

Initial Trust Toward an Unknown Website



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ABSTRACT: *Trust is a dynamic concept that evolves during a relationship. We study the initiation phase of trust toward an unknown website. We propose three sets of drives of initial trust: relational concepts (perceived value and satisfaction), in individual concept (trust propensity) and a contextual concept (structural assurance). We adopted the quasi-experimentation method for data collection. We have obtained 388 questionnaires. We have used structural equation modeling and we adopted multi-group analyses to test the moderator role of trust propensity.*

Keywords: Initial Trust, Perceived Value, Satisfaction, Structural Assurance, Trust Propensity

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1. Introduction

Trust is a fundamental relational concept that is important in e-commerce. It was pointed out that the lack of online consumer trust was the main barrier of consumer participation in e-commerce. Trust is also important for its link with economic performance [1]. In their study of 29 market economies, [2] demonstrate for each 10% rise of trust, there is an increase of 80% of the growth of per capita income per year.

Researchers tend to view trust as a dynamic concept. Of critical importance is the initial phase because it will condition the future of the relationship. Initial trust is object of controversy. If initial trust exists, how is it formed? In studying website trust, we propose three sets of drivers. The first one is related to the experience of navigation and is composed of the two relational concepts (perceived value and satisfaction). The second set is composed of the contextual factor (structural assurance). In fact, trust is inextricable from the environment and the special situation in which it is established. Third, trust is predicted by trust propensity: an individual trait representing individual tendency to trust others regardless of perceived attributes of the partner.

2. Conceptual Background

As we deal with the experience lived during navigation, the website is the driver of all perceptions of trust. It is possible to consider that trust develops in interpersonal communication mediated through technology. An alternative view is to consider the website as the object of trust. According to this stream, humans interact with technology in a social way. Reference [3] conclude that “*humans develop trust in technological entities such as websites, in the same manner that they develop trust in other people*”. Therefore, we propose that websites can be objects of trust.

2.1 Initial Trust

Trust was usually studied as a state; however, adding the time dimension should improve the theory of trust. Researchers are more and more interested in the dynamic nature of trust and focus on phases determining the process of trust building [4] [5]. In this research, we are interested in the initiation phase of trust. By initial trust, we mean trust developed toward an unfamiliar site after a first experience of navigation. But does it make sense to talk about initial trust?

Reference [6] affirms that there is no trust in the initial phase. To [7], trust increases slowly in the beginning of a relationship and starts at a weak level. But other researchers promote initial trust and the decisive role it plays in the first interaction [8]. The initial phase is very critical for a psychological reason: “*opinions and beliefs formed early tend to continue in the future perpetuated by beliefmaintaining mechanisms*” [8]

We adopt [8]’s definition of trust: “*the extent to which one believes (and feels confident in believing) that the other person is trustworthy in the situation*”.

2.2 Structural assurance

In the beginning of a relationship, the perception of the environmental security plays an important role. When the system operates in a predictable way, system trust takes all its importance [9] because predictability allows, to some extent, the control of the situation. Structural assurance refers to the existence of social structures that are guarantees of the security of the environment and providers of insurances when making transactions in this environment. It is defined as: “*The belief that the web has protective legal or technological structures (e.g. encryption or Secure Sockets Layer cryptographic protocols) assuring that web business can be conducted in a safe and secure manner*” [10].

The security of online transactions is a theme of major concern. If consumers perceive that the web is safe and secure, they will be comfortable in making transactions and this may affect trusting beliefs about an unfamiliar web vendor. Reference [8] argues that “*people who trust legal protections covering the Internet are more likely to trust a provider who operates on the Internet*”. In fact, a person is more likely to trust those operating in a safe and secure environment. Reference [11] maintains that structural assurance serves as “*peripheral cues indicating the evendor’s trustworthiness*”.

The relationship between structural assurance and trust is empirically proven by many researchers (eg. [5];[4];[12]). Therefore, we posit that:

Hypothesis 1: Structural assurance positively influences website trust.

2.3 Trust propensity

Trust propensity represents an individual concept and is related to the trustor. Reference [13] claims that: “*a consideration of consumer trust in Internet shopping that did not examine trust propensity... would be quite inadequate*”. Trust propensity is particularly important in initial trust formation because “*people have little or no specific information by which to judge the other party*” [8]. It is defined as “*a trustor’s inherent tendency to trust another, independent of any information about the trustee*” [14].

