

# Conceptual Model for Study of the Effect of Information Quality and Third Party Seals Toward Customers' Trust in B2C E-Commerce Website

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## ABSTRACT

Website is a company representative in e-commerce, while customer's trust is an essential factor that determines successful transaction in e-commerce. Hence, it is important to develop customer's trust toward company's website. Among strategies to capture customer's trust toward website is through information quality and third party seals. There are many studies have been conducted in various aspects of trust and on how to induce customers trust. Even though there are many studies in trust, however, there are still contradicting results among the studies. Thus this study is conducted because of the need for better understanding on how these two factors affect the content design; information quality and third party seals, could be the effect towards customers' trust. With this understanding, it can be applicable as additional finding to the existing website design guideline. With the aim to investigate the effect of information quality and third party seal's position toward customer's trust, thus objective of this study is to propose a conceptual model which will include these components. This study begins with developing an understanding on the concept by reviewing literature and related models, and then identifying the variables and lastly proposing the conceptual model. The proposed model consists of three main components; information quality, third party seal and trust. Based on the analysis of related models, this study has categorized information quality into four components; information accuracy, information relevancy, understandability of information and access to information. These four sub-components are expected to affect trust. Whereas, for the third party seals, the components involved in this part are position, noticeability and customer's knowledge on the seal, which is expected to give effect toward customer's trust. The proposed model resulted from this study hence serves as a foundation for investigating the effect of information quality and third party seal's position towards customer's trust.

**Keywords:** Trust, Information quality, Third party seals, Information accuracy, Information relevancy, Understandability of information, Access to information, Conceptual model

## 1. Introduction

In virtual e-commerce environment where physical interaction, actual transaction, product, services and seller-customer are absence (Aris *et al.*, 2011) (Chen and Dhillon, 2003), the website plays an important role as the representative of the owner with the people. The invisible transaction happened in a low interaction level and a high information asymmetry level e-commerce environment (Kimery and McCord, 2006) where only exchange of information occurs could raise the concern on privacy and security of customers', hence it affects the customers' trust toward e-commerce (Ho and Oh, 2009). Customers' trust is an important determiner in e-commerce (Karimov *et al.*, 2011), deciding factor whether the transaction will occur or not because it involved risk (Reichheld and Phil, 2000) and customers has no direct control over the action of company (Jarvenpaa *et al.*, 1999). Customers are reluctant to share of their information because of the privacy and security issues (Hu, 2010). Alshammari

& Mohd addressed that 71.8% of internet users never perform online purchase and 82.8% of these internet users do not have intention to become online customer due to initial trust issue (Alshammari and Mohd, 2012). This is a proof on the importance of customers' trust in e-commerce transaction.

Since online transaction involved no face to face interaction and involved intangible entities (Chen and Dhillon, 2003; Aris *et al.*, 2011), there are always questions toward the validity of the company, products, services or the transaction process (Chen and Dhillon, 2003; Karimov *et al.*, 2011). Customers usually have little information for all of these, so they have no other choice but to rely on the company website to acquire the information they needed (Metzger, 2006). This situation refers to information asymmetry, an imbalance situation where the customers know less than the company and this is especially true on first time they viewed the website. In this case, company has advantages on customers since the company has more information than the customers and this situation become a risk to customers (Karimov *et al.*, 2011). Metzger explained that customers usually are concerned about the online transaction mainly because of information asymmetry (Chang *et al.*, 2012). The information provided in the website should be able to cater the customers' need and the information in the website should be ensured high in term of quality so that the asymmetry of information could be reduced. Trust can be the approach to gap down this problem and initiate the relationship between the customers and the company (Pavlou, 2004).

On the other hand, another solution to gap down the information asymmetry is through the display of third party seals (Kaihong and Mingxia, 2007) and as a signal to the customers that they can be trusted (Kimery and McCord, 2006). It is an image or icon on the website that is displayed to customers that the website is assessed by third parties and have fulfilled their requirements. This is an alternative that the company employed in order to show to customers that they can be trusted (Kimery and McCord, 2006).

Overall in the big picture; The website is a source of information to customers. The information quality provided in the website could contribute in developing trust in customers and the third party seals which also give effect on customers' trust as both are antecedents to trust (Aris *et al.*, 2012). The third party seals serve as "trusted signal" is able to bridge down the gap of information asymmetry and the information quality is also able to tone down the information asymmetry by providing the website with sufficient information quality. This connection arise question that serve as basis to this study; Do information quality alone is enough for the customer to trust? Or the third party seal alone is enough? Or is it better to employ both in order to have a significant effect for the customer to trust?

According to Aris *et al.*, both information quality and third party seal are antecedent of trust (Aris *et al.*, 2012). Information quality is part of the website quality and third party seal is part of the web assurance. Ongoing research in these areas shows variety of result. Karimov, Brengman & Van Hove reported that only a tentative conclusion can be made regarding information quality as there is lacking of empirical evidence and there are results that are contradicting for the effect of information quality toward initial trust (Karimov *et al.*, 2011). An inconsistent finding for external e-assurance also is reported by the same researchers (Karimov *et al.*, 2011) and a contradict finding on the effect of web assurance seals towards online trust is through a study conducted by Hu (2010) in which they find that web assurance has a significant effect on online trust, while other researchers (Bahmanziari *et al.*, 2009) do not find so (Karimov *et al.*, 2011).

The aim of this study is to investigate the effect of information quality and third party seal's position toward customer's trust thus we need to have a conceptual model that will assist us to study these effects. In line with this, the objective of this research paper is to propose a conceptual model which will include these components. This study is conducted based on the following steps: 1) Developing an understanding on the concept by reviewing the literature and related models 2) Identifying the variables 3) Proposing the conceptual model.

The first stage in this research starts with identifying the research problem. This research is focused on the website design for B2C e-commerce website. After deciding on the area of research, a quick review on the literature is done to identify problem to be studied. This review is done by searching the latest papers related to the main concepts. Those papers that have been published ranging from 2009 until 2013 are reviewed. From this quick survey, the problem is identified, and literature review is expanded to related concepts.

After identifying the research problem, literature review on related topics is done. The main purpose for this stage is to build understanding regarding the concepts involved in this research. The related topics are e-commerce, B2C e-commerce, trust, website design, website information quality and third party seals. The literature is searched in databases like Scopus, ISIWeb, ScienceDirect, Emeright. After developing an understanding on the related concept, the review is then focused on the related research

models. This step is conducted by reviewing existing works and analyzing the components of related models. The purpose of this review is to identify the variables and components for the proposed model.

