, and offer recommendations for further studies and practical applications.

Keywords: E-commerce; Internet Trust; Security.

1. Introduction

The rapid growth of online merchants over the last two decades has undoubtedly dimmed earlier hopeful predictions for B2C transactions made via the Internet (Celik, 2016; Tarhini et al., 2021). The majority of shoppers choose online retailers because they save time and money, reduce travel, have access to expert knowledge, receive personalised attention, and broaden their knowledge base (Lim & Van, 2015). Unfortunately, a bad internet purchasing experience has turned off many potential purchasers. Finding, recruiting, and maintaining clients is a challenge similar to, if not more serious than, Internet fraud (Chang et al., 2015; Tarhini et al., 2016, Tarhini et al., 2021).

According to Visa, a large payment card firm, clients spent around 1% of Visa's total charge volume on online purchases reaching \$13 billion in 2000 (Gefen, 2000). However, even in 1996, internet sales were barely in the \$500 million to \$600 million range (Anderson, 1997). Since the dot-com bubble burst in 2001, the volume of business conducted over the Internet has steadily expanded. According to U.S. Census Bureau data from 2008, online sales appear to have been unusually resilient to the crisis. Despite its origins in the United States, e-commerce is currently being studied by countries of various sizes. Outside of the United States, e-commerce transactions totalled more than \$1.5 trillion in 2005 (Shih et al., 2005). E-commerce is threatening the old business model. Consumers' willingness to buy from strangers online is required for this to happen (Mensah et al., 2021). Customers' distrust of online shops, on the other hand, is a substantial obstacle to e-commerce (Bhattacharjee, 2002). One factor that may deter people from utilising the internet is the fear that hackers may steal their personal information or money (Mensah et al., 2021). People's apprehension about shopping online, as well as their distrust of the Web's technical and institutional underpinnings, can stymie widespread adoption of e-commerce.

In addition, there are some other factors affecting e-commerce adoption, such as people's attitudes to humanity, general Web experience, personal innovations, etc. The motive of this study is to understand E-commerce as a new way of doing business since the widespread use of internet. Many researchers acknowledge there is still a lack of understanding of online shopping (Lim & Ting, 2012; Lim 2015) and have called for future research that

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investigates the influencing factors of online shopping (Amaro & Duarte, 2015; Celik, 2016). Based on this, the following research query has been formulated:

R1: How is E-commerce revolutionizing the traditional way of doing business and what are the factors affecting e-commerce adoption?

1.1 Objective of the study:

Based on the previous researches and research question, the objectives of this study are:

1. To determine the factors affecting E-commerce adoption;
2. To offer insights and guidelines for Web vendors to achieve a success in E-commerce;
3. To offer suggestions for future research in the field of E-commerce.

2. Literature Review

This section will commence with a definition of e-commerce before moving on to the most important aspect of e-commerce: trust. In order to better comprehend this trust issue, I will introduce two trust antecedents: Familiarity and Trust Attitude. I will then define trust-related behaviours, trusting intentions, trusting beliefs, and institution-based trust. In addition, I will elucidate on the factors that influence E-commerce success and how they do so. In addition, this chapter will emphasise the importance of Web service quality and online security. Six hypotheses will be summed up at the conclusion of this chapter.

2.1 Defining E-commerce

There is no generally agreed-upon definition of electronic commerce. E-commerce, or electronic commerce, is a relatively new industry that involves the buying, selling, and trading of goods and services using electronic systems such as the internet. That is to say, it entails doing trade via the World Wide Web, either through the sale of traditionally delivered items and services or through the sale of "digitised" things like computer software (Tsagkias et al., 2021). The importance of online product discovery has grown as consumers increasingly make their purchases online rather than in physical locations. After starting with web searches, consumers have increasingly turned to eCommerce search engines (Degenhardt et al., 2019, Tsagkias et al., 2021) as their initial point of reference when looking for a product.

According to Cox and Dale (2001), "e-commerce can be defined as 'the conduct of business among e-enterprises and consumers,' where an e-business is a business enterprise with the capability to electronically exchange value (money, goods, services, and information)". The term "electronic commerce" refers to the buying and selling of products and services conducted over the Internet and other digital networks. Information sharing for the purpose of easing the financial and monetary parts of company deals is also included. Electronic trade between companies is known as "business-to-business" (B2B). In contrast, "business to consumer" (B2C) refers to e-commerce that takes place between businesses and end users. Examples of both "no intermediary" and "intermediary" e-commerce include Amazon.com and eBay, respectively. Jain et al. (2021) state that firms can increase their profits by using e-commerce since it allows them to better engage and interact with customers regardless of location or time constraints.

2.2 Trust: A major issue on E-commerce

E-commerce enables more options, more accessibility, more transparency, better pricing, and more individualised service (Aslam et al., 2020). Due to the proliferation of e-commerce platforms, customers are no longer restricted to stores located near their residences or places of business. No longer are online consumers restricted to domestic retailers. Since the overwhelming majority of newspapers now publish online, for instance, people from all over the world have easier access to their news and information. However, research indicates that consumers are hesitant to make purchases from online stores out of concern for the security of their personal information (McKnight et al., 2002; Broeder, 2020; Fernández-Bonilla et al., 2022).

In a 1999 study by Hoffman et al., 83% of respondents stated that they did not provide personal information to websites because they did not "trust" those obtaining the information. Therefore, people's confidence in internet

vendors and the entire internet transaction environment is crucial to the widespread adoption of e-commerce, and there is good reason to believe that trust should be a major concern in e-commerce.

As highlighted by Keen et al. (1999), the underlying conclusion in all of these fields is that "trust is becoming increasingly important, but we still can't explain what it is." According to Gefen (2000), "trust is the confidence a person has in his or her favourable expectations of what other people will do, based in many cases on previous interactions." In this paper, we examine one facet of E-commerce trust and define it as the belief that an online retailer's handling of customers' confidential information is morally sound.

According to Valarezo et al. (2018), the rise of e-commerce has led to a more competitive pricing environment, a more diverse selection of products, and an increase in marketing tactics, all of which have led to more discerning consumers. Because of this rivalry, the major goal of markets is now the maximisation of utility and profits. According to Chitura et al. (2008), SMEs may have been harmed by the proliferation of online markets since they lacked the resources to adapt to new media at the same rate as major firms (Fernández-Bonilla et al., 2022).

