

# Chapter 2

## The Effects of Similarities to Previous Buyers on Trust and Intention to Buy from E-Commerce Stores: An Experimental Study Based on the SVS Model

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### 2.1 Introduction

The spread of business-to-customer e-commerce in recent years has led to a growing body of studies on the role of trust in Internet shopping (Fogg and Tseng 1999; Fogg et al. 2001; McKnight 2001; McKnight and Chervany 2002; McKnight et al. 2002; Gefen et al. 2003a, b; Salam et al. 2005). Trust concerns people's perception of a website's trustworthiness in the face of social uncertainties that remain despite institutional and technological protective structures. Although institutional and technological advancements continue to secure structural assurance (McKnight and Chervany 2002; McKnight et al. 2002; Gefen et al. 2003b), system trust (Grabner-Kräuter and Kaluscha 2003), and calculative-based beliefs (Gefen et al. 2003b), lack of trust is still a strong inhibiting factor to the spread of e-commerce (Wang et al. 1998; Hoffman et al. 1999; Jarvenpaa et al. 1999; Gefen and Straub 2004). Therefore, along with the sophistication of the definition of trust in e-commerce (McKnight and Chervany 2002; Mayer et al. 1995; McKnight et al. 1998), many studies have investigated the question of how to build customer trust under the uncertain conditions of online financial transactions (Grabner-Kräuter and Kaluscha 2003; Corbitt et al. 2003; Koufaris and Hampton-Sosa 2004; Lim et al. 2006).

There are several research approaches to investigating the trust-building methodologies in an e-commerce environment. First, several studies have focused on the sophistication of contents and interfaces of e-commerce websites. For example, Fogg and colleagues have examined the effectiveness of information in aiding judgments of a website's trustworthiness when potential customers browse websites (Fogg and Tseng 1999; Fogg et al. 2001, 2003; Fogg 2002). Similarly, other studies have applied the technology acceptance model (TAM) (Davis 1986,

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1989), which focuses on the perceived ease of use and usefulness of websites (Gefen et al. 2003a, b; Pavlou 2003). These approaches have investigated how to transcend the signals of trustworthiness of the websites by increasing the sophistication of the interface and enriching the contents of e-commerce websites.

On the other hand, in addition to information on the website, there are studies that evaluate the effectiveness of information and reputation that exist *outside* the focal e-commerce website in building trust among potential buyers (Lim et al. 2006; Lowry et al. 2008). Although it is obvious that both approaches are necessary to understand how to build trust among potential buyers, empirical research on the latter is scarce in comparison with that on the former. Therefore, this study sheds light on the effectiveness of external information from a different perspective from those of previous studies. External information is defined as the information that is not present on the focal e-commerce website but can be useful in judging the trustworthiness of the store.

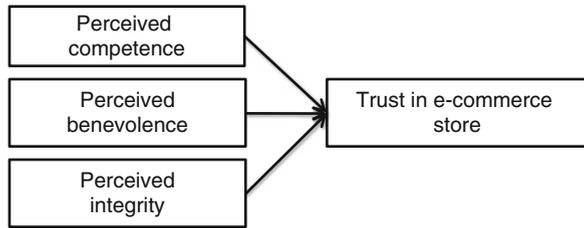
In this study, we first discuss the limitations of trust-building approaches based on traditional social psychology that focuses only on the internal components of websites (henceforth referred to as “traditional social psychological approaches”). Then we present empirical evidence that external information on salient value similarities (SVSs) with previous buyers is a critical factor in building trust in e-commerce stores among potential buyers. Through experimental manipulation of SVSs, we draw valid and rigorous inferences about causal relationships that are not available from correlational studies based on questionnaire surveys.

## 2.2 Theoretical Development

### 2.2.1 *Limitations of Traditional Social Psychological Approaches*

Previous studies have demonstrated the diverse and complex nature of trust in the context of e-commerce (McKnight and Chervany 2002; McKnight et al. 2002; Doney and Cannon 1997; Corritore et al. 2003). In fact, there is no clear consensus on the definition of trust so far (Kee and Knox 1970; Driscoll 1978; Cook and Wall 1980; Scott 1980). As McKnight et al. (1998) note, the word “trust” is so confusing (Shapiro 1987) and broad (Williamson 1993) that it almost defies careful definition (Gambetta 1988). In particular, because e-commerce studies are interdisciplinary, there are different sentences in the “grammar” of trust (McKnight and Chervany 2002), which leads to the difficulty in achieving consensus. Despite this difficulty, however, recent studies have tried to build consensus on the definition of Mayer et al. (1995). Mayer et al. (1995) defined trust as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party. Based on this definition, Mayer et al. (1995) conceptualized perceived competence (i.e. ability), benevolence, and integrity as

**Fig. 2.1** Traditional social psychological model



the antecedents of trust (Fig. 2.1). Competence refers to skills, abilities, and characteristics that enable a party to have influence within a specific domain. Benevolence is the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive. Integrity is defined as the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable.

