

The Effects of Website Content and Trust on Online Purchasing Intention of Agricultural Products

Yi-Chang Chen^{1*}, Hui-Ho Lee²

^{1,2}*KunShan University, Number 195, Kunda Rd., Yongkang Dist., Tainan City 710, Taiwan*

**Corresponding author. Email: a0920085105@gmail.com¹, j0932889247@gmail.com²*

ABSTRACT

According to the literature review, positive website content and trust in internet shopping will increase internet purchasing intention. Meanwhile, trust in internet shopping may play the mediating role. Therefore, this study aimed to explore the relationship between website content, trust in internet shopping, and purchasing intention. The results acquired from the 321-questionnaire survey revealed that the importance of website content and trust in internet shopping were positively related to online purchasing intention. However, the moderating effect of trust in internet shopping was insignificant. The managerial suggestions were proposed in this study as well.

Keywords: *Website Content, Trust in Internet Shopping, Online Purchasing Intention.*

1. INTRODUCTION

In recent decades, the internet has become one of the important media for many industry and business promotion [3]. Many business owners hope to save traditional marketing channel fees and expand access areas through online marketing. Internet marketing has the characteristics of no time and place restrictions. Building your own online trading platform will help you avoid the middlemen's intervention. Even agricultural industry is no exception [10]. The marketing of agricultural products is basically a set of service processes based on the Internet, including online advertising, electronic catalogue, browsing, ordering, refund, after-sales service, opinions exchange, and etc. The common mistake for the implementation of e-commerce has been completed by completing the product introduction on the webpage, and it is usually believed that the webpage can be used to bring higher sales or higher profits, but it ignores the need for a complete e-commerce system. In addition, how to attract consumers to stop at specific website of agricultural products and then to generate the consumption of such products through websites or social medias is also a vital question [2].

Therefore, the present study mainly investigated the relationship between website content, internet shopping trust, and purchasing intention by targeting consumer perceptions on agricultural products and peasant agriculture, which usually refers to family farm or small-scale farm in Taiwan.

2. LITERATURE REVIEW

Many corporations have made great efforts to use the website to expand their business. Website content has naturally become one of the most vital issues for companies that want to maximize profits by promoting their business in a competitive and restricted market. Meanwhile, some studies pointed out that customer satisfaction and website

content are closely related. For instance, consumers' perceptions about internet retailers are mostly built upon their interactions with the retailers' websites [9].

An appropriate retail website should have certain features. For instance, the website should present clear and relevant information, because customers will be able to compare the information that has been shown via different media [12]. For example, Detlor et al. [8] summarized the relevant research about what information is necessary for online shopping. He identified 14 factors for research and browsing tasks from open-ended questions that were answered by 962 participants. This study used Rahimnia and Hassanzadeh's framework [19] to divide the website content into two dimensions: information dimension and design dimension. The information dimension of a website specifies what information the website should present to the customers. Marketing practitioners and academic researchers deeply believe that a primary purpose of a company's website needs to provide information to prospects, customers, and other stakeholders. The design dimension determines how customers access the website information [4, 21]. In this study, the design dimension includes three factors: search function, protected content, and presentation content [19]. Presentation relates to the visual appearance or general attractiveness of the website. The search function allows the website's visitors to easily gain access to the information of interest. Protected content is a feature that customers value when ordering products or tracking orders by the internet. Good design and the use of interactive features on a website helps users identify relevant information quickly and easily, thereby making information more usable.

The literature of customer trust usually concentrates on person-to-person (e.g., in psychological studies) or organization-to-organization (e.g., in the study of strategic alliances) or people-to-computing systems trust (e.g., in the study of user interfaces of mission-critical computing systems) [15]. Internet shopping involves the trust not only between the internet merchant and the consumer, but also between the consumer and the computer system through

which the transactions are executed. Therefore, the importance of trust in e-commerce cannot be underestimated. Some studies have identified the building of trust as a fundamental and yet unresolved issue in the development of internet shopping [3, 11, 22]

Purchase intention refers to the decision of consumer to act for purchasing a specific product after conducting evaluation in the future [1, 20]. The purchase intention process begins with product evaluation. To conduct the evaluation, individuals use their existing knowledge experience and external information [6]. Hence, the external component also plays a major role in the purchase intention process by influencing the consumers attitudes [5].