2.3 Familiarity: A precondition for trust

If trust is crucial to the success of online transactions, then studying the factors that contribute to customers' confidence in online stores should be a top priority for academics and business owners alike. However, studies of trust in other contexts have tended to centre on the kind that develops slowly over time through consistent back-and-forth communication. As a result of these repeated exchanges, individuals form "beliefs about the ability, integrity, and intentions of the trusted party" (Gefen, 2000, p.726). Unfortunately, the Internet is a very different setting from face-to-face interactions, so this advice for fostering trust wouldn't work there (Ogbanufe & Kim, 2022). Familiarity is another type of trust antecedent proposed in Luhmann's (1979) theory of Trust and Power that is applicable to the one-of-a-kind Web environment because it provides a context and understanding of the environment and the trusted party within which the expectations of trust can be explained (Song & Shin, 2022).

In contrast to trust, which is defined as confidence in another person's or an object's ability to act in the future, familiarity refers to an existing knowledge of that person's or object's behaviour in the present. Therefore, familiarity and trust are two separate concepts (Gefen, 2000; Meskaran et al., 2022). Gefen (2000) uses the example of Amazon.com, one of the largest online booksellers, to discuss the differences between familiarity and trust. Expertise with Amazon.com, so the story goes, requires learning how to navigate the site to find books of interest, learn more about them, and place an order for them. However, if you have complete faith in Amazon.com, you may feel compelled to provide your credit card details in the hope that they would not be misused in the future (Song & Shin, 2022; Meskaran et al., 2022).

2.4 Disposition to trust and Institutional based Trust: Another antecedent of trust

Luhmann (1979) claimed that familiarity does not emerge naturally through repeated contacts between individuals. Similarly, people have different trust levels. The propensity to trust other people and believe in mankind is what McKnight et al. (1998) call a "disposition to trust." The stance comprises the conviction that better results can be attained by providing credit and trusting individuals, regardless of whether this trust is deserved (Soleimani, 2022). In the first stages of a relationship, when one party is still learning about the other, a predisposition to trust is essential because it lays the groundwork for the development of trusting views (McKnight et al., 1998; Furner et al., 2022). Users' increased vulnerability to the vendor's harm is a direct result of their trust-related behaviour on the Internet (Mayer et al., 1995; Sarkar et al., 2020). Trust-related behaviours in electronic commerce include things like sharing personal information, making a purchase, or consulting a website for guidance (Furner et al., 2022).

To have trusting intentions, the grantor must be willing to rely on the trustee and feel secure doing so (Sha, 2009). A consumer's subjective probability of dependence on an e-commerce service is contingent on their projected intent to engage in one of three potentially harmful behaviours: disclosing personally identifiable information to the vendor, making a purchase, or acting on vendor information (such as financial advice) (Ginting et al., 2023).

The importance of laws and other institutional safeguards in creating a stable society was originally studied by sociologists. Perceived e-commerce success, according to McKnight et al. (2002), is the belief that necessary structural circumstances (such as access to the internet) are in place to boost the probability of a positive e-commerce outcome (Salam et al., 2005; Leonard & Jones, 2021). It is hypothesised that trust in institutions is connected favourably with trusting attitudes and behaviours. When we feel safe, we are more likely to attribute trustworthy motives to others around us. Customers who are confident in their own knowledge of Internet security measures are more likely to place their trust in a certain business. Similarly, feelings of security that are dependent on the surrounding environment lead us to act more trustingly (Vinoth et al., 2022).

2.5 Personal innovativeness

Innovativeness is defined as "a trait that reflects confidence or optimism regarding the adoption of new ideas or technologies" (McKnight et al., 2002). As previously said, e-commerce is a fresh notion for conducting business using newly available technology methods. As a result, personal creativity should contribute positively to the creation of trust in electronic trade (Malik & McMenemy, 2021).

Information technology (IT) literature has discussed both a global "innovativeness" construct (Limayem et al., 2000) and a domain-specific "innovativeness" construct (Agarwal & Prasad., 1998). The predictive capacity of domain-specific personal IT innovation is greater than that of global IT innovation (Hwang, 2011). This is due to the fact that IT innovators in one discipline may be laggards in another. According to the knowledge of the author, no prior research has examined the effect of personal innovativeness in information technology on the relationship between perceived strategic value of e-commerce and online service use (Al-Kfairy et al., 2022; Hapsari et al. 2023).

2.6 Web experience

The fact that familiarity breeds confidence in the object of trust is one of the most fundamental foundations of trust development (Luhmann, 1979). It suggests that consumers' amount of Web experience is positively related to their trust in authoritative institutions, because such exposure provides them the perception that engaging with the Web is appropriate and normal. Furthermore, "the more time people spend on the Internet, the more confident they will become in the Internet's security" (Al-kfairy et al., 2023).

In order for people to try out and use cutting-edge innovation, they need to have faith in it. Understanding what motivates consumers' faith in e-commerce is crucial given the growing importance of online shopping. Trust, happiness, and dedication all play a role in the connections made between customers and service providers (Tajvidi et al., 2021; Al-kfairy et al., 2023). Trust, as stated by Lu et al. (2016), is built primarily through social and environmental interactions. S-commerce communities earn their customers' confidence when they provide them with relevant, up-to-date resources and information. Online shoppers benefit from having access to informative resources like product reviews and ratings in order to make more informed decisions (Yang, 2021; Al-kfairy et al., 2023).

Consumers who have used the internet in general are more inclined to assume that online transactions are safe and commonplace (Al-kfairy et al., 2023). The broad public's positive perception of Internet safety originates from their own personal experiences with the medium, which benefits quality control methods. Someone who is familiar with the Internet is more likely to believe in websites in general. Extensive study has demonstrated that prior exposure to computers and the internet enhances the likelihood that a buyer would make an online purchase (see, for example, Sexton et al., 2002). However, as internet use grows more popular, individuals will become more adept and self-assured (Al-kfairy et al., 2023). As a result, authors believe that this boosts trust in both the internet and social networking sites.

2.7 Perceived Website Quality

The quality of the website leads to confidence in the vendor because if consumers view the website to be of high quality, they will think that the Web seller has favourable characteristics and will form trusting intentions. As a result, perceived website quality should have a positive relationship with both trusting beliefs and trusting intents (Qalati et al., 2021).

From the consumer's perspective, confidence in the online marketplace and its participating businesses is

essential (Demir et al., 2021). On the other hand, for the company's success, delivering high-quality Internet service is essential. Successful online businesses have total system, network, procurement, delivery, and customer service integration. "Companies must have the capability to manage this throughout the entire supply chain, and they must be prepared for the volume of users accessing their website" (Cox & Dale, 2001). The propelling force behind any successful business is quality. No company can provide the necessary degree of service quality to its consumers without a quality management approach that guarantees quality from its systems, people, and suppliers. Even if e-commerce has boomed since the introduction of the Internet, quality control is still essential for success (Demir et al., 2021).

The significance of service quality has prompted academicians to examine its various dimensions, and others, such as Demir et al., (2021) have addressed the question of how customers evaluate service quality. The majority of E-commerce transactions occur online; therefore, the quality of service provided by the website — the point of contact between the company and its consumers — is crucial to the success of any company operating in this industry. There are no set business hours for websites, as there would be for a physical store or bank (Kumar & Ayodeji, 2021; Li et al., 2021).