According to the definition of trust by Mayer et al. (1995), potential buyers evaluate information on the competence, benevolence, and integrity of e-commerce websites respectively and finally judge whether they trust the website. In fact, many previous studies on trust in e-commerce have conceptualized models consistent with Mayer et al. (1995).

For example, using large-scale social surveys, Fogg et al. (2001) identified 300 internal components that make websites credible (see also Fogg (Davis 1986)). These components were reduced to 51 items classified under seven different subscales: real-world feel, ease of use, expertise, trustworthiness, tailoring, commercial implications, and amateurism. It should be noted that all these concern perceptions of site components.<sup>1</sup> Likewise, studies by Gefen et al. (2003a, 2003b); Salam et al. (2005), which employ the TAM (Davis 1986, 1989) to estimate trust based on a website's perceived ease of use and usefulness, also concern the internal components of a website. Consistent with the model of Mayer et al. (1995), these studies all indicate that it is important for e-commerce stores to communicate their trustworthiness accurately through the website's design, ease of use, and expertise, to gain customers' trust in e-commerce.

Originally, the approach that focuses on perceived ability, benevolence, and integrity was derived from findings on persuasive communication in social psychology. Hovland and Weiss' (1951) classic experiment showed that there is a high level of trust in a message if the credibility of its source is high. The components of credibility are (1) a perception that the source has expert knowledge, experience or qualifications, and (2) the perception that the source is an honest person with a benevolent intent to convey a message fairly (Hovland et al. 1953; McGinnies and Ward 1980). That is, if the receiver easily perceives competence, benevolence, and integrity, he or she will trust the sender.

<sup>1</sup>To be exact, the trustworthiness scale indirectly considers the effects of external information, such as the presence or absence of links to external sites. However, because these links are presented on the website, it is appropriate to count them as internal components.

However, there is an important presupposition to the traditional social psychological model. That is, it is assumed that the receiver of a message can obtain sufficient and accurate information to evaluate the competence, benevolence, and integrity of the sender. If the receiver was unable to obtain this information, or the information was not credible even if obtained, s/he would be unable to judge whether the sender may be trusted. The question is whether the internal components of a website, such as those presented by Fogg et al. (2001), are sufficient to allow a buyer to evaluate a seller's trustworthiness.

Compared with brick-and-mortar stores, transactions at online stores generally involve greater social uncertainties because buyers are unable to confirm directly the quality of a product or engage in face-to-face communication with the seller (Reichheld and Schefter 2000). Therefore, it is difficult to gather the sufficient and credible information regarding the seller's competence, benevolence, and integrity that is normally accessible at brick-and-mortar stores where customers can talk with retailers and actually see the products (Kollock 1999; Gefen 2000). Traditional social psychological approaches can be regarded as attempts to overcome this lack of information through enriched, sophisticated website content and design. However, these improvements may not provide the consumer with sufficient signals concerning competence and benevolence/integrity. The reason is that, at least compared with brick-and-mortar stores, the components of e-commerce stores can be much more easily imitated and reproduced, as has been evident in rampant online phishing. Even if trust-building components are identified, these alone cannot be relied upon as stable signals of a website's trustworthiness in the long term because they are easily imitated and reproduced. This indicates that we need to be careful in applying the definition of trust by Mayer et al. (1995) because, as these authors noted, "this model is focused on trust in an organizational relationship, and its propositions may not generalize to relationships in other contexts." Mayer et al. (1995) focused on the relationships in organizations such as between employers and employees and between supervisors and their subordinates. Their relationships are normally based on face-to-face interactions where they can obtain ample clues about the competence, benevolence, and integrity of others, which is not necessarily the case in e-commerce situations.

In summary, in e-commerce transactions where uncertainty caused by information asymmetry is high, trust-building strategies based on traditional social psychological approaches may malfunction because internal components inside the website that can be easily forged or imitated at lower cost cannot fully transmit effective and costly signals. In this situation, enrichment and sophistication of internal components of the website do not necessarily guarantee greater consumer trust. In other words, having the appropriate internal components is a necessary but not sufficient condition for gaining a customer's trust. This suggests that we need to look beyond a website's internal components to understand customer trust building in e-commerce.

### ***2.2.2 Effectiveness of External Information***

Considering the limitations of traditional social psychological approaches, we next examine how external information may be used by potential buyers to evaluate a seller's competence, benevolence, and integrity. For example, employing a large-scale social survey, Fogg et al. (2003) refined component approaches and identified "name recognition and reputation" as one of 18 categories of information clues for respondents. Trust in a website increases if the site operator's name is well known in the real world, and this effect is especially apparent in e-commerce stores. In fact, Fogg et al. (2003) recognized that it is impossible to control reputation and other such external information solely through enrichment and sophistication of the internal components of a website and called for more research on the effect of external information on trust.