Following the literature review, several conceptual frameworks are reviewed in order to determine a suitable model for the research. Next, the variables for the proposed model need to be identified and only then the research model is proposed.

This paper is organized into three sections: 1) Introduction 2) Concepts on e-commerce, trust, information quality and third party seal 3) Research framework and proposed model.

## 2. Review on Concepts

### A. E-Commerce

Among the reason for the emerging e-commerce trend are convenient and time saving (Kim and Kim, 2011). E-commerce is processes of selling and buying on the internet. Chen & Dhillon define e-commerce as “the sale of products and services over the Internet” (Chen and Dhillon, 2003). According to other researchers, they defined e-commerce as “a process of buying, selling, transferring, or exchanging products, service, and/or information via computer network, including the Internet” (Bakar, 2010), (Turban *et al.*, 2009). From these definitions, it is understood that e-commerce is referring to activities that involved transaction or exchange of services, product or information by using the internet as medium.

There are several categories of e-commerce, for example like Business to Business (B2B), Business to Customer (B2C), Customer to Business (C2B), Customer to Customer (C2C) (Hasan and Abuelrub, 2011) and Mobile e-commerce. As the name suggested, B2B e-commerce deals with transaction between organizations or companies whereas B2C e-commerce involved the transaction between companies and customers. As for C2C e-commerce, it refers to the transaction that happened between customers. This study's setting is focusing on the B2C e-commerce.

In e-commerce, every transaction is done virtually. There is no face-to-face interaction between customers and companies, and involved intangible entities (Aris *et al.*, 2011), (Chen and Dhillon, 2003) and make customers to ponder the validity of companies and their products or services (Chen and Dhillon, 2003). For example, it is difficult for customers to check product quality and authenticity of company (Karimov *et al.*, 2011). In the absence of this interaction, this will lead customers to have a lack of trust in using the e-commerce (Ho and Oh, 2009). In addition to the absence of face-to-face interaction, the unpredicted nature of the computer system and the internet often made customers to become concerned and insecure. This is one of the reasons on why trust plays an important role in e-commerce transaction (Ho and Oh, 2009).

Because of this nature, e-commerce is described to have high level of information symmetry and low level of personal interaction (Kimery and McCord, 2006). Information asymmetry is a situation when one party has less information compared to another party. In this case, company has advantages on customers since the company has more information than the customers and this situation become a risk to customers (Karimov *et al.*, 2011).

One way which is implemented by a company in order to signal to the customers that they can be trusted is by using external e-assurance or third party seal (Kimery and McCord, 2006). Third party seals also are implemented to decrease information asymmetry (Kaihong and Mingxia, 2007). Other aspect that the company should emphasize is on the information quality, since customers relied on the information provided by the company. Information quality will help the company to deliver all information to customers, hence reduce the information asymmetry.

Chang, Fang & Tseng explained that customers usually are concerned about the online transaction mainly because of information asymmetry (Chang *et al.*, 2012). Trust can be the approach to gap down this problem and initiate the relationship between the customers and the company (Pavlou, 2004).

### B. Trust

In general, trust is faith or confidence that someone has toward something. Trust is essential in establishing a relationship between two parties. With no trust or lack of trust, this relationship is impossible to occur. For one party to trust another party, the other party needs to show they are worth to be trusted. When the party can see the proof of the trustworthiness from the other party, their trust will be developed. The concept of trust in e-commerce is explained by Aris *et al.* involved trustor, trustee and trust as the relationship that connected both trustor and trustee (Aris *et al.*, 2011).

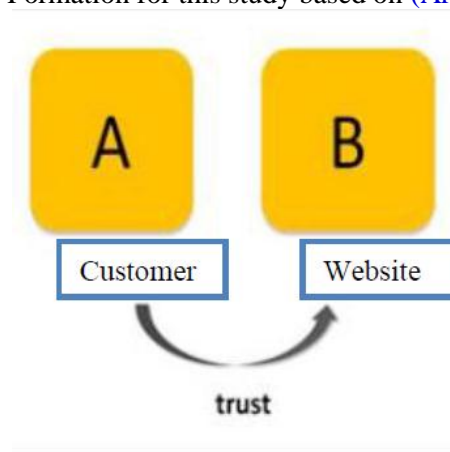
To explain the trust formation, first the term trust will be defined. Based on Mayer, Davis & Schoorman, trust is “the willingness of a party to be vulnerable to the action of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of ability to

monitor or control that other party” (Mayer *et al.*, 1995). According to Liao, Liu & Chen, trust is defined as “one believes in, and is willing to depend on, another party” (Liao *et al.*, 2011) (McKnight *et al.*, 2002). Another definition by Gafen is, “the confidence a person has in his or her favorable expectations of what other people will do” (Gafen, 2000). Chen & Dhillon define trust as “the reliability and dependability of the vendor offering products or services” (Chen and Dhillon, 2003). This variety of trust definition exists because of the nature of trust that is context-specific.

Based on Aris *et al.* and trust definition, trustor is the one who has the willingness to be vulnerable, or the one who believed in (Aris *et al.*, 2011). Trustee is another party who trustor put the faith in and having control on trustor’s possessions. Therefore, in this research’s context, Party A is customers while Party B is the company (to be specific, company’s website), and supported by example by Aris *et al.*, trustor is “the individual that browsed the e-commerce website, searching for information and/or having intention to purchase goods from the e-commerce website”. While trustee refers to “the trusted party or trusted object of the trustor which relate to the e-commerce web site”(Aris *et al.*, 2011). (Refer Figure 1)

Trust also is differentiated based on the time of the trust to be formed. It could be initial trust, where it happened during the first time the customers encounter the website and have little information about the company and the website. Or it could be repeated-trust, happened when the customers already have experience with the customers. This difference is important because trust is context-specific and also the antecedent of trust could be different. In this study, initial trust is used as the primary indicator for trust.

**Fig-1.** Trust Formation for this study based on (Aris *et al.*, 2011)



Trust is important especially to transaction that involved risk like online transaction in e-commerce (Reichheld and Phil, 2000) and when situation involving the trustor has no direct control over the action of trustee (Jarvenpaa *et al.*, 1999). When referring to conducting online transaction, customers usually will be cautious regarding their personal information. This exchange of information is a must, yet sometime customers are reluctant to share their information because of the privacy and security issues [8]. These situation lead customers choose not to do the transaction in the end. This situation shows that initial trust that customers have influence as initiator to customers purchase intention and repeated visit to the website. Online trust is also one indicator of success and failure in online business (Karimov *et al.*, 2011). Chang, Fang & Tseng stated that the major reason that customers conducting the online transaction is due to trust (Chang *et al.*, 2012).