2.8 E-commerce Security

When conducting online transactions, security is a crucial factor. Typically, a website will indicate that it is secure so that consumers can provide sensitive information, such as credit card numbers, without fear of unauthorised access (Cox & Dale, 2001). Cox and Dale (2001) suggest that security is crucially essential when conducting online transactions. Similarly, Badotra & Sundas (2021) argued that without a high level of customer trust that their exceedingly sensitive personal information will be kept secure, e-commerce will not function; thus, "one of the critical success factors of e-commerce is its security".

E-commerce companies and their clients are a constant target for cybercriminals and cyberattacks (Zutshi et al., 2021). Security Magazine (2020) found that 83 percent of U.S. stores are open targets for hackers. Confidential customer information is the most sought-after commodity in cybercrime because of its immense value to online retailers. Either malware, ransomware, or e-skimming can be used to steal sensitive customer information from online retailer databases. Opportunities are coming to us faster than ever before because to technological innovations like e-business and e-commerce; yet, these developments are not without their share of challenges, such as cyber security and others (Jang-Jaccard and Nepal, 2014; Liu et al, 2022). Similar to legitimate online businesses, cybercriminals invest much in research and development to identify and exploit weaknesses in the industry's current infrastructure. For this reason, it is important to examine the benefits and drawbacks of technology and find solutions to the problems that arise as a result (Liu et al., 2022).

Risks associated with e-commerce security include unauthorised access to network infrastructure, cable eavesdropping, impersonating a legitimate user, etc. Proper implementation of access control is essential for preventing or mitigating these risks, as it ensures that only those who require access to resources are granted access, while those without valid access are denied access (Liu et al., 2022). Privacy restricts access to data within a system to only authorised users. No one other than the intended recipients should be able to view the data. Given that the means by which privacy can be compromised are analogous to those employed in access control, the latter is required for the former. If a customer submits an online order and an unauthorised third-party log into the system using the customer's credentials, the third party may be able to modify the order (Zutshi et al., 2021). By sustaining their integrity, documents sent over a network are protected from unauthorised alteration. Authentication is the process of confirming the identity of a message's purported originator over a network. This is what it means to be able to trace the origin of a message to a specific user or computer. With appropriate verification, it is possible to determine who placed the order and whether it is legitimate (Chen et al., 2021).

After reviewing the literatures, six hypotheses are formulated for this study. The next two chapters will illustrate the research design (*Chapter 3*) and analyze the data collected (*Chapter 4*) to test these hypotheses.

Table 1: Summary of Research Hypotheses

H1	Disposition to trust should positively influence the formation of trusting beliefs.
H2	Institution-based trust positively relates to both trusting beliefs and trusting intentions.
H3	Personal innovativeness positively affects the formation of trusting beliefs.
H4	General Web experience is positively related to institution-based trust.
H5	Perceived website quality positively relates to both trusting belief in vendors and trusting intentions.
H6	The concern of online security negatively affects trusting intentions.

3. Methodology

This research focuses primarily on people's concerns when conducting online transactions, as well as their feelings and attitudes towards electronic commerce. This study measures respondents' feelings (trust) in both internet vendor and internet environment, attitudes to service quality on the Web, concerns about online security, and feelings of intending to make an online purchase (trusting intentions), etc. Consequently, this study's characteristics place it in the interpretivist position.

According to Saunders et al. (2007), there are two distinct schools of thought when it comes to conducting research: the deductive, in which a theory and hypothesis are developed before a research strategy is designed to test the hypothesis, and the inductive, in which data collection comes first and a theory is developed after analysing the data. This inquiry makes use of a deductive methodology. However, the inductive approach is not necessary for interpretivism. The following explains why deductive reasoning was chosen over inductive reasoning:

- i) After examining the existing literature, the researcher discovered that the majority of them employed a deductive method.
- ii) Saunders et al. (2007) state that the nature of the study issue is the most important factor to consider when deciding on a research approach. "Deduction works best when applied to topics where there is a large body of literature from which a theoretical framework and hypothesis may be defined. When conducting research on a topic that is unique, contentious, and on which there is little previous literature, "it may be more appropriate to work inductively by generating data and analysing and reflecting upon what theoretical themes the data are suggesting" (Saunders et al., 2007, p. 119). The issue of electronic commerce has been studied extensively, and there is a plethora of written material on the subject. Because of how the investigation is structured, it is deductive.

3.1 Research Strategy - Survey

Consequently, a survey strategy is employed in this study, and the questionnaire, which is one of the data collection approaches included in the survey strategy, is chosen for this research. However, actual trust-related behaviours (such as providing personal information, making a purchase, or acting on information provided by a website) will not be investigated in this study due to the difficulty of encouraging respondents to engage in such actions. Instead, the researcher will assess trusting intentions, or the likelihood that participants will engage in behaviours that demonstrate trust towards the online retailer. Initially, a questionnaire is used to collect the respondent's demographic data. The rest parts of questionnaire demonstrate as follows:

- i) Eight items of 7-point Likert Scale for disposition to trust are from the study conducted by McKnight et al. (2002).

- ii) Eight items of 7-point Likert Scale for institution-based trust (Q13-20) are from the study conducted by McKnight et al. (2002).
- iii) Three items of 7-point Likert Scale for trusting beliefs (Q21-23) are from the study conducted by McKnight et al. (2002). Some small adjustments are made.
- iv) Four items of 7-point Likert Scale for personal innovativeness (Q24-27) are from the study conducted by McKnight et al. (2002).
- v) Two items of 7-point Likert Scale for general Web experience (Q28-29) are from the study conducted by McKnight et al. (2002).
- vi) Four items of 7-point Likert Scale for perceived site quality (Q30-33) are from the study conducted by McKnight et al. (2002). Some small adjustments are made.
- vii) One item of 5-point Likert Scale for trusting belief in vendors (Q34) is developed on my own.
- viii) Three items of 7-point Likert Scale for trusting intensions (Q35-37) are from the study conducted by McKnight et al. (2002). Some small adjustments are made.
- ix) Three items of 5-point Likert Scale for online security (Q38-40) are developed on my own.

3.2 Sampling

This study's sample is a non-probability sample, meaning the probability of each case's selection from the entire population is unknown. And the population for this study consists of all humans who can consume and have internet access.

3.3 Data Collection Techniques

The questionnaires utilised in this study are self-administered questionnaires filled out by the respondents themselves. The questionnaires are distributed online, mailed to respondents, then collected by hand when they have been returned.

3.4 Data Analytic Method

SPSS, one of advanced data management and statistical analysis software packages, is used to process the data collected.