Noting the importance of external information, some previous studies have investigated the effect of third party certificates, consumer feedback, and advertising reputation. However, these studies have mainly focused on the trust-building effects of such information when it is presented on the website. For example, Cheskin Research (1999, 2000) evaluated the effectiveness of TRUSTe seals in trust building (see also McKnight and Chervany (2001)). Similar approaches have been applied to BBB online (Cheskin Research and Studio Archetype/Sapient 1999; Cheskin Research 2000; McKnight and Chervany 2001), WebTrust (McKnight and Chervany 2001; Kover et al. 2000a, b), and VeriSign (Cheskin Research and Studio Archetype/Sapient 1999; Cheskin Research 2000; McKnight and Chervany 2001). Other studies have investigated the effect of advertising reputation (Cheskin Research and Studio Archetype/Sapient 1999; Cheskin Research 2000; McKnight and Chervany 2001; Jarvenpaa et al. 2000), customer feedback (Lim et al. 2006, 2001), and portal affiliation (Lim et al. 2006). Although these previous studies concern the effectiveness of the credibility of third parties or customer feedback rather than self-report by the e-commerce store, they are still similar to the traditional social psychological model in that they focus on third party certification or customer feedback presented on the e-commerce website.

Although these studies are important in understanding how website design and information presentation affect trust building, it must be noted that potential buyers do not judge the trustworthiness of an e-commerce site only from the information presented on it. When people make purchases via the Internet, they can collect external information on e-commerce stores through any number of search engines, word of mouth sites, bulletin boards, and blogs. To build trust in e-commerce, it should be important to employ these wide networks of reputation and recommendation information appropriately. As mentioned above, it is difficult for potential buyers to penetrate the website's disguise with fake certification seals or forged customer feedback because of the information asymmetry in the e-commerce situation. When the internal components of the website cannot serve as stable signals of trustworthiness, potential buyers may also search for information outside the website to judge its trustworthiness. That is, potential buyers not only gather

clues about competence, benevolence, and integrity of the website in a bottom-up way, but it is also usual for them to judge whether to trust a website based on the information outside it.

However, there are a surprisingly small number of studies that investigate the effect of external information on potential buyers' trust. This leads to a need for a clear process model to explain what and how external information about e-commerce stores influences trust among potential buyers. Rather than the traditional social psychological model, which assumes that information on a website's competence and benevolence/integrity are readily available, we must adopt a bounded rationality model that accounts for the constraints of social uncertainties characteristic of e-commerce stores. In this study, we employ the SVS model to investigate the trust-building process in e-commerce stores.

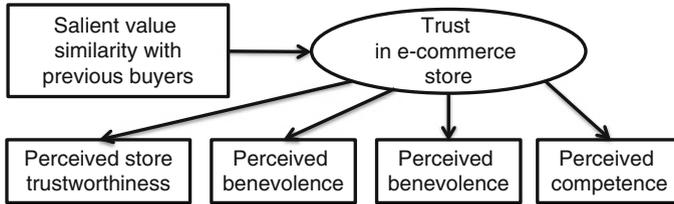
### ***2.2.3 The SVS Model of Trust and Its Application to E-Commerce***

The SVS model of trust was originally developed from risk perception studies. According to Earle and Cvetkovich (1995), people trust others when they perceive that they have the same salient values. For example, citizens trust a particular risk management organization if they feel that the organization's priorities in approaching and solving a problem (salient values) are similar to their own. Based on shared salient values, they entrust the organization with decision-making power.

In contrast to the traditional social psychological model, the key feature of the SVS model is that it explains trust in situations with insufficient clues for a person to evaluate the competence or benevolence/integrity of another person or an organization. When people cannot directly confirm the competence or benevolence/integrity of others, they focus on similarity in salient values. If they conclude that similarity exists, they will "entrust" these others with decision making.

The SVS model is entirely different from the traditional social psychological model in that, rather than competence and benevolence/integrity being treated as antecedents of trust, perception of SVS increases trust, leading to increased perception of competence and benevolence/integrity. Many empirical risk management studies have supported the SVS model (Earle and Cvetkovich 1997; Siegrist and Cvetkovich 2000; Siegrist et al. 2001, 2003, 2005; Earle 2004; Poortinga and Pidgeon 2006). Furthermore, direct comparisons of the SVS and traditional social psychological models in the area of risk management have indicated that the SVS model fits the data better than the traditional social psychological model (Cvetkovich and Nakayachi 2007).

The SVS model of trust can be applied to trust building in e-commerce, where information on competence and benevolence/integrity is not easily transmitted. As discussed above, it can be difficult for users to gather information about the competence and benevolence/integrity of an e-commerce website when they decide whether to trust it. Given these social uncertainties surrounding the trustworthiness



**Fig. 2.2** Salient value similarity model

of a site, external information is important. According to the SVS model of trust, people base their decisions on the judgments of others with whom they share salient values. If we define information about the salient values of previous buyers as external information, it follows that if potential buyers perceive that they share salient values with previous buyers, they will trust them and consequently their judgment of the trustworthiness of a particular e-commerce store. By definition, previous buyers have already decided to trust an e-commerce store and have made a purchase. If a person's salient values are very similar to those of a previous buyer, his or her trust in, and intention to buy from, the e-commerce store also increases. The SVS-based trust-building model we use in this study is illustrated in Fig. 2.2. Based on this model, trust in this study is constitutively defined as a psychological construct comprised of perceived trustworthiness, benevolence, integrity, and competence.