Based on Technology Acceptance Model (TAM), if perceived ease-of-use (PEOU) and perceived usefulness (PU) increase, the intention of using the system will increase as well [14, 16]. In this way, PU and PEOU should be considered when utilizing the internet for e-commerce behaviors. Meanwhile, the internet consists of more information compared with other traditional media and thus, the amount of information content is considered to be an indicator for e-commerce website involvement [17]. According to Wen's study [22], the quality of information is one of the major dimensions of an effective website. In addition, the design dimension including search function, protected content, and presentation content, have influence on the perceived value of website content. Furthermore, according to the theory of reasoned action, trust increases positive attitudes towards the web store which consequently lead to reducing uncertainty and fear [18]. Jarvenpaa and Tractinsky [13] have empirically supported that trust has a direct meaningful impact on purchase intention in different cultures. According to the previous discussion, this study, in short, suggested that the perceived importance evaluation of website content and trust in internet shopping is likely to have influence on the online purchasing intention. Meanwhile, psychological attitude referring to trust is likely to increase the effect of website content evaluation on online shopping intention.

3. RESEARCH METHOD

3.1 Research Framework and Hypotheses

Based on the literature review and research objectives, Figure 1 reveals the research structure of present study investigating the moderating effect of consumer trust in internet shopping on the relationship between website content and online purchasing intention.

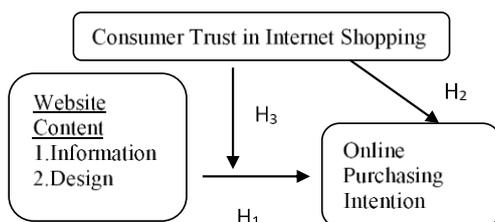


Fig. 1. Research Framework

Based on the literature review and research framework, this study developed three main research hypotheses as follows:
H₁: The importance evaluation of website content is positively related to online purchasing intention.

H₂: Consumer trust in internet shopping is positively related to online purchasing intention.

H₃: The moderating effect of consumer trust in internet shopping has influence on the relationship between the importance evaluation of website content and online purchasing intention.

3.2 Measurement

In this study, the questionnaire includes 4 parts: demographic variables, evaluation of website content, consumer trust in internet shopping, and online purchasing intention.

The importance evaluation of website content was mainly based on Rahimnia and Hassanzadeh's study [19], which surveyed 100 commercial saffron corporations in the Khorasan province. Information dimension ($\alpha = 0.89$, 8 items) and design dimension ($\alpha = 0.82$, 5 items) were measured. The measurement of consumer trust in internet shopping was mainly based on the relevant literature of Cheung and Lee's research [7], which has acquired 405 filled-out questionnaires from the students, in which three items were used ($\alpha = 0.81$). The measurement of online purchasing intention was based on the relevant literature of Zarred and Debabi [23], Zhao, Deng and Zhao et al. [24], in which five items were used ($\alpha = 0.86$).

The rating used the Likert 5-point scale. The scales are divided into the points of 5, 4, 3, 2, and 1. They are the representative of strongly agree, agree, no difference, disagree, and strongly disagree, respectively.

3.3 Sampling

Because one objective of this study was to understand the attitude of targeting market for the case farm, the participants of present study mainly were local government employees in Taiwan and the current customers of the case farm.

The survey was conducted from July to August 2019. The convenient sampling was used by sending the questionnaires to the key person in local governments and existing customers based on the customer data list. Finally, 450 questionnaires were sent, and 321 valid questionnaires were collected with 71% return-rate.

4. DATA ANALYSIS

4.1 Demographic Data

In Table 1, the information of demographic variables, including gender, occupation, age, education level, annual income, and online shopping experience, were demonstrated.