4. Data Analysis

This section will describe the entire process of data analysis and provide the results of these statistical analyses, which indicate whether the hypotheses are supported or not. PASW Statistics 18.0 is used to analyse the data collected from samples because it is a remarkably potent data analysis programme. Before data analysis, three stages must be completed:

- Step 1: Entering data and checking for errors;
- Step 2: Instructing PASW Statistics 18.0 to add up the scale scores from each item respectively for “Deposition to Trust”, “Institution-Based Trust”, “Trusting Beliefs”, “Personal Innovations”, “General Web Experience”, “Perceived Site Quality”, “Trusting Intensions”, “Concern of Online Security” in order to give an overall score for each of the variables;
- Step 3: Generating graphs to describe the relationship between variables.

PASW Statistics 18.0 generates tables and diagrams (table frequency distributions, pie chart, bar chart, scatter plot, etc.) in order to describe and present data information. The researcher would emphasise scatter plot in this section because it is a crucial illustrative diagram in this study for demonstrating the relationship between cases for two variables. The intensity of the relationship is indicated by the proximity of the points to an imaginary straight line. A positive relationship exists between two variables if, as one variable's value increases, so does the other. In contrast, there would be a negative relationship between the variables if, as the value of one variable decreases, so does the value of the other variable. Before verifying the hypotheses, the response rate and general information about survey respondents will be determined.

4.1 Response Rate

80 questionnaires were disseminated through various channels. 38 of the 80 questionnaires distributed had been returned, for a response rate of 47.5%. The final valid response rate is 38.75% after removing seven invalid responses that were neither fully completed nor matched to a case in the sampling frame.

Table 2: Summary of questionnaires and response rate

Questionnaires	Total	Return	Usable	Unusable
Number	80	38	31	7
Percentage (%)	100	47.5	38.75	8.75

4.2 Profile of the Respondents

20 males and 11 females have submitted valid responses, representing 64.52 and 35.48 percent of the samples, respectively. The ages of the samples range from 21 to 42 years old, with an average age of about 29 years. In general, this study's samples have a high level of education. 22 of 31 respondents have tertiary education, representing 71% of the samples, and 7 of them have postgraduate degrees, representing 22.6% of the samples.

Figure 1: Distribution of Male and Female

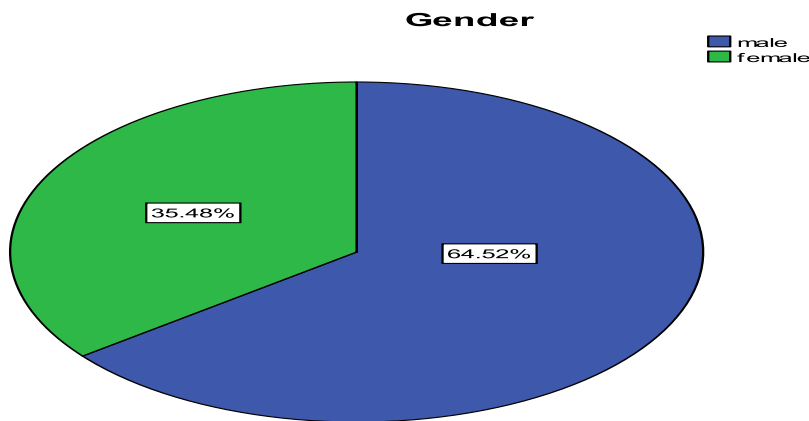
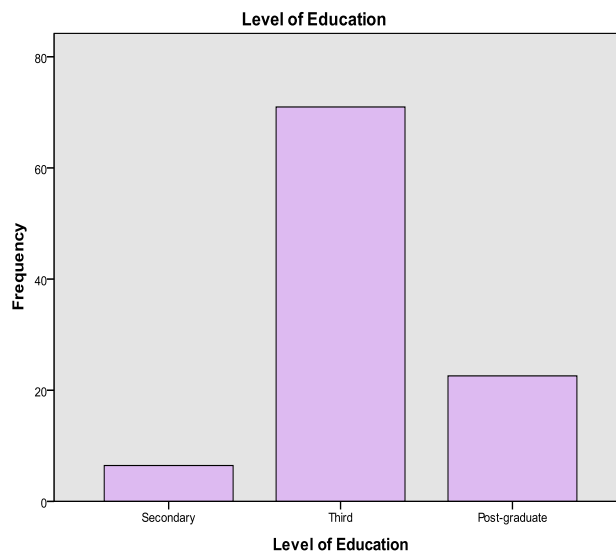


Figure 2: Diagrams for Gender, Age and Level of Education

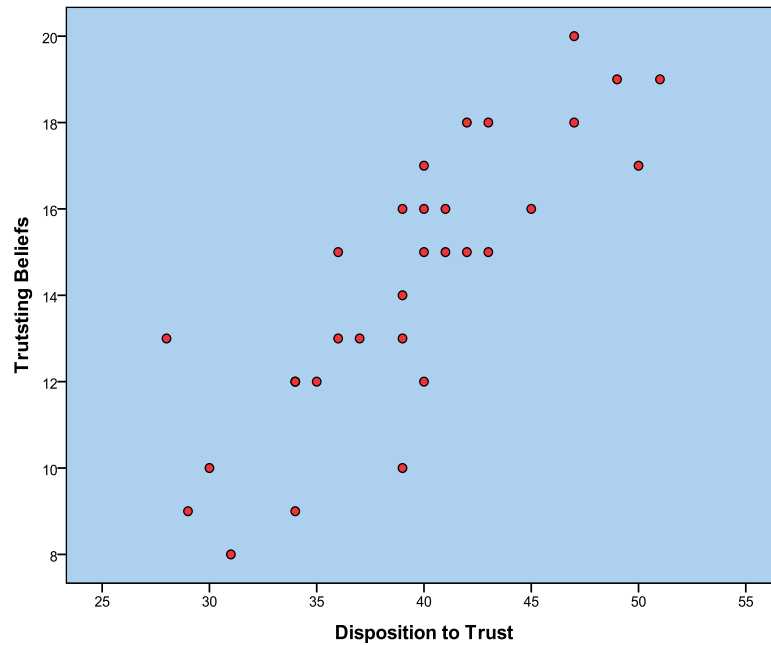


Testing Hypothesis 1

H1: Disposition to trust should positively influence the formation of trusting beliefs.

In order to explore the relationship between variable of "Disposition to Trust" and "Trusting Beliefs", a scatter plot is generated by PASW Statistics 18.0 as below.

Figure 3: Scatter plot of "Disposition to Trust" & "Trusting Beliefs"



The fact that the points in Figure 3 begin low on the left and move higher on the right suggests that the values for "Trusting Beliefs" would increase as the values for "Disposition to Trust" rise. Therefore, a positive correlation exists between the two variables. In addition, the fact that the points tend to accumulate in a linear fashion suggests that the relationship's strength is not feeble.