Based on the theoretical development discussed above, we have two hypotheses to test in this study.

H1: SVS to previous buyers increases trust in e-commerce stores.

Trust in e-commerce is a complex concept that cannot be measured with any single indicator (McKnight 2001; McKnight and Chervany 2002; McKnight et al. 2002). In this study, we take store trustworthiness, benevolence, integrity, and competence as four indicators of trust-related variables.

In addition to manipulating SVS in our experiment, we also examine the effect of basic attribute similarities that potential buyers may have with previous buyers. Zucker (1986) argues that similarities in basic attributes, such as birthplace and race, can produce mutual trust. It is possible that this type of trust-building process is also at work in an e-commerce context. In this study, by attributes we mean sex and age group. If similarity leads to greater trust in e-commerce stores, is it limited to similarity of salient values, or does it include wider similarity of social attributes? We must answer this question to clarify the scope of our proposed model.

There are also significant implications for marketing if SVS to previous buyers is found to have a substantial effect on intention to buy. Although the SVS model of trust predicts that SVS increases trust, it does not predict subsequent behavior. Even if SVS to previous buyers increases intention to buy, with our present knowledge we have no way of predicting whether trust acts as a mediating factor or if SVS directly affects intention to buy. Therefore, we divide our second hypothesis, that SVS to previous buyers increases intention to buy, into two competing corollaries: SVS

*indirectly* increases intention to buy with trust as a mediating factor (H2-1), and SVS *directly* increases intention to buy without trust as a mediating factor (H2-2). H2: SVS to previous buyers increases intention to buy from e-commerce stores.

H2-1: SVS to previous buyers indirectly increases intention to buy from e-commerce stores, with trust as a mediating factor.

H2-2: SVS to previous buyers directly increases intention to buy from e-commerce stores, without trust as a mediating factor.

## 2.3 Methodology

### 2.3.1 Presurvey and Selection of Subjects

The subjects of this experimental survey were Japanese adults who were recruited through “goo Research,” a web-based survey service of NTT Resonant Inc (Tokyo, Japan).<sup>2</sup> We first conducted a presurvey over two periods: January 29th–31st and February 4th–8th 2009. Our presurvey of 75,000 goo Research registrants produced 2,151 valid responses, limited to adults aged from 20 to 39 years old. This was to ensure a sufficient spread of ages for attribute dissimilarity, to be discussed below.

The primary information we gathered in the presurvey consisted of (1) past e-commerce experience, (2) consumer values related to food product e-commerce and their subjective importance (salient values), and (3) basic social attributes. We first selected respondents who had made a past e-commerce purchase of at least one of (1) crab or other seafood, (2) meat, (3) side dishes, (4) rice, or (5) vegetables or fruit. The purpose of limiting the survey to respondents with food purchase experience was to increase the sense of reality in the following experimental survey.

We next used a four-point bipolar scale to measure ten different consumer values related to food product e-commerce. We also used a four point scale (“important,” “somewhat important,” “somewhat unimportant,” and “unimportant”) to measure the subjective importance attached to these consumer values by respondents. This information was used as point of reference in the experimental survey when presenting SVSs. Specifically, we adopted the two items shown in Table 2.1 because they had comparatively symmetric distributions and high average values for subjective importance. We also selected respondents who ranked these two items as “important” or “somewhat important” to ensure the success of the manipulation in the experimental survey.

After selecting subjects, we conducted the experimental survey using a two-factor between-subjects design with random assignment. Salient consumer value and attributes were each tested at three levels: similar attributes/values, dissimilar attributes/values, or no attributes/values. For each of the nine conditions

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**Table 2.1** Salient consumer values used for salient value similarity manipulation

		Close to A	Somewhat close to A	Somewhat close to B	Close to B	
Salient consumer value 1	A: Select inexpensive and economical products	10.12	39.41	38.88	11.58	B: Select high- quality products even though they are expensive
Salient consumer value 2	A: Select best products by spending considerable time to ensure full satisfaction	24.1	26.9	44.74	4.26	B: Select satisfactory products without spending much time on it

Percentage (%) of experimental survey subjects (N = 751)

( $3 \times 3 = 9$ ), we solicited 180 respondents for a total of 1,620 survey subjects. The distribution of salient consumer values was equal in each of the nine conditions. That is, 25 % of respondents in each condition fell into each of the four combinations of salient consumer values 1 and 2, with possible responses A or B. The combinations were: (1) A, A; (2) A, B; (3) B, A; and (4) B, B.

### 2.3.2 *Experimental Survey and Manipulation Check*

We conducted our experimental survey on February 10th and 11th 2009. The procedures were conducted in four steps.

Step 1: Lead-in to the Scenario. The following text was presented to all subjects.

“You have a craving for crab after seeing on television that it is in season. However, you’ve been very busy recently and don’t have time to go to the store. You decide to buy some crab from an online store instead. After browsing around, you narrow down your choices to a number of stores selling snow crab that you think you would be satisfied with in terms of price and taste. One of the stores you are considering is shown on the next page. Please carefully look over the information on this site before moving on to the next page.”