We propose trust propensity as a moderator variable. If individuals typically find it hard to trust in general, even though they are satisfied, their beliefs about the trustworthiness of the partner are not easily formed. On the other hand, individuals that find it easy to trust will likely easily judge the site as trustworthy if they are satisfied with it. This trait should amplify the effect of satisfaction on trust. Reference [15] studied consumers’ online initial trust with Taiwanese online bookstores. They found that trust propensity moderates perceptions of the website. Consequently, we propose that:

Hypothesis 2: Trust propensity intensifies the influence of satisfaction on trust.

2.4 Perceived value

The conception of perceived value according to the PxOxS paradigm considers that the experience of consumption is an interaction between a ‘Person’, an ‘Object’ and a ‘Situation’ or a context of consumption. In this vein and on the basis of axiology, [16] defines perceived value as: “*an interactive relativistic preference experience*”. Reference [16] has proposed a typology of consumer value by considering three axes. The first one reflects extrinsic vs. intrinsic value. The second one represents self-oriented vs. other-oriented value and the third concerns active vs. reactive value. This typology results in eight

categories of perceived value: efficiency, excellence, play, aesthetics, status, esteem, ethics and spirituality. Despite critics addressed to this typology, it is a comprehensive framework and a detailed classification of the value perceived by consumers.

The relationship between perceived value and trust is not well established in literature. Reference [17] proves the direct relationship between trust and value. But they call for more research in order to evaluate the nature of the link between value and trust. We think that if the visitor finds that the website provides him/her with high value, he/she will develop positive beliefs about its expertise and may guess its benevolence and integrity, i.e. possesses trustworthy characteristics. This relationship is supported by [18] [19]. Therefore, we propose the following hypothesis:

Hypothesis 3: Website perceived value positively influences website trust.

2.5 Satisfaction

It was emphasized in the literature that satisfaction is a dynamic concept. We deal with initial satisfaction in order to assess its importance in the establishment of long term relationships. In this research, we adopt the expectancydisconfirmation theory in the conception of satisfaction as an evaluative judgment. [20]’s definition will be adopted. It stipulates that satisfaction is “*a pleasurable fulfillment. That is, the consumer senses that consumption fulfills some need, desire, goal, or so forth and that this fulfillment is pleasurable*”.

In previous researches, satisfaction has been linked to trust [21]; [22]. Therefore, we propose the following hypothesis:

Hypothesis 4: Website satisfaction positively influences website trust.

Scales	Sub-scales	Author
Satisfaction	Emotion-based Satisfaction	[23]
	Evaluative Satisfaction	
Perceived value	Visual Appeal	[24]
	Entertainment Value	
	Escapism	
	Intrinsic Enjoyment	
	Efficiency	
	Economic Value	
	Excellence	
Trust	Ability	[10]
	Benevolence	
	Integrity	
Structural assurance		[10]
Trust propensity		[25]

Table 1. Measurement Scales

3. Research Methodology

3.1 Procedure of data collection

We used quasi-experimentation in laboratory. We invited students to participate to the experimentation. The method adopted for the recruitment of subjects was convenience sampling depending on their willingness to participate to the study. They were informed that we were conducting a study on the Internet users’ behavior in the context of an academic research and that their participation may last from 20 to 40 minutes. If they agree, we began the procedure which is composed of three phases. The first phase consisted of answering the questionnaire before navigation. This part was composed of filter questions (questions related to the knowledge of the site and the brand). Those who don’t know the somewhere brand and who had never visited its

website were retained to participate to the experimentation. For this reason, only three participants were not retained. Then, they answered to questions related to the individual trait (trust propensity) and to the contextual variable (structural assurance). These questions were independent from the object of study; we placed them in the questionnaire before navigation in order to reduce possible artifacts.

After navigation, participants were instructed to fill in the questionnaire after navigation. This part assessed the manipulation check questions and measures of the variables: “*satisfaction*”, “*perceived value*” and “*trust*”. The questionnaire contained also background information which was devoted to general questions about the respondents, notably demographic questions. We have obtained 401 questionnaires.

3.2 Operationalization of the constructs

It is described in Table 1.

4. Assessment of Measurement Quality

4.1 Exploratory factor analysis

A principal components analysis with Varimax rotation was carried out on the responses to the items. This Results are represented in table 2.