The researcher will employ statistics to investigate the relationships between the two variables in greater depth. Due to the fact that both variables contain ordinal (ranked) data, Spearman's rank correlation coefficient (Spearman's rho) and Kendall's rank correlation coefficient (Kendall's tau), the two most commonly used in business and management research, are chosen to evaluate the strength of the relationship between Disposition to Trust and Trusting Beliefs.

Table 3: Correlation between Disposition to Trust and Trusting Beliefs

		Disposition to Trust	Trusting Beliefs
Kendall's tau_b	Disposition to Trust	Value	1.000
		Sig.(2-tailed)	.000
		N	31
	Trusting Beliefs	Value	.706**
		Sig.(2-tailed)	.000
		N	31
Spearman's rho	Disposition to Trust	Value	1.000
		Sig.(2-tailed)	.000
		N	31
	Trusting Beliefs	Value	.857**
		Sig.(2-tailed)	.000
		N	31

**Correlation is significant at the 0.01 level (2-tailed).

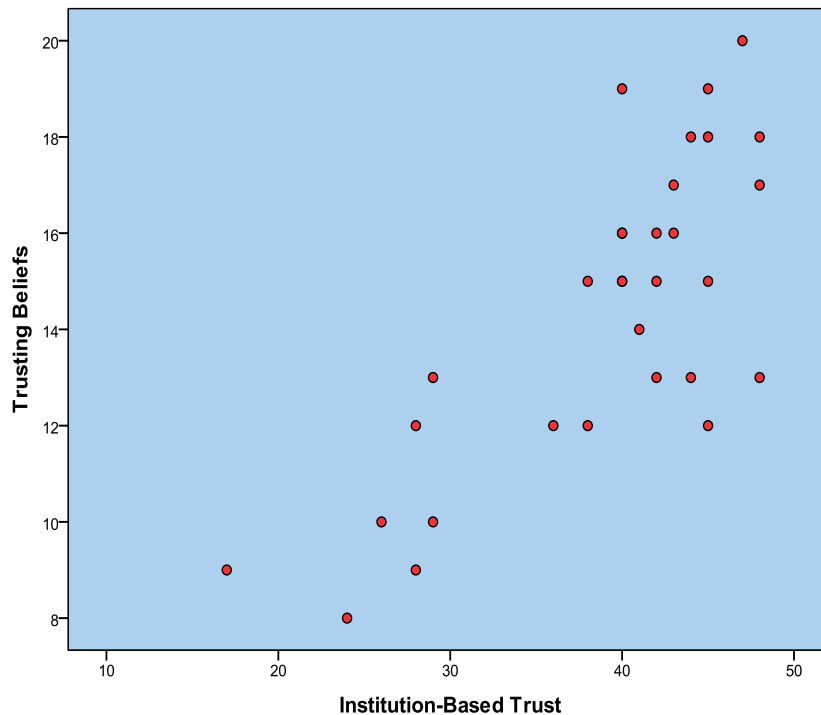
According to the table, Spearman's rank correlation coefficient is 0.857 and Kendall's is 0.706. Both correlation coefficients indicate that there is a strong positive relationship between Trust Predisposition and Trusting Beliefs. In addition, the (*) indicates that the probability of these correlation coefficients occurring due to chance alone is less than 0.01 percent (1 percent), indicating that these correlation coefficients are statistically significant. The correlation between "Trust Predisposition" and "Trusting Beliefs" is statistically significant, robust, and positive, as shown by the analyses above. This study therefore firmly supports Hypothesis 1.

Testing Hypothesis 2

H2: Institution-based trust positively relates to both trusting beliefs and trusting intentions.

To examine the relationship between the variables "Institution-based Trust" and "Trusting Beliefs", PASW Statistics 18.0 generates the scatter plot shown below.

Figure 4: Scatter plot of "Institution-based Trust" & "Trusting Beliefs"



The fact that the points in Figure 4 begin low on the left and rise towards the right suggests that the values for "Trusting Beliefs" would increase as the values for "Institution-based Trust" rise. Therefore, a positive correlation exists between the two variables. In addition, since the proximity of the points indicates the strength of the relationship, the relationship in this case would not be strong because the points are dispersed.

Using statistical methods such as correlation, the strength of this relationship can be determined. The researcher will employ statistics to investigate the relationships between the two variables in greater depth. Due to the fact that both variables contain ordinal (ranked) data, Spearman's rank correlation coefficient (Spearman's rho) and Kendall's rank correlation coefficient (Kendall's tau), the two most commonly used in business and management research, are chosen to evaluate the strength of the relationship between Institution-based Trust and Trusting Beliefs.

Table 4: Correlation between Institution-based Trust and Trusting Beliefs

		Institution-Based Trust	Trusting Beliefs
Kendall's tau_b	Institution-Based Trust	Value	1.000
		Sig.(2-tailed)	.551**
		N	.000
		N	31

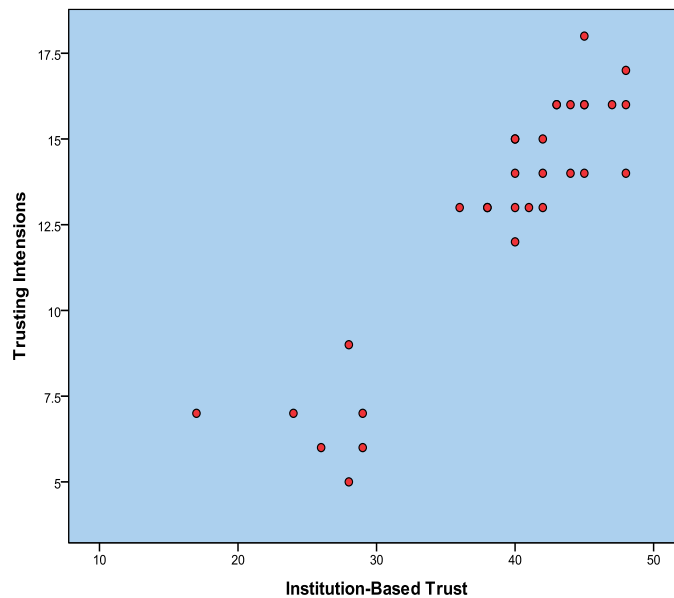
	Trusting Beliefs	Value	.551**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
Spearman's rho	Institution-Based Trust	Value	1.000	.678**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Beliefs	Value	.678**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
**Correlation is significant at the 0.01 level (2-tailed)				

Spearman's rank correlation coefficient is 0.678, and Kendall's rank correlation coefficient is 0.551, as shown in the table. According to the "values of the correlation coefficient" in the appendix, there is a positive relationship between Institution-based Trust and Trusting Beliefs, but the strength of the relationship is not robust.