Step 2: Mock Site. The mock site of an e-commerce store that sells crab was presented to all subjects.<sup>3</sup> The e-commerce site included pictures, price, brief description about the quality of crabs, weight, pull date, and place of origin, all of which are typical internal components of e-commerce sites selling crabs in Japan.

Step 3: Presentation of Salient Consumer Values and Attributes of Previous Buyers.

The following text was presented to subjects based on salient consumer values measured in the presurvey.

<sup>3</sup>The mock e-commerce site shown to subjects is available from the authors upon request.

“According to “goo Research,” a survey of previous buyers indicates that this shopping site is used mostly by [attribute 1 (sex)] in their [attribute 2 (age group)] who [salient consumer value 1]. Recently it has also become popular among people who [salient consumer value 2].”

Subjects assigned to the similar attribute condition were informed that many previous buyers were of the same age group and sex as themselves. Subjects assigned to the dissimilar attribute condition were informed that many previous buyers were over 30 years of age and of the opposite sex. Those assigned to the similar salient consumer value condition were informed that many previous buyers shared two of the respondent’s salient values measured in the presurvey. In the dissimilar salient consumer value condition, subjects were informed that many previous buyers endorsed values opposed to those that the subjects had indicated in the presurvey. For example, to women in their 20s who answered A for salient consumer value 1 and A for value 2 in the presurvey and were assigned to the similar attributes and salient consumer values condition, we presented the following information about previous buyers.

“According to “goo Research,” a survey of previous buyers indicates that this store is used mostly by women in their 20s who select inexpensive and economical products. Recently it has also become popular among people who select the best products by spending considerable time to ensure full satisfaction.” (Similar attributes and similar salient consumer values condition)

To men in their 30s who answered B for salient consumer value 1 and A for value 2 in the presurvey assigned to the dissimilar attributes and dissimilar salient consumer values condition, we presented the following information about previous buyers.

“According to “goo Research,” a survey of previous buyers indicates that this store site is used mostly by women in their 60s who select inexpensive and economical products. Recently it has also become popular among people who select satisfactory products without spending much time.” (Dissimilar attributes and dissimilar salient consumer values condition)

Subjects assigned to the no-attributes condition were only given information on the salient consumer values of previous buyers. Those in the no salient consumer values condition were only provided with information on the attributes of previous buyers. Subjects with neither attributes nor salient consumer values were not provided with any information about previous buyers. Finally, for purposes of checking the manipulation, we calculated the total amount of time spent by each subject on steps 2 and 3.

Step 4: Measurement of Dependent Variables and Manipulation Check. After reviewing the survey results of previous buyers, each of the dependent variables below were measured. Please refer to the [Appendix](#) for the scale items.

1. Perceived store trustworthiness

We used six of the seven items from the store trustworthiness scale (Jarvenpaa et al. 1999) ( $\alpha = 0.73$ ).

2. Perceived benevolence, integrity, and competence

**Table 2.2** Factor analysis of all indicators

	Variable	Factor 1	Factor 2	Uniqueness
Trust-related scales	Store trustworthiness	0.86	0.02	0.24
	Benevolence	0.89	-0.01	0.22
	Integrity	0.90	0.02	0.17
	Competence	0.82	0.05	0.28
Transaction intentions	Item 1	0.18	0.75	0.26
	Item 2	-0.05	0.92	0.20
	Item 3	0.14	0.81	0.21
	Item 4	-0.10	0.86	0.34
	Variance	3.99	3.78	
N = 751	Proportion	0.50	0.47	

Method: principal component factor analysis  
Rotation: oblique promax

We used slightly reworded versions of three subscales from the trusting belief scale (McKnight et al. 2002), benevolence scale (three items,  $\alpha = 0.72$ ), integrity scale (four items,  $\alpha = 0.89$ ), and competence scale (four items,  $\alpha = 0.85$ ).

### 3. Transaction intentions

We used a total of four items: one of three items on the transaction intentions scale (Item 1 in the [Appendix](#)) (Pavlou and Gefen 2004) and three of four items on the intention to buy scale (Items 2 to 4 in the [Appendix](#)) (Stewart 2003) ( $\alpha = 0.86$ ).

A factor analysis (principal component method) of all of the indicators above clearly indicated a two-factor structure (Table 2.2). This result validates our models with two latent variables; i.e. trust in an e-commerce store and intention to buy.

There were 941 responses to the 1,620 requests to participate in this study. We excluded data with low trustworthiness by eliminating those from the fastest and slowest 5 % of respondents in terms of total response time as well as those from respondents who spent less than 10 s or more than 10 min on steps 2 and 3. In addition, we eliminated cases that indicated incomplete manipulation.<sup>4</sup> This left 751 subjects for analysis. An ex posteriori sample size calculation (Westland 2010) indicated that the sample size of 751 subjects is adequate for hypothesis testing using structural equation models.