So, in order to develop trust in customers, the question to answer is what can help in building customers trust, for example; what is the antecedent to initial trust. Aris *et al.* classified the antecedent of initial trust into three groups; website quality, assurance and reputation. However, this study only focuses on website quality and assurance to eliminate the reputation or branding influence so that it would applicable to both reputable and non-reputable website. Website quality consists of information quality and interactivity whereas assurances consist of external e-assurance (EPeA) and internal e-assurance (IPeA) (Aris *et al.*, 2012). The next section will discussed about information quality.

### C. Information Quality

In general, the term quality means “the standard of something as measured against other things of similar kind” or “the degree of excellence of something” (Oxford, 2013). In context of information, by referring to this definition, information quality means that the standard of information or the degree of excellence of information. And so, information quality in website is the standard of information or the

degree of excellence of information provided by a website. To precisely define this term in the context of research, definition by other researchers is viewed.

Firstly according to Kim & Niehm, quality is defined as “an attribute of a product/service, which indicates how well it meets consumers' needs” (Kim and Niehm, 2009) (Nagel and Cilliers, 1990). Whereas Lee & Kozar described information quality as “the quality of the information that the system produces and delivers” (Lee and Kozar, 2006). Another researcher defines information quality as “a measure of value perceived by customers of the output produced by a website” (Lin, 2007).

Cao, Zhang & Seydel stated that information quality represents the e-commerce content issue by two constructs, information accuracy and information relevance (Cao *et al.*, 2005). Information accuracy means that information on the website should be accurate, informative and updated. Updated information cater in two ways; first the existing information is updated to latest one and second, new content is updated. Information relevance is defined as “to the extent to which the information on the website is related to the information needs of the customers”. Information in website should tend to customers' need, as there are varying group of customers. Website requires on-going maintenance and need to be monitored frequently. A website with less relevant content will influence customers' need hence reduce their trust towards the e-vendor (Cao *et al.*, 2005).

Information quality consists of information relevance, currency, and understandability (Lee and Kozar, 2006). Information relevance is the completeness, depth and scope of relevance of information; information currency refers to information updates; understandability involved the “ease of understanding and clearness of the information” (Lee and Kozar, 2006). Lin (2007) listed the attributes for informativeness such as information timeliness, accuracy, usefulness and completeness.

Bakar (2010) studied on the information elements of website that could promotes trust, summarized the attributes into seven; 1) easy information access, 2) search facilities, 3) useful information, 4) current information, 5) clear information flow, 6) vendor information and 7) accurate product and service information.

Hence, from the review on the information quality and based on the constructs and attributes that had been stated, this research classifies the information quality into four components; 1) information accuracy, 2) information relevance, 3) understandability of information and 4) access to information. The attributes are classified into these four categories based on attributes from studies by other researchers (Bakar, 2010) (Cao *et al.*, 2005) (Lee and Kozar, 2006) (Lin, 2007). Table 1 shows the classification of information quality.

First category is information accuracy. The attributes of information accuracy are accurate, informative and updated. For information relevancy, the attributes are relevant, useful and complete. The attributes for understandability of information are easy to read, easy to understand, clear in meaning and clear information flow. While for access to information, the attributes are easy information access and included search facilities. The next section will discussion on the third party seals.

**Table-1.** Classification of Information Quality

Information quality	Cao <i>et al.</i> (2005)	Lee and Kozar (2006)	Lin (2007)	Bakar (2010)
Information accuracy	Accurate Informative Updated	Updated	Accuracy Timeliness	Accurate Current
Information relevance	Fulfill customers need	Complete- Ness Relevant	Complete-ness Useful-ness	Useful
Understand ability of information		Ease of understand- ing Clearness of the information		Clear information flow
Access to information				Easy information access Search facilities

#### D. E-Assurance (Third Party Seal)

There are two types of e-assurance; external e-assurance (EPeA) and internal e-assurance (IPeA) (Bahmanziari *et al.*, 2009). IPeA is assurance that is provided by the company itself. This assurance usually focuses on company policies and disclosure (Bahmanziari *et al.*, 2009). Examples of IPeA are privacy policy, guarantees, free shipping, return policies, contact information and FAQ (frequent-asked-question) features (Bahmanziari *et al.*, 2009).

EPeA is an externally provided assurance, usually by third-party provider. EPeA can also be referred as third party seals. There are various term that have been used to refer to external assurance. For example, (Ho and Oh, 2009) use term e-security seals and they also listed the terms used to refer to external assurance; third-party assurance, web seals, web assurance, trust relievers, third party organization endorsement, third-party privacy or security seals.

Third party seals, as the name suggested, are provided by external provider or the third party provider. There is certain process that will be conducted before one company can actually obtained the seals. The seal can only be obtained by the vendor after their website and activities are evaluated. The evaluation by the seals provided based on certain criteria and conditions. The companies need to meet certain requirement by the provider to obtain the seals (Ho and Oh, 2009). The seal is created with specific standard and principles as a sign or symbol to customers, so that customers able to know which company and website are trustworthy. Simply put, the display of these seals can help customers to differentiate the trusted and non-trusted website (Kimery and McCord, 2006). Third party seals are symbolized as an icon and this symbol or icon represents credibility assurance to increase customers' trust and confident (Ho and Oh, 2009). As explained in Stewart and Harris-Stowe (2012) and Ho and Oh (2009), for customers to see the provided policies or assurance, customers need to click on the seal, and then it will redirect to the seal provider's website. Customers can see the detail about the seals at the website, such as the regulation, the policies, use of the seal and expiration date of the seal.

Kim *et al.* (2008) classified the seals based on the seal providers, either certified public accountant (CPA) or non-certified public accountant (non-CPA). The seals that are created by CPA are WebTrust, SysTrust, and BetterWeb. The examples of seal provided by non-CPA are TRUSTe, BBBOnline Privacy, BBBOnline Reliability, Good Housekeeping, VeriSign, and GeoTrust. There are three major functions of third party seal namely transaction security, consumer privacy, or transaction-integrity (Hu, 2010). Third party seal could be multi-function seals. Other classification of third party seal is based on underlying content of seal, which are privacy, process and technology assurance (Kimery and McCord, 2002). It ensures that the company will complied on privacy, process and technology aspects toward customers. Other than the common type of the seal, there are also seals that use customers rating who has done purchasing such as Gomez.com and Bizrate.com (Kim *et al.*, 2004). Third party seals are summarized into security, privacy and business integrity. Security assurances ensure that all transactions that happened are secure and reliable. Examples of security assurance are Verisign, Thawte, WebTrust and BBBOnline Reliability. Verisign certified the companies' authenticity through digital ID services. Thawte secure the online transmission by providing Secure Socket Layer (SSL) and code signing certificates. For privacy assurances, the privacy policies provided by the company to customers are evaluated. These policies must meet the requirement of the seals provider's services. Examples for privacy seal are TRUSTe, BBB, and WebTrust (Kim *et al.*, 2004).