In addition, the (*) indicates that the probability of these correlation coefficients occurring due to chance alone is less than 0.01 percent (1 percent), indicating that these correlation coefficients are statistically significant.

In order to explore the relationship between variable of "Institution-based Trust" and "Trusting Intentions", a scatter plot is generated by PASW Statistics 18.0 as below.

Figure 5: Scatter plot of "Institution-based Trust" & "Trusting Intentions"



The fact that the points in Figure 5 begin low on the left and rise towards the right suggests that the values for "Trusting Intentions" would increase as the values for "Institution-based Trust" rise. Therefore, a positive correlation exists between the two variables. In addition, the points tend to accumulate in a linear fashion, suggesting that the strength of this relationship is likely to be robust. Spearman's rank correlation coefficient (Spearman's rho) and Kendall's rank correlation coefficient (Kendall's tau) are utilised to determine the strength of the relationship between the two variables.

Table 5: Correlation between Institution-based Trust and Trusting Intentions

		Institution-Based Trust		Trusting Intentions
Kendall's tau_b	Institution-Based Trust	Value	1.000	.709**
		Sig.(2-tailed)	.	.000
		N	31	31

	Trusting Intensions	Value	.709**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
Spearman's rho	Institution-Based Trust	Value	1.000	.852**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Intensions	Value	.852**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
**Correlation is significant at the 0.01 level (2-tailed)				

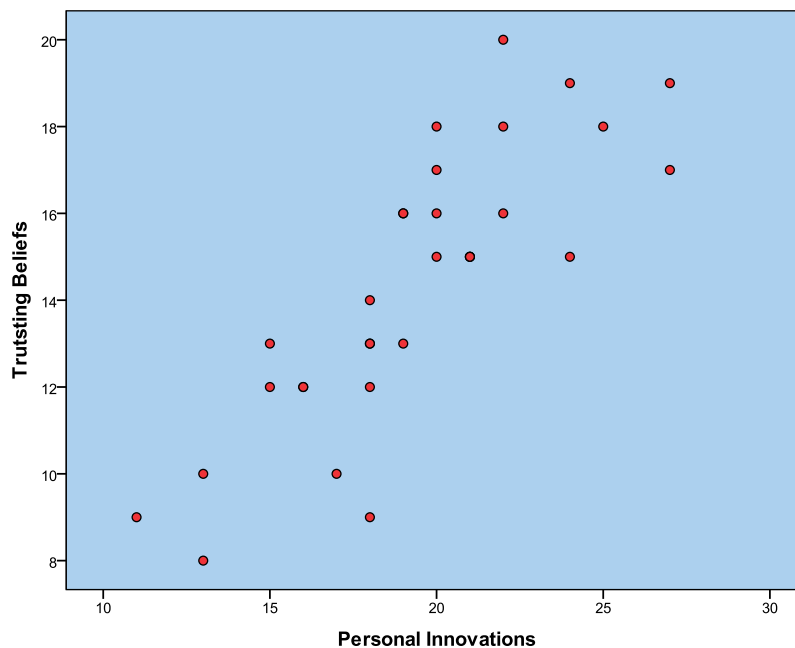
Spearman's rank correlation coefficient is 0.852, whereas Kendall's rank correlation coefficient is 0.709. Both correlation coefficients indicate that Institution-based Trust and Trusting Intentions have a strong positive relationship. In addition, the (*) indicates that the probability of these correlation coefficients occurring due to chance alone is less than 0.01 percent (1 percent), indicating that these correlation coefficients are statistically significant.

According to the aforementioned analyses, there is a statistically significant, positive, but weakened relationship between "Institution-based Trust" and "Trusting Beliefs," and a statistically significant, positive, strong relationship between "Institution-based Trust" and "Trusting Intentions." Consequently, this research supports Hypothesis 2.

Testing Hypothesis 3

H3: Personal innovativeness positively affects the formation of trusting beliefs.

Figure 6: Scatter plot of “Personal Innovations” & “Trusting Beliefs”



The fact that the points in Figure 6 begin low on the left and move higher on the right suggests that the values for "Trusting Beliefs" would increase as the values for "Personal Innovations" rise. Therefore, a positive correlation exists between the two variables. In addition, the fact that the points tend to accumulate in a linear fashion suggests that the relationship's strength is not feeble.

Spearman's rank correlation coefficient (Spearman's rho) and Kendall's rank correlation coefficient (Kendall's tau) are utilised to determine the strength of the relationship between the two variables.

Table 6: Correlation between Personal Innovations and Trusting Beliefs

		Personal Innovations	Trusting Beliefs
Kendall's tau_b	Personal Innovations	Value	1.000
		Sig.(2-tailed)	.000
		N	31
	Trusting Beliefs	Value	.703**
		Sig.(2-tailed)	.000
		N	31
Spearman's rho	Personal Innovations	Value	1.000
		Sig.(2-tailed)	.000
		N	31
	Trusting Beliefs	Value	.863**
		Sig.(2-tailed)	.000
		N	31

**Correlation is significant at the 0.01 level (2-tailed)

According to the table, Spearman's rank correlation coefficient is 0.863 and Kendall's is 0.703. Both correlation coefficients indicate that Personal Innovations and Trusting Beliefs have a strong positive relationship. In addition, the (*) indicates that the probability of these correlation coefficients occurring due to chance alone is less than 0.01 percent (1 percent), indicating that these correlation coefficients are statistically significant.

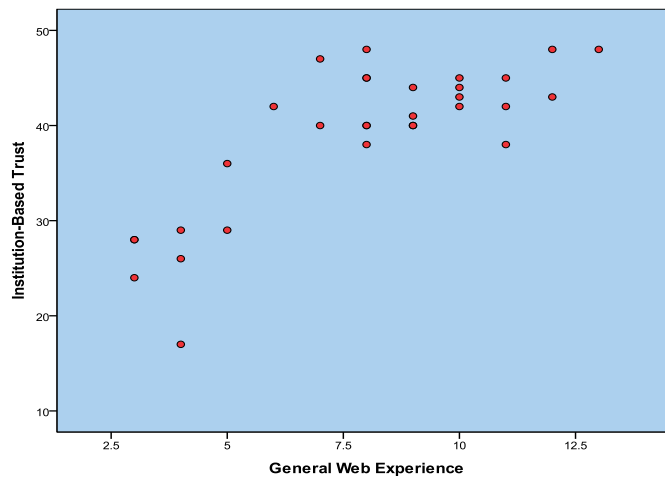
The correlation between "Personal Innovations" and "Trusting Beliefs" is statistically significant, robust, and positive, as shown in the analyses above. This study therefore firmly supports Hypothesis 3.