4.2 Confirmatory factor analysis

Structural Equation Modeling (SEM) is used to estimate the measurement models. We used AMOS 16.0 statistical program. At this step, we consider the measurement model of each construct to verify its reliability and validity. Results are represented in table 2. Perceived value is considered as a second-order construct. This choice is sustained by the means end theory and justified empirically. Indeed we compared nested first and second-order models. The superior one represents perceived value as a reflective second-order construct with four first-order constructs. Alike trust is a second-order reflective construct with three second-order constructs.

Second-order constructs	First-order constructs	KMO	Bartlett's Test of sphericity	Number of Items	Alpha	Cumulative % of information retrieved	Reliability (Jöreskog Rho)	Convergent validity (AVE)	Discriminant validity
Perceived value	Aesthetics	0.883	$\chi^2 = 2022.477$, p = 0.000	5	0.823	35.021	0.822	0.479	Verified
	Playfulness			4	0.801	44.175	0.800	0.501	
	Excellence			4	0.688	52.484	0.703	0.446	
	Efficiency			3	0.726	59.974	0.749	0.508	
	Cognitive and positive affective satisfaction	0.749	$\chi^2 = 642.474$, p = 0.000	5	0.767	40.347	0.764	0.457	Verified
	Negative affective satisfaction			2	0.629	58.384	0.637	0.469	
Trust	Ability	0.816	$\chi^2 = 1078.380$, p = 0.000	4	0.796	34.346	0.798	0.50	Verified
	Benevolence			3	0.666	46.749	0.670	0.406	
	Integrity			4	0.624	57.115	0.674	0.350	
	Structural assurance	0.739	$\chi^2 = 594.762$, p = 0.000	4	0.827	65.864	0.852	0.591	
	Trust propensity	0.710	$\chi^2 = 470.657$, p = 0.000	4	0.786	60.899	0.818	0.532	

Table 2. Results of Factor Analysis

5. Verification of Structural Model and Test of Hypotheses

5.1 Verification of structural model

While testing the structural model, we found high error variance of SAT5. This item was dropped. But the construct ‘*negative*

affective satisfaction’ is composed of only two items. The drop of SAT5 results in the drop of the construct ‘*Negative affective satisfaction*’. The model tested is represented in figure 1. The relational constructs (perceived value, cognitive and positive affective satisfaction) and the institutional construct (structural assurance) influence trust.

5.2 Results of test of hypotheses and discussion

Regarding the structural model we are testing and using constructs validated in confirmatory factor analyses, results of test of hypotheses are represented in table 4.