There are many aspects of the seals that can be studied. Some researchers study on the seal itself, for example on the assurance that the seals convey or the seal provider. Some researches focused on the real web assurances that exist in industry. Besides that, researchers also have conducted studies from the perspective of the company, like company type or company location. Other than that, there are many researches that studied on the customers' perspective, for examples, customers' knowledge of the seal (Moore, 2005) or on noticeability of the seal. Other than that, there are studies that do comparison between IPeA and EPeA. Table 2 shows the summary of previous studies and aspects of seal that they studied.

**Table-2.** Previous Studies on Third Party Seals

Source/ Year	Aspect of seals tested	Seal Effect
Stewart and Harris-Stowe (2012)	1. Presence-absence 2. Noticeability	1. Presence of third party seal has positive partial effect 2. Noticeability has positive partial effect
Chang <i>et al.</i> (2012)	1. Commercial seal – WebTrust 2. Seal provider	1. WebTrust has significant effect 2. Seals provided by large firm has greater impact compare to small firm
Kim and Kim (2011)	1. Presence-absence	1. Presence of seal increase trusting belief and trusting intention
Fisher and Chu (2009)	1. Company location 2. Web assurance seal	1. Company location have significant role toward customers trust.

Source/ Year	Aspect of seals tested	Seal Effect
	(WebTrust)	2. Web assurance seals provide “little comfort” to customers.
Bahmanziari <i>et al.</i> (2009)	1. EPeA 2. Additional effect of EPeA to IPeA	1. EPeA do not affect customers trust. 2. Presence of EPeA in addition to IPeA did not increase customers trust.
Peterson (2007)	1. IPeA 2. EpeA	1. EpeA do not increase trust and purchase intention surpass as IpeA does 2. No compensatory effect with the presence of EpeA when IpeA is absent.
Kaplan and Nieschwietz (2003)	1. WebTrust (Present vs Absent) 2. Company Type (Unknown vs. Known)	1. Present of WebTrust seal strengthen assurance belief. 2. Company type is not significant.

From Table 2, it shows that there are several aspects that had been studied in previous research to test the effect of the seals toward customers trust. From the finding, it shows that there is mixed finding on the effect of the seals. It is consistent with finding by Karimov *et al.* (2011) who said that there is inconsistency and contradict finding on seals' effect. Since there are different approach and aspects of seal that been studied, these reason possibly lead to vary in seal's effect.

Kim and Kim (2011) studied on posting the seals on the order page and test it on customers trust. They find out that posting the seal on the order page of unfamiliar website affect initial trust. However, the study does not test on posting the seal in various locations and suggested that could be area to research for.

Location also can be referred as position (Oxford, 2013). (Ho and Oh, 2009) have researched on the third party seals specifically in Taiwan and obtained the finding regarding the seals position as follows: 1) left 2) bottom 3) middle 4) right and 5) top. The researchers also highlighted the fact that many website do not follow standardize guideline when placing seals at their website. One suggestion for this problem is to follow F-shaped pattern for reading web content (Nielsen, 2006). It is advantageous to know how people read website content because it will help in arranging the website content. Usually the way people read website content is different than normal reading. Nielsen's F-Shaped pattern explains how people read or skimming in the website based on eye tracking. This viewing behavior affected the noticeability of people toward the web content (Djamasbi *et al.*, 2012). Based on guidelines from Nielsen (2006), first, people will read in horizontal movement at the upper part and content area. Then, people moves down a bit and read across in horizontal movement again. Lastly, people will scan the left part in vertical movement. All these movement formed the shape of 'F'. Figure 2 illustrates the F-shaped pattern for website reading.

Fig-2. F-Shaped Pattern for Web Reading (Nielsen, 2006)



Stewart and Harris-Stowe (2012) investigated the present-absent effect of web assurance seals toward customer intention to purchase. The study also testing on the noticeability of the web assurance seals to

customer, as the noticeability is related to present-absent effect. Even though the study use customer intention to purchase as measurement, the result is still relevant to this research because the researchers are also investigating on the web assurance seals. The only difference is the use of intention to purchase as their dependent variable.

The study finds out that “assurance seal presence” and “seal noticeability” are insignificant toward customer intention to purchase. As an explanation, this result may be led by few factors such as; the experiment in the study is using a newly created web assurance seals, rather than an existing and published one. Other than that, the result is biased by the customer knowledge and attention (for noticeability) while responding to the questions. These are two elements that need to be considered when testing the effect of seals. [Stewart and Harris-Stowe \(2012\)](#) stated that, based from previous studies, many customers still have incomplete knowledge and understanding about the seals, and its importance for them. There are also cases that customer do not even take note about the seals, which means that customer do not recognize or pay attention about the seals. Due to this reason, it is important to take note on the knowledge of customer on third party seals as it has influence on customer noticeability.

### **3. Review on Model**

This section will explained two related model that has been reviewed to identify the variable for the proposed model.