Testing Hypothesis 4

H4: General Web experience is positively related to institution-based trust.

To examine the relationship between the variables "General Web Experience" and "Institution-based Trust", PASW Statistics 18.0 generates the scatter plot shown above.

Figure 7: Scatter plot of “General Web Experience” & “Institution-based Trust”



The points in Figure 7 begin low on the left and increase as they progress to the right, indicating that the values for "Institution-based Trust" would increase as the values for "General Web Experience" rise. Therefore, a positive correlation exists between the two variables. Furthermore, as the closeness of the points indicates the strength of the relationship, in this case the relationship is not strong because the points do not tend to aggregate in a linear fashion.

Using statistical methods such as correlation, the strength of this relationship can be determined. The researcher will employ statistics to investigate the relationships between the two variables in greater depth. Due to the fact that both variables contain ordinal (ranked) data, Spearman's rank correlation coefficient (Spearman's rho) and Kendall's rank correlation coefficient (Kendall's tau), the two most commonly employed in business and management research, are chosen to evaluate the strength of the relationship between General Web Experience and Institution-based Trust.

Table 7: Correlation between General Web Experience and Institution-based Trust

			General Web Experience	Institution-Based Trust
Kendall's tau_b	General Web Experience	Value	1.000	.544**
		Sig.(2-tailed)	.	.000
		N	31	31
	Institution-Based Trust	Value	.544**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
Spearman's rho	General Web Experience	Value	1.000	.681**
		Sig.(2-tailed)	.	.000
		N	31	31
	Institution-Based Trust	Value	.681**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
**Correlation is significant at the 0.01 level (2-tailed)				

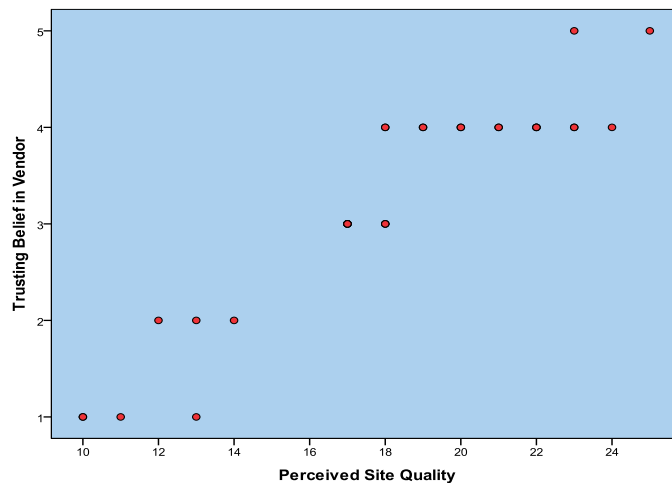
Spearman's rank correlation coefficient is 0.681, and Kendall's rank correlation coefficient is 0.544, as shown in the table. According to the "values of the correlation coefficient" in the appendix, there is a positive relationship between General Web Experience and Institution-based Trust, but the strength of the relationship is not robust. In addition, the (*) indicates that the probability of these correlation coefficients occurring due to chance alone is less than 0.01 percent (1 percent), indicating that these correlation coefficients are statistically significant.

The correlation between "General Web Experience" and "Institution-based Trust" is statistically significant, positive, but feeble. This analysis therefore supports Hypothesis 4.

Testing Hypothesis 5

H5: Perceived website quality positively relates to both trusting belief in vendors and trusting intentions.

Figure 8: Scatter plot of “Perceived site quality” & “Trusting belief in vendors”



The fact that the points in Figure 8 begin low on the left and increase towards the right suggests that the values for "Trusting belief in vendors" would increase as the values for "Perceived site quality" increase. Therefore, a positive correlation exists between the two variables. In this instance, however, it is difficult to determine the intensity of the relationship based on the proximity of the points. In order to evaluate the strength of the relationship, Spearman's rank correlation coefficient (Spearman's rho) and Kendall's rank correlation coefficient (Kendall's tau) will be utilised.

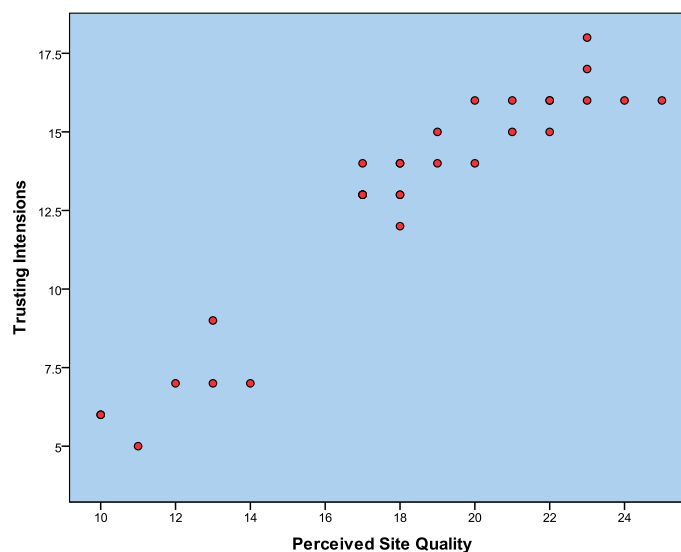
Table 8: Correlation between site quality and trusting belief in vendor

			Perceived Site Quality	Trusting Belief in Vendor
Kendall's tau_b	Perceived Site Quality	Value	1.000	.846**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Belief in Vendor	Value	.846**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
Spearman's rho	Perceived Site Quality	Value	1.000	.924**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Belief in Vendor	Value	.924**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
**Correlation is significant at the 0.01 level (2-tailed)				

Spearman's rank correlation coefficient is 0.924, and Kendall's rank correlation coefficient is 0.846, as shown in the table. Both correlation coefficients indicate a strong positive relationship, and the asterisk (*) indicates that the probability of these correlation coefficients occurring by chance alone is less than 0.01 percent; therefore, these correlation coefficients are statistically significant.

PASW Statistics 18.0 generates a scatter plot in order to investigate the relationship between the variables "Perceived Website Quality" and "Trusting Intentions."

Figure 9: Scatter plot of "Perceived site quality" & "Trusting intentions"



Virtually, the points in the figure 9 start low on the left-hand side and move higher on the right-hand side, which means that the values for "Trusting Intentions" would increase when the values for "Perceived site quality"

increase. Therefore, there is a positive relationship between the two variables. Furthermore, because the points tend to be gathering in a linear fashion, it indicates that the strength of the relationship would not be weak. To further examine the relationships between the two variables, Spearman’s rank correlation coefficient (Spearman’s rho) and Kendall’s rank correlation coefficient (Kendall’s tau) are used to assess the strength of this relationship.