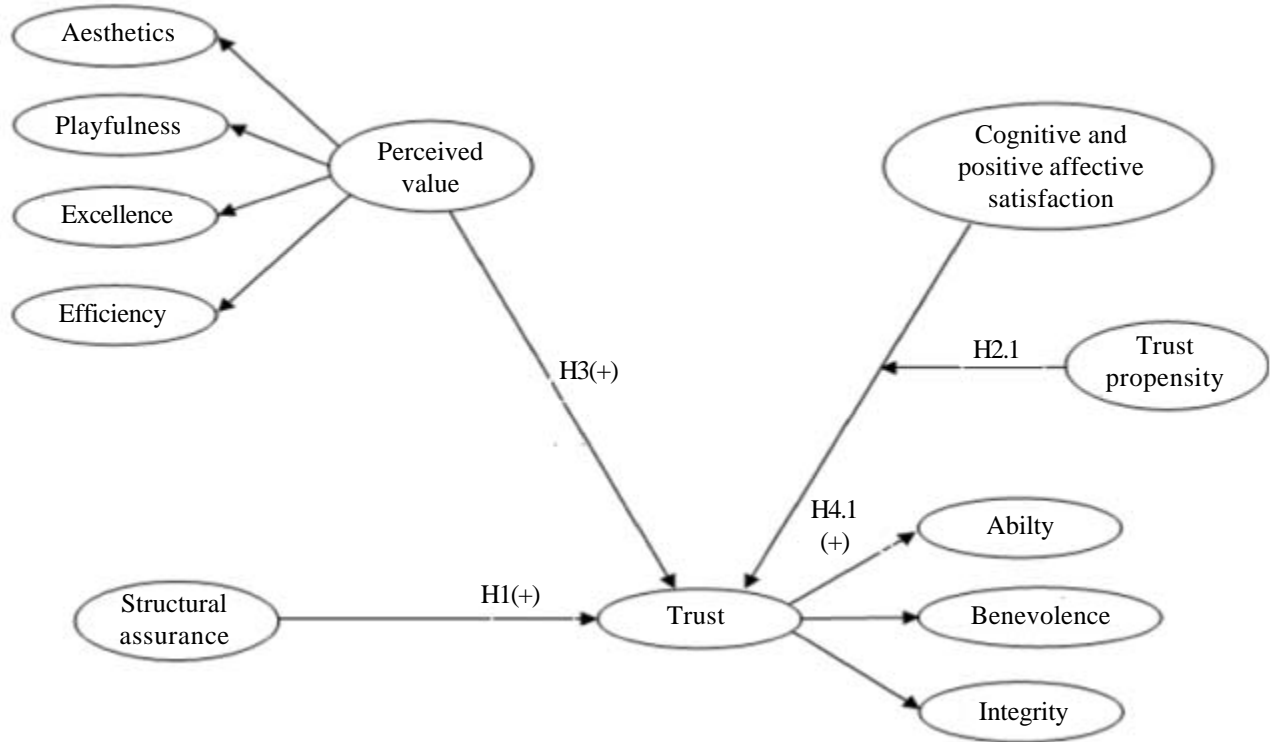


Figure 1. Structural model tested

Chi ²	df	p	Normed Chi ²	GFI	AGFI	TLI	CFI	RMR	RMSEA
694.838	313	0.000	2.220	0.887	0.864	0.870	0.884	0.119	0.056

Table 3. Overall Model Fit

		Std regression weight	Estimate	S.E.	C.R.	p
H3	Trust ← PV	0.966	0.806	0.106	7.633	***
H1	Trust ← Str	0.135	0.060	0.030	1.976	0.048
H4.1	Trust ← Satcgaff	0.158	0.127	0.051	2.516	0.012

Table 4. Results of Test of Hypotheses

Our results support all the direct effects. Perceived value is the most important predictor of trust. It appears that the perception of the experience of navigation in the website is of paramount importance to build initial trust. For managers, we propose a polysensorial stimulation design and theatricalization of the website. We also propose to induce an active participation of the consumer by enhancing interactivity to increase escapism and intrinsic enjoyment. The designers should pay attention to the

structure and layout of the site and build appropriate tools. More attention could also be paid to using multimedia tools to increase levels of pleasure for shoppers. Personalization of the website could increase user interactivity. Moreover, the functional side of value should not be neglected. In fact, consumers still evaluate the excellence and the degree of expertise of the website. They look also for efficiency in executing their tasks.

The only aspect of satisfaction we tested was ‘*cognitive and positive affective satisfaction*’. It has a positive significant effect on trust but the importance of its role is limited. Offering a satisfying experience is still recommended. And it is necessary to distinguish different aspects of satisfaction. Future studies may improve measurement of negative affective satisfaction in order to assess the impact of irritating factors.

Structural assurance was significantly and positively related to trust corroborating the institutional theory. However, the relationship between structural assurance and trust was not very strong. This may be due to unawareness of participants about the existence of such safeguards, their efficiency and their limits. It is therefore necessary to educate the consumer about security procedures (encryption, verification and authentication). This can be the object of television programs, newspaper articles and school modules for students. This is consistent with [26]’s argument regarding the importance of consumer education to achieve consumer protection. Once online consumers hold better knowledge of security and privacy issues, they will be able to assess the trustworthiness of e-commerce websites and recognize the possibility to deliver personal information in a more efficient way.

To test the hypothesis H2 (Trust propensity strengthens the relationship between satisfaction and trust), the sample was split into two groups according to the median of the moderating factor. After that, we compared the equal model and the free model (table 5). Chi-square difference between them is not significant indicating the absence of difference between the two groups. For further justification, we compared the equal model to the one that relaxes the path linking ‘*cognitive and positive affective satisfaction to trust*’ (table 5). There was no significant chi-square difference. We conclude that trust propensity did not have any moderator effect on the relationship between satisfaction and trust. H2.1 is therefore rejected.