<sup>4</sup> A manipulation check was conducted after the dependent variables were measured. Respondents were asked, “Of the previous buyers who previously bought crab from this store, do you believe that there are many people who are similar to you, or do you believe that there are more people who are dissimilar to you, based on the criteria below?” We eliminated the subjects who responded “dissimilar” to at least one of the two salient values although they were assigned to the similar salient consumer value condition, as well as subjects who responded “similar” to at least one of the two salient values although they were assigned to the dissimilar salient consumer value condition. Sixty-six subjects were eliminated by this manipulation check. This may be because of an interval of up to 2 weeks between the presurvey and experimental survey and possible differences in evaluation criteria used for food products in general in the presurvey and for crab only in the experimental survey.

**Table 2.3** Correlation matrix for dependent variable scales

	Store trustworthiness	Benevolence	Integrity	Competence
Benevolence	0.72			
Integrity	0.77	0.77		
Competence	0.65	0.71	0.74	
Transaction intention	0.48	0.47	0.50	0.50

All coefficients are significant at 1 % level (N = 751)

## 2.4 Results

Table 2.3 shows the correlation coefficient matrix for the dependent variables.

To verify H1 and H2 simultaneously for statistical efficiency, structural equation modeling was employed to determine whether SVS to previous buyers increased trust in the e-commerce store (H1), and whether SVS to previous buyers increased intention to buy from the e-commerce store as an indirect effect mediated by trust, or as an unmediated direct effect (H2). We configured a latent variable to trust in e-commerce store because, as Table 2.3 shows, there were strong correlations among indicators of trust in e-commerce site. We estimated an indirect model with a trust-mediated indirect effect of the exogenous variables (salient consumer value similarity and attribute similarity) on intention to buy, which verifies H2-1, as well as the direct model allowing direct paths from the exogenous variables to intention to buy, which verifies H2-2. By comparing models using goodness of fit indices (GFIs), we investigated the paths through which similarity to previous buyers affects intention to buy.

Figure 2.3 shows the indirect model adopted after the addition of three error covariances. The reference categories of salient consumer value similarity and attribute similarity are the dissimilar salient consumer values and dissimilar attributes conditions. These reference categories are naturally omitted from the model to test the difference in means between each condition with reference categories. Because salient consumer value similarity and attribute similarity were orthogonal, we set all the covariance parameters between the two factors at zero. Table 2.4 shows the indirect model's goodness of fit and standardized coefficients.

As Table 2.4 shows, the GFI, adjusted goodness of fit index (AGFI), and root mean square error of approximation (RMSEA) all indicated acceptable overall goodness of fit. The results of chi-squared tests indicate that there was no statistically significant discrepancy between the data and the model. Furthermore, all the coefficients from trust in e-commerce store to its three indicators are highly significant, which indicates the success of the measurement model of trust (the coefficient of store trustworthiness was set to 1 to fix the scale of a latent variable; i.e. trust in e-commerce store).

Trust was significantly higher in the similar salient consumer values condition compared with the dissimilar condition, which clearly supports H1. On the other hand, similarity in attributes (i.e. sex and age groups) did not show any significant

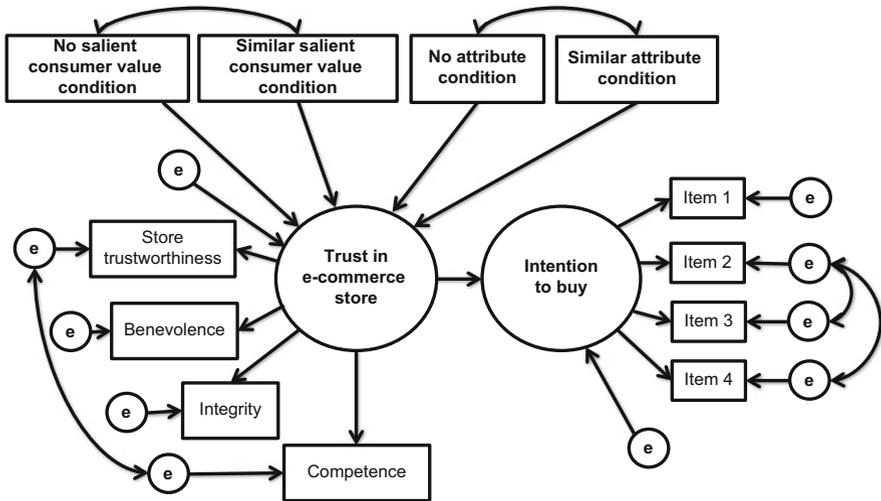


Fig. 2.3 Indirect model

Table 2.4 Estimations for the indirect model

Goodness of fit			
Chi-squared (df = 57)	43.75	n.s	
GFI	0.99		
AGFI	0.98		
RMSEA	0.00		
AIC	103.75		
Standardized coefficients			
Trust in e-commerce store	← No salient consumer value condition	0.09	+
	← Similar salient consumer value condition	0.14	**
	← No attributes condition	0.01	n.s.
	← Similar attributes condition	0.04	n.s.
Intention to buy	← Trust in e-commerce store	0.64	**
Store trustworthiness	← Trust in e-commerce store	0.84	-
Benevolence	←	0.83	**
Integrity	←	0.89	**
Competence	←	0.81	**
Item 1	← Intention to buy	0.89	-
Item 2	←	0.71	**
Item 3	←	0.89	**
Item 4	←	0.60	**