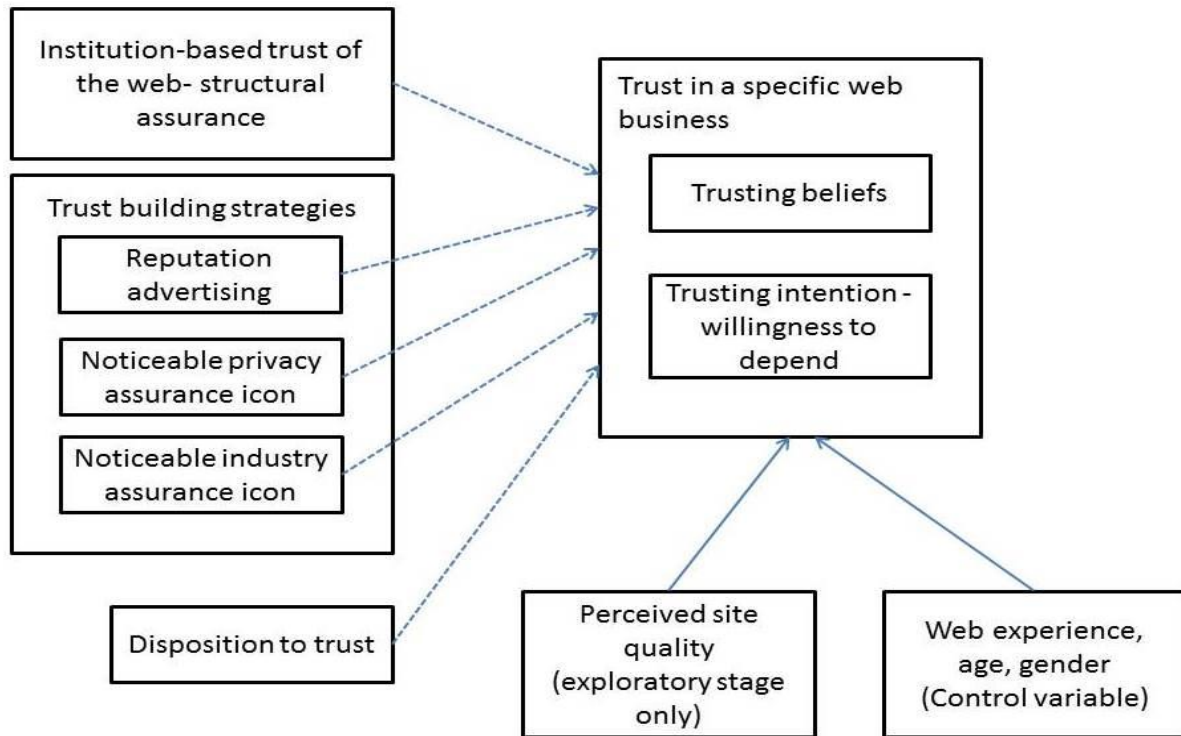
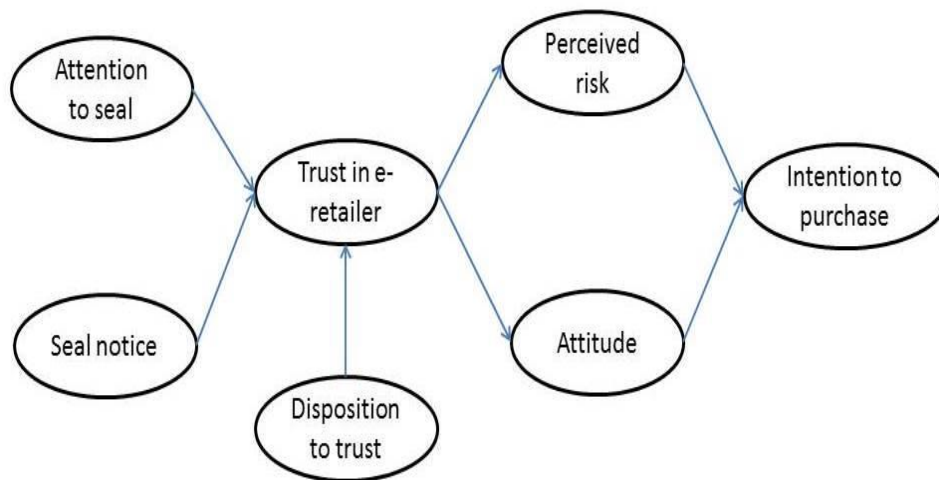
#### **A. Two-Stage Model of Initial Trust in Web Business**

[McKnight \*et al.\* \(2004\)](#) proposed a model that indicates the influence differs based on stage. For this model, there are two stages, introductory and exploratory. In Figure 3, introductory stage is represented as dotted lines. Introductory stage is a stage when customers are not familiar with the web business. At this stage, customers’ trust usually influence by institution-based trust, dispositional trust and evaluation on relevant information. During exploratory stage, customers already acquire some familiarity. Hence, trust is influence by perceived site quality. The control variables appear in both stages. Figure 3 shows the research model used in this study.

The following is the explanation on the model by McKnight, Kacmar & Choudhury (2004). Institution-based trust is customers’ belief that the structural safety and setting of the website. The structural is referring to contracts, guarantees and legal protections which are believed to provide a safe environment then increase customers’ trust. Reputation advertising is the antecedent to trust and this study differentiate reputation advertising from reputation. Reputation refers to attributes of another person based on secondhand information, is a common antecedent of trust in e-commerce. This study defined reputation advertising as information deliverance to the potential customers. Reputation advertising is used to build reputation by providing the customers with the positive attribute and intention of the company. This strategy could increase the customers’ trust. Another common strategy that is employed in website by the company is third party seal. Displaying third party seals in the website could transmit the signal to customer that the website is good because it is certified by third party. Hence it could influence customers’ trust. While displaying a seal considered a good strategy, what matter most is for customer to notice it. Noticeability of the seals is proved to have effective influence on building customers’ positive expectation and purchasing behavior. Another trust building strategy is through seal provided by industrial reputable organization. This type of seal is suitable for website that offers professional advice and information. Trust is transferred from the provider’s site to the endorsed website. The seal also need to be noticed in order to give effect to trust. All these factors involved in the introductory stage.

#### **B. Model of the Relationship between Third-Party Assurance Seals, Trust, and Online Purchasing Intentions**

[Kimery and McCord \(2002\)](#) proposed a model that show the relation between three variables; third party seals, trust and online purchase intention. There are seven constructs in this model. Seal notice, attention to seal and disposition to trust are antecedents to trust which included in the left half of the model, whereas the right half of the model is the relationship between trust and intention to purchase. Therefore, this research focuses more on the left half on the model where trust and antecedent of trust is concerned. Figure 4 and Table 3 described and summarized the research model used by this study.

**Fig-3.** Two Stage Model of Initial Trust in Web Business (McKnight *et al.*, 2004)**Fig-4.** Model of the Relationship between Third-Party Assurance Seals, Trust, and Online Purchasing (Kimery and McCord, 2002)**Table-3.** Summary of Model Constructs (Kimery and McCord, 2002)

Variable	Factors	Explanation
Independent	Seal Notice	Whether an individual did or did not notice an assurance seal
	Attention to Seal	Intensity of an individual's attention to an assurance seal
	Disposition to Trust	Extent to which an individual is willing to depend on others across a broad spectrum of situations
Dependent	Trust	Consumer's willingness to accept vulnerability in an online transaction based on positive expectations of the future behaviour of an e-retailer

### C. Analysis on Information Quality and Third Party Seal

Information quality and third party seals are antecedents to trust. Therefore, these two factors are expected to have influence in developing customers' trust. Based on the studies from (Cao *et al.*, 2005) (Lee and Kozar, 2006) (Lin, 2007) (Bakar, 2010), the researchers have categorized the information quality into four components; information accuracy, information relevancy, understandability of information and access to information. These four categories of information quality are expected to influence customers to trust.