	Δchi^2	Δdf	p
Equal model	—	—	—
Free model	0.402	3	0.940
One free path: Scgaff-Trust	0.042	1	0.838

Table 5. Test of the Moderator Effect of Trust Propensity

Our research did not support the effect of the individual trait. Reference [27] also found that the construct propensity to trust did not moderate the relationships between the independent variables and the individual’s trust response. Further, [28] found that the construct propensity to trust did not have any impact on the relationships between the independent variables and trust.

6. Conclusion

The objective of this research was to determine factors that influence the development of initial trust through the first website visit. We developed and empirically tested a model of the establishment of initial trust based on literature and existing models. Accordingly, we considered three aspects: relational quality concepts, individual properties of the visitor, and the specific context of the visit.

While our model does not pretend to encompass all the antecedents that may form initial trusting beliefs, we found a high R² (97.9%). This is a very good percentage. Further, perception of trust was high (superior to the mid-point scale). Despite the lack of prior experience, new visitors were able to form a trustworthy image about the website. Our data show the superiority of a second-order representation of perceived value and trust. From among predictors of trusting beliefs, perceived value has the strongest impact followed by cognitive and positive affective satisfaction and finally structural assurance. It appears that relationship quality concepts are more important predictors than the institutional factor.

Limitations of this study are inherent to the measurement scales used. Indeed, we think that the scale related to individual traits (trust propensity) has to be developed regarding the specificities of culture and values. If this variable had been able to be measured more accurately, it could have provided better insight into the establishment of trust. We think that trust propensity can be better held with in-depth interviews rather than simple items. Further, [24]'s measurement scale of perceived value does not include the third axe according to Holbrook's typology (other-oriented). The sociological dimension is very important in offline shopping and certainly it is online. Finally, negative affective satisfaction was assessed with only two items. This has affected the psychometric properties of the scale. While it is acceptable in SEM to use scales that are measured by only two items, it is preferred to use three or more items [29].

Furthermore, the experimental procedure used has its particularity but also its limitations regarding the validity of the results. Internal validity of this research is acceptable. Conversely, external validity is limited. The issue of external validity is a concern in developing studies with student samples. However, the use of this kind of sample is accepted by researchers [30]; [31]. In addition to that, our focus on only one website is encouraged by many researchers [32] [33] in order to realize in-depth interpretations of visit sessions. However, this is not a realistic situation. In fact, in reality, individuals may visit more than one site to accomplish any task.

For future research, we recommend to test the model with real Internet visitors, with other types of sites and other product categories. Moreover, it would be plausible to incorporate other individual traits like optimism and religiosity which may influence the development of trust. We also recommend a longitudinal study of trust in order to compare the different roles played by the different concepts. Finally, refinement of measurement scales is of paramount importance in order to have reliable results.

References

- [1] Geyskens, I., Steenkamp, J. B. E. M., Kumar, N. (1998). Generalizations about trust in marketing channel relationships using metaanalysis. *International Journal of Research in Marketing*, 15 (3) 223-248.
- [2] Knack, S., Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *Quarterly Journal of Economics*, 112 (4) 1251-1288.
- [3] Bailey, B. P., Gurak, L. J., Konstan, J. A. (2002). Trust in cyberspace. In *Human Factors and Web Development*, 2nd eds., edited by J.Ratner, New Jersey: Lawrence Erlbaum Associates, 311-321.
- [4] Eastlick, M. A., Sherry, L. (2011). Cognitive and institutional predictors of initial trust toward an online retailer. *International Journal of Retail & Distribution Management*, 39 (4) 234-255.
- [5] Tao, Z. (2011). An empirical examination of initial trust in mobile banking. *Internet Research*, 21 (5) 527-540.
- [6] Dasgupta, P. (2000). Trust as a Commodity. In Gambetta, Diego (ed.) *Trust: Making and breaking cooperative relations*, electronic edition, Department of Sociology, University of Oxford, 4, p. 49-72.
- [7] Blau, P. M. (1964). *Exchange and power in social life*, New York: John Wiley & Sons.
- [8] McKnight, D. H., Kacmar, C. J., Choudhury, V. (2004). Shifting factors and the ineffectiveness of third party assurance seals: a two-stage model of initial trust in an e- vendor, *Electronic Markets*, 14 (3) 252-266.
- [9] Luhmann, N. (2000), Familiarity, confidence, and trust: problems and alternatives, In Gambetta D. (Ed.), *Trust: making and breaking cooperative relationships*, electronic edition, Department of Sociology, University of Oxford, chapter 6, 94-107.
- [10] McKnight, D. H., Choudhury, V., Kamar C. (2002). Developing and validating trust measures for e-commerce: an Integrative typology. *Information Systems Research*, 13 (3) 334-359.
- [11] Kong, W., Hung, Y. T. C. (2006), Modeling initial and repeat online trust in B2C e-commerce. *In poceedings of the 39th Hawaii International Conference on System Sciences*, 1-10.
- [12] Song, J., Zahedi, F. M. (2007). Trust in health infomediaries. *Decision Support Systems*, 43, 390-407.
- [13] Lee, M. K. O., Turban, E. (2001). A trust model for consumer Internet shopping, *International Journal of Electronic Commerce*, 6 (1) 75- 91.