+ p < 0.10, \*\* p < 0.01

All the covariances are significant at 1 % level

See Appendix for the scale items of intention to buy

**Table 2.5** Estimations for the direct model

Goodness of fit				
Chi-squared (df = 53)	36.65	n.s.		
GFI	0.99			
AGFI	0.99			
RMSEA	0.00			
AIC	104.65			
Standardized coefficients		Beta		
Trust in e-commerce store	←	No salient consumer value condition	0.09	+
	←	Similar salient consumer value condition	0.13	**
	←	No attributes condition	0.01	n.s.
	←	Similar attributes condition	0.04	n.s.
Intention to buy	←	No salient consumer value condition	0.01	
	←	Similar salient consumer value condition	0.07	+
	←	No attributes condition	0.06	+
	←	Similar attributes condition	0.05	
Store trustworthiness	←	Trust in e-commerce store	0.64	**
	←	Trust in e-commerce store	0.84	-
Benevolence	←		0.83	**
Integrity	←		0.89	**
Competence	←		0.81	**
Item 1	←	Intention to buy	0.89	-
Item 2	←		0.71	**
Item 3	←		0.89	**
Item 4	←		0.60	**

+  $p < 0.10$ , \*\* $p < 0.01$

All the covariances are significant at 1 % level

See [Appendix](#) for the scale items of intention to buy

effects on trust in e-commerce store. Trust in e-commerce store, in turn, had a statistically significant positive effect on intention to buy.

Table 2.5 shows the goodness of fit and standardized coefficients of the direct model (Fig. 2.4) in which we draw direct paths from salient consumer value similarity and attribute similarity to intention to buy. GFI, AGFI, and RMSEA all indicated acceptable overall goodness of fit. The results of chi-squared tests indicate no statistically significant discrepancy between the data and the model. Trust was significantly higher in the similar salient consumer values condition compared with the dissimilar condition as well as in the indirect model. The consistency of the positive effect of salient consumer values similarity across two models indicates robustness of the validity of H1. Attribute similarities did not increase trust in e-commerce store as well as in the indirect model. Furthermore, the direct paths from value similarity and attribute similarity did not show clear positive effects on intention to buy from the e-commerce site. Although two of the four coefficients are marginally significant, these effects are rather weaker than the effects on trust in e-commerce store.

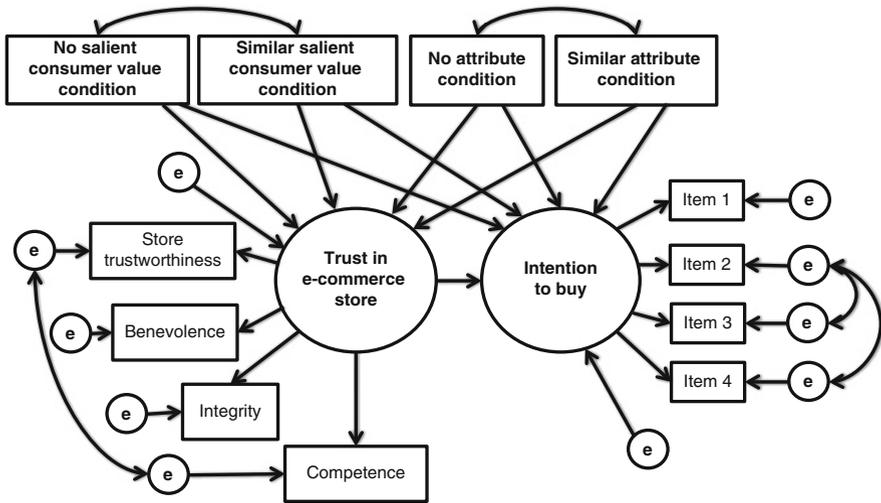


Fig. 2.4 Direct model

Furthermore, there was no statistically significant improvement in overall goodness of fit from the indirect to the direct model ( $\Delta\text{chi-squared} = 7.1, df = 4, n.s.$ ), and Akaike’s information criterion (AIC) is slightly smaller in the indirect model. This strongly suggests that we should select the indirect model from the viewpoint of parsimony. These results support H2-1, instead of H2-2, that salient consumer value similarity has an indirect effect, via trust in e-commerce store, on intention to buy.

## 2.5 Discussion and Conclusions

In this study, we indicated the limitations of traditional social psychological approaches in understanding trust building in e-commerce stores and investigated the effects of external information about salient consumer values and attributes of previous buyers on trust in potential buyers. We also conducted an exploratory investigation of the process by which SVS increases intention to buy from an e-commerce store.