Third party seal's position is associated with noticeability. Therefore, models with noticeability constructs are focused more such as Two-stage Model of Initial Trust by (McKnight *et al.*, 2004) and Model of the Relationship between Third-Party Assurance Seals, Trust, and Online Purchasing Intentions (Kimery and McCord, 2002). It is expected that the position of the seal will influence the customers' noticeability, and by noticing the seals, customer will trust. Another consideration in this research is customers' knowledge on the third party seal. All these components in information quality and third party seals are to be used in developing the proposed model in next section.

## 4. Research Framework and Proposed Model

### A. Research Framework

This study use E-Commerce Customer Relationships Trust Constructs as the research framework. This framework relates constructs of trust with customers' action. It defines the conceptual and operational level of trust constructs. The trusts construct are related to the existing Internet relationship constructs. The constructs in this framework are disposition to trust, institution based trust, trusting beliefs, trusting intentions and web vendor intervention. Each of construct has these sub constructs. Table 4 shows the construct and sub construct in this framework. The explanation in this section is based on McKnight *et al.* (2002).

**Table-4.** Constructs in Framework

Constructs	Sub construct
Disposition to trust	Faith in humanity Trusting stance
Institution based trust	Structural assurance of the web Situational of normality of the web
Trusting beliefs	Competence belief Benevolence belief Integrity belief Predictability belief
Trusting intentions	Willingness to depend Subjective probability of depending
Web vendor intervention	Privacy policy Third party seals Interacting with customers Reputation building Link to other site Guarantees
Trust related internet behaviour	Purchasing Cooperating Information sharing

Disposition to trust is defined as tendency of person that willingly depend on others in any situation or person. This definition stated that disposition to trust is a kind of trust that people have by willingly depend on others with any reason that they have. Disposition to trust has two sub constructs which are faith in humanity and trusting stance. Faith in humanity is the assumption about people. It means that a person assumed that the other person is, for example, always "competent, benevolent, honest, ethical, and predictable" (McKnight *et al.*, 2002). By having high faith in humanity it shows that the particular person has high trusting belief. People with high faith in humanity have characteristics such as less judgmental towards others and could tolerate with their mistakes. In e-commerce, faith in humanity leads a person to believe that it is people who operate or manage the company.

Trusting stance means personal strategy; McKnight *et al.* (2002) stated that trusting stance means the assumption about other people where one party will achieve better outcomes when dealing with people although they are reliable and well-meaning. Trusting stance is a choice for a person if they want to trust others. People with high trusting stance have high trusting belief. They will trust the company and willing to take risk until they have reason not to trust the company anymore. The difference between trusting stance and faith in humanity is based on their assumption. Faith in humanity is related to the assumption on people's attribute, so it is an antecedent of trusting belief. Trusting stance is a strategy to trust others, so it is related to trusting intention.

Second construct is institution-based trust. Institution-based trust is the belief that there exist favorable conditions that will lead to situational success. The term "favorable conditions" is referring to legal, regulatory, business, and technical environment. Institution-based trust has two sub constructs

which are structural assurance and situational normality of the Web. Structural assurance is the belief that there exist protective structures that will lead to situational success. Protective structure is referring to guarantees, contracts, regulations, promises, legal recourse, processes, or procedures. It means that customers believed that they are protected by the legal and technological safeguard from risk like identity theft or fraud. Customer would be more likely to trust the company (trusting belief) and want to rely on the company (trusting intention) that provided high structural assurance. The structural assurance make the customer feel secure.

Situational normality refers to the belief that the environment of setting is normal and able to lead to situational success. A properly order setting will help this success venture. Customer will have basis to trust the company when they believe the situation in the internet is normal, and theirs and the company's role are appropriate which could led to success. Situational normality influence trusting belief and trusting intention towards the company. Customer with high faith in humanity is supposedly to have high situational normality and structural assurance in the e-commerce since they have positive thought on the setting. This is also applied to customers with high trusting stance. So, disposition to trust influence institutional-based trust.

The third construct is trusting belief. Trusting belief is the belief that the other party has the characteristic that are advantages for trustor. Trusting belief has four sub constructs which are competence belief, benevolence belief, integrity belief and predictability belief. Trusting belief competence is the belief that the other party has capability to fulfill their promises. Putting in context of e-commerce, it means that customers believe that the company will provide appropriate services and products. Trusting belief benevolence is the belief that other party cares about the trustor and have desire to act upon their interest. The company that acts benevolently will not take advantage of their customer. It shows the specific relationship between customers and the company, and not a sign of kindness.

Trusting belief integrity is "one believes that the other party makes good faith agreements, tells the truth, acts ethically, and fulfills promises" (McKnight *et al.*, 2002). This is the belief that the company will fulfill their promises and ethical commitment towards customer. As an example, the company should ensure the quality of products and services, and secure the personal information of customers.

Trusting belief integrity is focusing on the character of the company itself as trustee, not on the relationship of customers and the company. Trusting belief predictability is the belief that action of the other party either bad or good is consistent and predictable in given situation. This definition stated that customers that have high trusting belief predictability able to predict the company's action in certain situation. They believed that, as they predict, the company will do good or bad actions in future. Other than that, they believe that the company possesses either good or bad qualities which will become their consistency. All these four sub constructs is a complement of each other's. Customers with high competence, integrity, benevolence and predictability beliefs toward the company will have the highest willingness to depend on the company. Specific explanation by McKnight *et al.* (2002):

"A vendor consistently (predictability belief) shown to be willing (benevolence belief) and able (competence belief) to serve consumer interests with total honesty (integrity belief) is indeed worthy of trust."

These beliefs are important based on customers concerns and situation. The beliefs could be a separate construct or can be combined depending on situation. For example, when customers only have little knowledge of the company these construct may combine together, such as integrity and benevolence. And the belief will become more discrete as the customer's knowledge on the company increase.