- [14] Serva, M. A., Benamati, J., Fuller, M. A. (2005). Trustworthiness in B2C e-commerce: an examination of alternative models. *Database for Advances in Information Systems*, 36 (3) 89-108.
- [15] Chen, Y. H., Barnes, S. (2007). Initial trust and online buyer behavior. *Industrial Management + Data Systems*, 107 (1) 21-36.
- [16] Holbrook, M. B. (1999). Introduction to consumer value, in Holbrook M. B., *Consumer Value. A Framework for Analysis and Research*, London: Routledge, p. 1-28.
- [17] Sirdeshmukh, D., Singh, J., Sabol, B. (2002). Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing*, 66, 15-37.
- [18] Liao, N. N. H., Wu, T. C. (2009). The pivotal role of trust in customer loyalty: Empirical research on the system integration market in Taiwan, *The Business Review*, 12 (2) 277-383.
- [19] Chi, H. K., Yeh, H. R., Chiou, C. Y. (2009). The effects of brand affect on female cosmetic users brand loyalty in Taiwan. *The Journal of American Academy of Business*, Cambridge, 14 (2) 230-236.
- [20] Oliver, R. L. (1999). Value as excellence in the consumption experience. In Holbrook M.B., *Consumer Value. A Framework for Analysis and Research*, London: Routledge, p. 43-62.
- [21] Yeh, Y. S., Li, Y. M. (2009). Building trust in m-commerce: contributions from quality and satisfaction. *Online Information Review*, 33 (6) 1066-1086.
- [22] Kassim, N., Abdullah, N. A. (2010). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in ecommerce settings: A cross cultural analysis. *Asia Pacific Journal of Marketing and Logistics*, 22 (3) 351-371.
- [23] Cronin, J. J., Brady, M., Hult, G. T. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76 (2) 193-218.
- [24] Mathwick, C., Malhotra, N., Rigdon, E. (2001). Experiential value: conceptualization, measurement and application in the catalog and Internet shopping environment. *Journal of Retailing*, 77 (1) 39-56.
- [25] Cheung, C. M. K., Lee, M. K. O. (2001). Trust in Internet shopping: instrument development and validation through classical and modern approaches. *Journal of Global Information Management*, 9 (3) 23-35.
- [26] Dekleva, S. (2000). Electronic commerce: A half-empty glass?. *Communications of the Association for Information Systems*, 3 (18).
- [27] Connolly, R., Bannister, F. (2007). Consumer trust in Internet shopping in Ireland: towards the development of a more effective trust measurement instrument. *Journal of Information Technology*, 22 (2) 102- 118.
- [28] Borchers, S. A. (2001). Trust in Internet shopping: a test of a measurement instrument. *In: Proceedings of the Association for Information Systems*, Atlanta, GA.
- [29] Bollen, K. A. (1989). *Structural equations with latent variables*. Wiley, New York, NY.
- [30] Calder, B. J., Philips, L. W., Tybout, A. M. (1981). Designing research for application. *Journal of Consumer Research*, 8 (4) 197-207.
- [31] Peterson, R. A. (2001). On the use of college students in social science research: insights from a second-order meta-analysis. *Journal of Consumer Marketing*, 28 (4) 450-461.
- [32] Moe, W. W. (2003). Buying, searching, or browsing: differentiating between online shoppers using in-store navigational clickstream. *Journal of Consumer Psychology*, 13 (1/2) 29-39.
- [33] Harris, L. C., Goode, M. H. (2004). The four levels of loyalty and the pivotal role of trust: A study of online service dynamics. *Journal of Retailing*, 80 (2) 139-158.