Table 9: Correlation between site quality and trusting intentions

			Perceived Site Quality	Trusting Intentions
Kendall's tau_b	Perceived Site Quality	Value	1.000	.840**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Intentions	Value	.840**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
Spearman's rho	Perceived Site Quality	Value	1.000	.940**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Intentions	Value	.940**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
**Correlation is significant at the 0.01 level (2-tailed)				

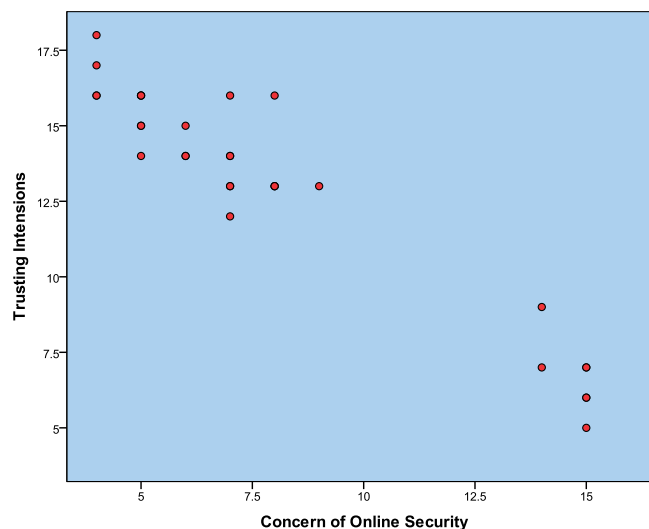
Spearman's rank correlation coefficient is 0.94 and Kendall's rank correlation coefficient is 0.840, as shown in the table. Both correlation coefficients indicate a strong positive relationship, and the asterisk (*) indicates that the probability of these correlation coefficients occurring by chance alone is less than 0.01 percent; therefore, these correlation coefficients are statistically significant.

According to the analyses presented above, perceived site quality is positively related to both trusting beliefs in vendors and trusting intentions, and the relationship is statistically significant and very strong. This study therefore firmly supports Hypothesis 5.

Testing Hypothesis 6

H6: The concern of online security negatively affects trusting intentions.

Figure 10: Scatter plot of “Concern of online security” & “Trusting intentions”



As shown in Figure 10, the values for "Trusting Intentions" decline as the values for "Concern of online security" grow, implying that the points begin high on the left and move lower towards the right. Therefore, the two variables are positively related. However, in this scenario, it is not straightforward to infer the strength of the link from the proximity of the spots. Spearman's rank correlation coefficient (ρ) and Kendall's rank correlation coefficient (τ) are used to evaluate the strength of the association between the two variables.

Table 10: Correlation between concern of online security and trusting intentions

			Concern of Online Security	Trusting Intentions
Kendall's tau_b	Concern of Online Security	Value	1.000	-.792**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Intentions	Value	-.792**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
Spearman's rho	Concern of Online Security	Value	1.000	-.875**
		Sig.(2-tailed)	.	.000
		N	31	31
	Trusting Intentions	Value	-.875**	1.000
		Sig.(2-tailed)	.000	.
		N	31	31
**Correlation is significant at the 0.01 level (2-tailed)				

The table displays a -0.875 Spearman's rank correlation coefficient and a -0.792 Kendall's rank correlation coefficient. Because the possibility of both correlation coefficients occurring by chance alone is less than 0.01%, we can confidently say that they are statistically significant and that both correlation coefficients point to a strong negative association. Statistically substantial, strong, and negative correlations between online security worries and trust intentions have been found in the aforementioned analyses. This research provides strong evidence in favour of Hypothesis 6.

5. Discussions on Research Findings

The authors tested the six hypotheses developed in the literature review chapter. All statistics and diagrams generated by PASW Statistics 18.0 from the analysis of the sample data support the hypotheses. The disposition to trust is the general propensity to have faith in humanity and to assume a trusting attitude towards others. Because consumers are unfamiliar with internet vendors and the online purchasing environment, a predisposition to trust is a crucial antecedent to the formation of trusting beliefs in the early phases of E-commerce.

The results of the data analysis indicate that the greater a person's propensity for trust, the simpler it is for them to develop trusting beliefs regarding internet vendors and the internet. Institution-based trust in the context of e-commerce refers to people's perceptions of the internet environment. A consumer who believes the Internet environment is appropriate, well-ordered, and conducive to conducting personal business is more likely to develop trusting beliefs and indulge in e-business. E-commerce is a new concept for conducting business using new technologies, which is revolutionising the traditional business model. The results of a data analysis indicate that consumers who are more confident or optimistic about the adoption of new websites, ideas, or technologies are more likely to develop trusting beliefs, even if they are unfamiliar with internet vendors and the process of making online purchases.

Analysis of the data shows that the hypothesis that "general Web experience is positively related to institution-based trust" is correct. This is because having a positive Web experience gives the impression that using the Internet is both commonplace and secure, boosting the confidence of the majority of users. Quality is the driving force behind any successful firm, and the same is true of online commerce. If customers have a good impression of the website, they will think highly of the vendor and be more likely to do business with them. When

conducting business online, privacy and the protection of personal information are paramount. Customers who worry too much about the safety of their personal information, the trustworthiness of online retailers, or both are unlikely to shop there.

6. Research Implication

Information from this study can help online retailers succeed in the realm of electronic commerce. Consumers who have faith in humanity and who feel that giving people credit and trusting them would bring improved results, regardless of whether this trust is justified, make up the backbone of the e-commerce market. Customers need to feel safe making purchases online before they embrace e-commerce. A successful online firm has well-integrated systems, networks, procurement, delivery, and customer support across the board. The website cannot have set hours of operation and must be available around the clock. Secondly, the Web vendor must guarantee that customers can quickly and easily visit the website, as this is one of the key draws for users. In addition, the corporation should follow through on its promises to patrons if it wants to earn their trust. If a customer places an online order and the company says it will arrive within 48 hours, then it should arrive within 48 hours with the correct items. In addition, customers can reach out to customer service by phone or email if they run into trouble; either way, they should receive a reply within an acceptable time frame.

7. Limitations & Future Agenda

The sample size of this study is 31. Such small sample makes that generalization is quite limited. This study is cross-sectional. However, both cross-sectional study and longitudinal study have their own limitation. In this study, people's attitudes to humanity, web vendors, and internet might change from time to time.

One of reason for low response rate in this study might be asking the sensitive question, such as "age". In order to obtain a high response rate, it would be better to make an ordinal or sequence question. As mentioned previously, both cross-sectional study and longitudinal study have their own advantage and limitation. Therefore, choose the one which is suitable for the research. If the researchers could afford the cost and have sufficient time for doing research, longitudinal would be the better one, or else cross-sectional would be more suitable than longitudinal.

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