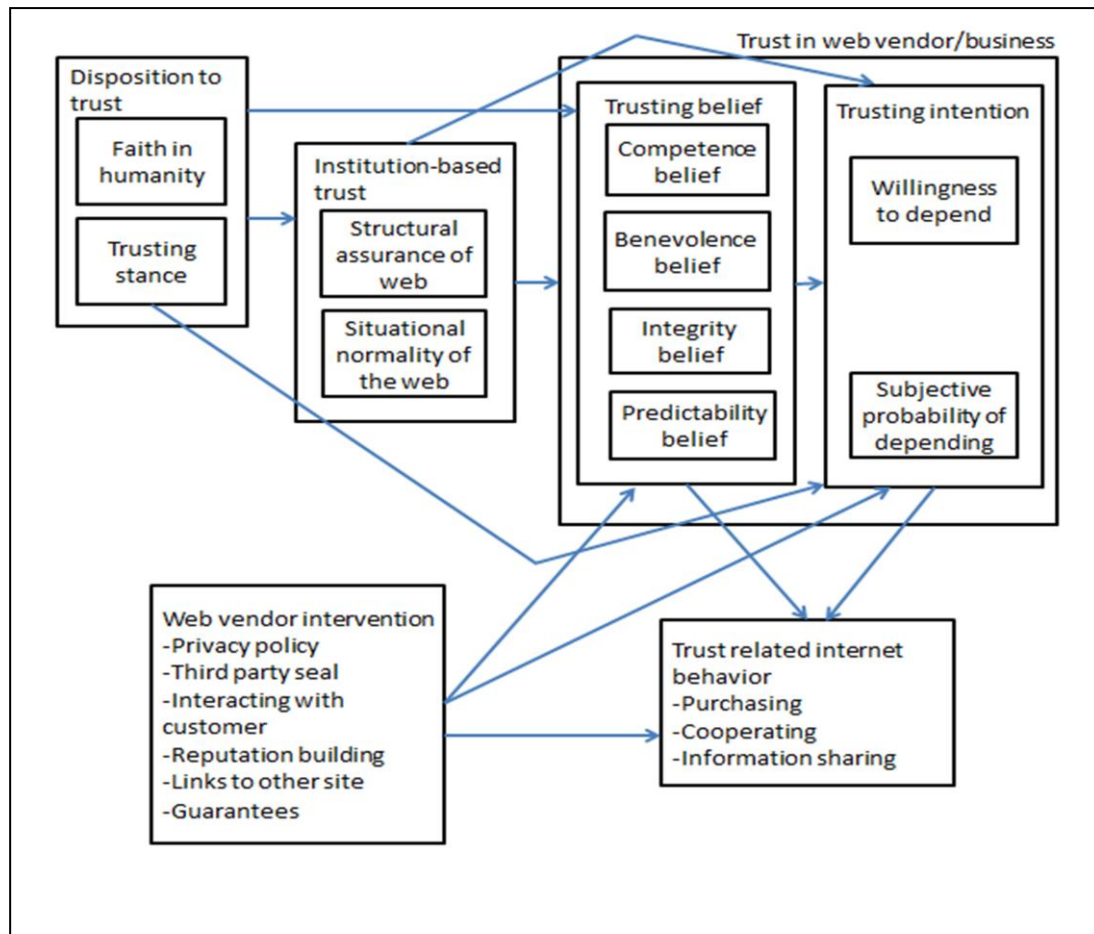
The fourth construct is trusting intention. Trusting intention has two sub constructs, willingness to depend and subjective probability of depending. Willingness to depend is the willingness to be vulnerable and rely on the other party. Willingness to depend means that customers are willingly depending on the company as they decide to do the transaction properly and efficiently. It shows customers' will and want to depend on the company. Subjective probability of depending is the assumption or prediction that the trustor will depend on the other party. This definition is stated to which customer predict that they will depend on the company in future. It shows that customers are committing to depend to the company.

The next construct is trust-related Internet behaviors. This construct is linked with trusting belief and trusting intention. This construct is related with the customers' behavior that shows them willing to purchase, cooperate and share information with the company. This behavior is not considered as trust construct, rather is a post-effect of interpersonal trust construct. Interpersonal trust is customers' trust that forms when customers trust special attributes of the company (Aris *et al.*, 2011).

The last construct is web vendor interventions. This construct refers to approaches that the company employ in the website to provide assurance to customers. Examples of this approach are privacy policies, third-party seals, interacting with customers, reputation building, links to other sites, and guarantees.

Disposition to trust influence institutional-based trust. Disposition to trust has influence toward interpersonal trust when in unfamiliar or new situation. In e-commerce which is new to customers, disposition to trust influence interpersonal trust towards company. Institution based trust is linked towards trusting beliefs and intentions. Institution based trust influence interpersonal trust. If situation is known, institution-based trust influences interpersonal trust more than dispositional to trust. Trusting belief and trusting intention influences customers' behavior, to commit with the company. Web vendor intervention could increase customer s' trust. The effect of these interventions is mediated by trusting belief and trusting intention. Figure 5 shows the framework of E-Commerce Customer Relationships Trust.

**Fig-5.** E-Commerce Customer Relationships Trust Framework (McKnight *et al.*, 2002)



This study uses E-Commerce Customer Relationships Trust framework as a reference. This research focuses only on specific part of the framework, which is related to third party seals and information.

## B. Proposed Model

There are two parts in this proposed model, the first one is on information quality and the second is on third party seals. There are four components in information quality where the components are information accuracy, information relevance, understandability of information and access to information. This categorization is based on (Bakar, 2010) (Cao *et al.*, 2005) (Lee and Kozar, 2006) (Lin, 2007). For the third party seals, the aspect that is focused in this study is position of the seal. The position is associated with noticeability, hence this variable is taken into account in this proposed model. For position of the seal, this study uses F-Shaped pattern guideline for web reading by (Nielsen, 2006). In addition, customers' knowledge on third party seal are also included because this element can influence customer to recognize or notice the seals (Kim and Kim, 2011) and (Stewart and Harris-Stowe, 2012) (Table 5).

**Table-5.** Summary of Variable in Proposed Model

<b>Component</b>		<b>Description</b>
Trust	Initial trust	The willingness to be vulnerable, or believed in, even with no/less information
	Information accuracy	Information in website is accurate, informative, updated for new and existing content
	Information relevance	Information in website is relevant and complete to customers
Information Quality	Understand ability of information	Information in website is easy to read, easily to understand and clear in meaning, the flow information is clear
	Access to information	Information is easily access (for example, search engine is provided or the information is categorized)
Third Party Seals	Position	F-shaped pattern web reading by (Nielsen, 2006)
	Customer's knowledge on seal	The knowledge or information of customer about third party seal
	Noticeability	Awareness and noticeability to locate the position of the seals

Third party seal and information quality are the antecedent of trust. So, information quality and third party seals are expected to influence customers' trust. For information quality, it is categorized into four categories i.e. information accuracy, information relevancy, understandability of information and access to information. This categorization is based on several studies (Bakar, 2010) (Lee and Kozar, 2006) (Cao *et al.*, 2005) (Lin, 2007). For the third party seals, the aspect that is focused in this research is on position of the seal. Due to the position is associated with noticeability, the model that employs noticeability as their variable is reviewed. According to (Kimery and McCord, 2002) and (McKnight *et al.*, 2004) they stated that noticeability of seal influences trust. For position of the seal, this research is applying F-Shaped pattern guideline for web reading (Nielsen, 2006). So it is expected that the position of third party seals will influence the noticeability of the seal. Thus when customers notice the seal, it could influence customers' trust. In addition, customers' knowledge on third party seal could influence customer to recognize or notice the seals (Kim and Kim, 2011) and (Stewart and Harris-Stowe, 2012). Customers maybe could notice the seal, but since they do not know or does not have knowledge about the seal, they will ignore it. Therefore, for this reason this research takes the approach to control the customers' knowledge of the seal, in order to effectively test on the seal's position toward customers noticeability (Table 6).