As we predicted in H1, salient consumer value similarity to previous users had a causal effect on increasing trust in e-commerce stores. By manipulating salient consumer value similarity, we were able to avoid the ambiguous interpretation common to correlational survey studies. Specifically, it is not possible to interpret our findings such that there was a reverse causal relationship in which people trust e-commerce stores and therefore perceive shared similarities with previous buyers under a false consensus effect (Ross et al. 1977). Sharing salient consumer values with previous buyers does not logically guarantee that a site is trustworthy. Yet our

data indicates that salient consumer value similarity did in fact increase trust, suggesting that the SVS model of trust is a valid process model in cases of financial transactions under conditions of social uncertainty.

While we widened the definition of trust by including indicators of store trustworthiness, benevolence, integrity, and competence, ANOVA tests showed that salient consumer value similarity to previous buyers had effects on all four indicators (tables not shown), raising the possibility that people depend on information about salient consumer value similarity to previous buyers to make comprehensive evaluations in situations where they lack adequate information about a website's trustworthiness. In other words, rather than arriving at trust as the sum of independent evaluations of competence, benevolence, and so on, people form top-down judgments based on external information about salient consumer value similarity to previous buyers. This interpretation is supported by the extremely high goodness of fit of the models in Figs. 2.3 and 2.4.

Several tasks remain before we can apply the findings of this study to create a trust-building methodology for e-commerce stores. First is the question of how to present potential buyers with information about SVSs to previous buyers. If previous buyer profiles are displayed on a site, the information becomes an internal component of the website. In fact, reputation information is already widely presented on e-commerce stores in the form of user ratings and other messages from previous buyers. However, such displays may not function as valid clues for potential buyers if they do not discuss salient consumer values or if it is possible for the website owner to manipulate the information. These kinds of internal components may also be insufficient as signals of trustworthiness because, as discussed earlier, they may be easily imitated and reproduced. In this study, information on previous buyers is presented as the result of a survey by a research company independent of the e-commerce store. This retains the neutrality of the external information and suggests that information on salient consumer values and attributes of previous buyers should be presented by a neutral third party.

Of course, not all potential buyers will be willing to trust an e-commerce store just because a neutral third party has provided information about previous buyers. Our study shows that trust building is rather difficult if potential buyers and previous buyers have different salient consumer values. This means that a trust-building methodology based only on the presentation of salient consumer values is not universally effective. However, when the customers of an e-commerce store share some consumer values, presenting such information should be effective in attracting, or selectively encircling, potential buyers who share such values. By explicitly stating that users of a store share the same salient consumer values, e-commerce stores can build a sense of community or in-group identity among users to maintain a highly loyal customer base based on trust.

Finally, our study leaves us with several research tasks for the future. While we tested a food product e-commerce store, it is unclear whether we would obtain the same results with other products or services. Transaction uncertainties are greater for food products because there tends to be greater variation in quality, unlike products such as books or CDs. Further research should be conducted on the effects

of similarity on trust in e-commerce in goods and services that have comparatively low uncertainty levels. Furthermore, researchers must consider formats other than survey research results that may be used to present similarities of previous buyers to potential consumers. In reality, potential buyers may judge similarities based on external information posted independently by previous buyers on social media. The difference between the effects of this kind of user-generated content and presentation by third party survey results should also be further explored. By continuing this line of research, we hope to improve understanding of e-commerce trust-building methodologies for both practitioners and researchers.

## **Appendix**

### ***Scale Items***

#### **Perceived Store Trustworthiness**

(1. Agree, 2. Somewhat agree, 3. Somewhat disagree, 4. Disagree)

1. This store is trustworthy.
2. This store wants to be known as one that keeps its promises and commitments.
3. I trust this store to keep my best interests in mind.
4. I find it necessary to be cautious with this store.
5. The retailer of this store has more to lose than to gain by not delivering on its promises.
6. This store's behavior meets my expectations.

#### **Perceived Benevolence**

(1. Agree, 2. Somewhat agree, 3. Somewhat disagree, 4. Disagree)

1. I believe that this store would act in my best interest.
2. If I required help, this store would do its best to help me.
3. This store is interested in my well-being, not just its own.

#### **Perceived Integrity**

(1. Agree, 2. Somewhat agree, 3. Somewhat disagree, 4. Disagree)

1. This store is truthful in its dealings with me.
2. I would characterize this store as honest.
3. This store would keep its commitments.
4. This store is sincere and genuine.

## Perceived Competence

(1. Agree, 2. Somewhat agree, 3. Somewhat disagree, 4. Disagree)

1. This store is competent and effective in selling crabs.
2. This store performs its role of selling crabs very well.
3. Overall, this store is a capable and proficient Internet crab seller.
4. In general, this store is very knowledgeable about crabs.

## Intention to Buy

(1. Agree, 2. Somewhat agree, 3. Somewhat disagree, 4. Disagree)

1. Given the chance, I would consider buying crabs from this store in the future.  
[Item 1]
2. I probably would not buy from this store. [Item 2]
3. It is likely I would consider purchasing from this store. [Item 3]
4. It is unlikely I would return to this store before making a purchase decision.  
[Item 4]

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