**Table-6.** Variable for Proposed Model

<b>Variable</b>	<b>Justification</b>
Information quality	Information quality is categorized into information accuracy, information relevancy, understandability of information and access to information (Cao <i>et al.</i> , 2005) (Lee and Kozar, 2006) (Lin, 2007) (Bakar, 2010).
Third party seal position	Third party seals position followed the F-Shaped Web Reading Pattern (Nielsen, 2006).
Noticeability	Noticeability is added as it associated with the position. Noticeability can influence customer trust. (Kimery and McCord, 2002) (McKnight <i>et al.</i> , 2004).
Knowledge on third party seals	The third party seals will not be noticeable or recognize if the customers do not know about the third party seals (Kim and Kim, 2011) (Stewart and Harris-Stowe, 2012). This element is associated with noticeability.
Trust	The customer belief that the company is honest, competence and benevolent (McKnight <i>et al.</i> , 2004)

There are two parts in this proposed model, the first one is on information quality and the second is on third party seals. As mentioned before, there are four components in information quality where the components are information accuracy, information relevance, understandability of information and access to information. This categorization is done based on the literature review that has been conducted (Section 2(C)). The description for each component is as in Table 7:

**Table-7. Information Quality**

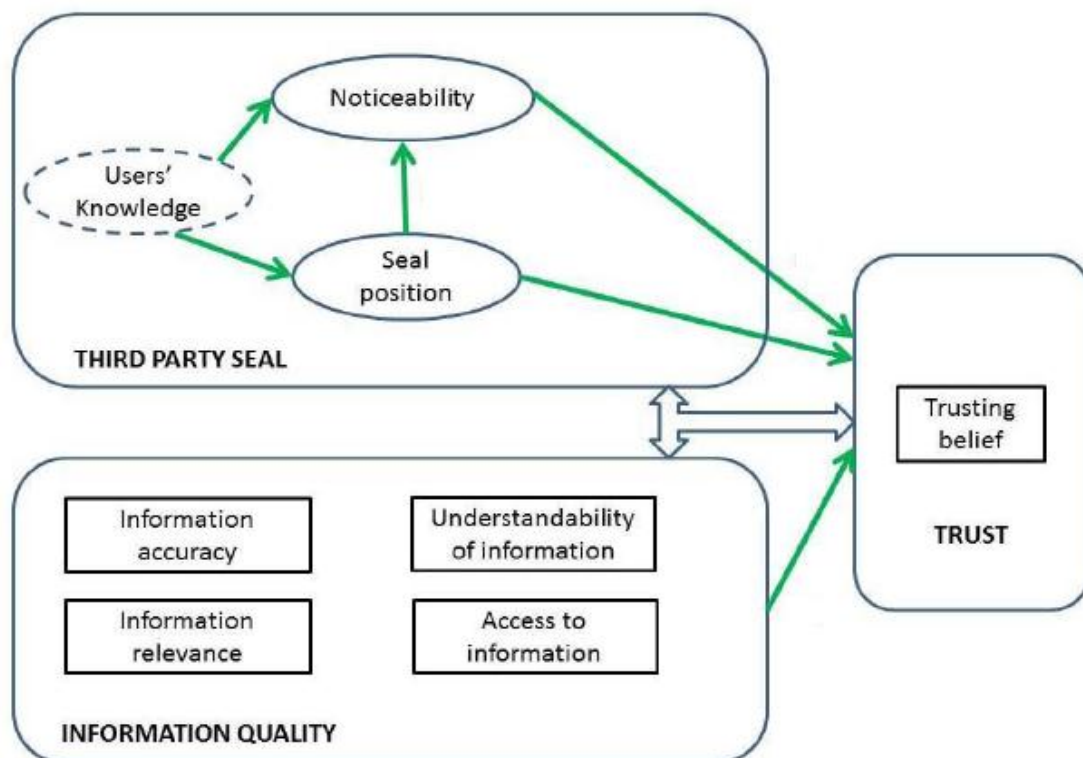
Information Quality	Description of Website Information
Information accuracy	Information in website is accurate, informative, updated for new and existing content
Information relevance	Information in website is relevant and complete to customers
Understand ability of information	Information in website is easy to read, easily to understand and clear in meaning, the flow information is clear
Access to information	Information is easily access (for example, search engine is provided or the information is categorized)

The second part is testing on the effect of third party seals position towards customers' trust. There are three components in this part i.e. position of third party seals, customer's knowledge on seal and noticeability. Customer's knowledge about the seals becomes a controlled variable in this research due to following considerations: [Kim and Kim \(2011\)](#) stated, many of their respondent do not know about seals and aware about the seal's purpose. In addition to that, most of them do not bother to check or verify the seal's function, and do not validate the seal function on the third party website. This argument is consistent with [\(Stewart and Harris-Stowe, 2012\)](#) who also bring up the issue of customers knowledge and noticeability.

As described by [\(Kim and Kim, 2011\)](#) and [\(Stewart and Harris-Stowe, 2012\)](#), many customers have incomplete knowledge and understanding regarding third party seals. Therefore, this factor may affect the testing as it will not truly examine the seals effect toward customers trust. Therefore, this research takes approach to make the customers' knowledge regarding the seals as the controlled variable.

Other than these two parts, this research also tested on the relationship of the third party seal's position and information quality towards customer trust. This relationship is tested in order to understand if these two sub-dimensions of content design have significant relationship towards each other or just independently affect customers' trust. (Figure 6)

**Fig-6. Proposed Model**



## 5. Summary and Future Work

As a summary, the research model consists of three main components; third party seals, information quality and trust. Information quality involved four subcomponents; accuracy, relevance, understandability and access to information. For third party seals, there are two components; position of seals and noticeability and one controlled variable (customers' knowledge on seals). And in addition to that, a relationship between information quality and third party seals is added to test on the effect of the relationship of information quality and third party seals position. The proposed model resulted from this study hence serves as a foundation for investigating the effect of information quality and third party seal's position towards customer's trust.

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