Table 1. Demographic Information of Samples

<i>Variable</i>	<i>Item</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Cumulative Percentage</i>
Gender	Female	197	61.4	61.4
	Male	124	38.6	100.0
Occupation	Civil Servant	129	40.2	40.2
	Banking and Service Industry	102	31.8	72.0
	Others	90	28.0	100.0
Age	Under 30	71	22.1	22.1
	31-50	120	37.4	59.5
	Above 51	130	40.5	100.0
Education Level	Below High School	80	24.9	24.9
	Above Diploma	241	75.1	100.0
Annual Income	Under 500.000	170	53.0	53.0
	Above 500.000	151	47.0	100.0
Online Shopping Experience	No	202	62.9	62.9
	Yes	119	37.1	100.0

4.2 Descriptive Statistics and Correlation Analysis

In Table 2, the mean and standard deviation values of research dimensions pointed out that consumer trust in internet shopping (TIS, $m = 3.13$) and online purchasing

intention (PI, $m = 3.37$) were not very high. In addition, the importance evaluation of information dimension (ID, $m = 4.25$) was higher than that of design dimension (DD, $m = 3.93$). Meanwhile, the independent research dimensions (ID, DD, TIS) were positively ($r = 0.10 - 0.26$) related to the dependent research dimension (PI).

Table 2. Descriptive Statistics and Correlation Analysis of Research Dimensions

<i>Variable</i>	<i>Dimension</i>	<i>Mean</i>	<i>SD</i>	<i>ID</i>	<i>DD</i>	<i>TIS</i>	<i>PI</i>
Website Content	Information Dimension (ID)	4.25	0.51	1			
	Design Dimension (DD)	3.93	0.58	.575**	1		
Consumer Trust in Internet Shopping (TIS)		3.13	0.74	0.092	0.047	1	
Online Purchasing Intention (PI)		3.37	0.59	.138*	.255**	.110*	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.3 t-Test and ANOVA

To test the influence of demographic variables on the research dimensions, the t-Test and ANOVA were employed. The significant results (referring to Table 3) pointed out that the importance evaluation of design dimension was not influenced by the demographic variables ($p > 0.05$). However, the respondents whose education level

below high school ($m = 4.12$) had significantly lower mean score of the importance evaluation of information dimension. Meanwhile, the respondents whose were male ($m = 3.01$), above 51 years old ($m = 2.91$), below high school ($m = 2.84$), without online shopping experience ($m = 3.04$), had lower consumer trust in internet shopping. In addition, the respondents without online shopping experience ($m = 3.27$) had less online purchasing intention.

Table 3. Significant Results of t-Test and ANOVA

<i>DV</i>	<i>Influential Factor</i>		<i>Mean</i>	<i>SD</i>	<i>t/F Value</i>
Information Dimension (ID)	Education Level	Below High School	4.12	0.50	-2.63*
		Above College	4.29	0.51	
Consumer Trust in Internet Shopping (TIS)	Gender	Female	3.21	0.70	2.40*
		Male	3.01	0.79	
Online Purchasing Intention (PI)	Age	Under 30	3.35	0.86	11.13*** (1,2>3)
		31-50	3.24	0.62	
		Above 51	2.91	0.72	
	Education	Below High School	2.84	0.71	-4.11***
		Above Diploma	3.23	0.73	
Online Shopping Experience	Online Shopping	No	3.04	0.77	-2.93***
		Yes	3.29	0.66	
Online Shopping Experience	Online Shopping Experience	No	3.27	0.60	-4.27***
		Yes	3.55	0.52	

*p<0.05, **p<0.01, ***p<0.001

4.4 Regression Analysis

In Table 4, the results of regression analysis were demonstrated. All equations with online shopping intention as dependent variable were significant since F-values were significant (p < 0.05). In *E0*, the demographic variables except occupation and annual income were independent variables. In *E1* and *E2*, the importance evaluation of information dimension (ID, $\beta = 0.12, p < 0.05$) and design dimension (DD, $\beta = 0.26, p < 0.001$) were positively related to online shopping intention (PI). Consequently, Hypothesis

1 was supported. Regarding the effect of consumer trust in internet shopping, TIS ($\beta = 0.05, p > 0.05$) was insignificantly related to PI. Therefore, Hypothesis 2 was not supported. Considering the interaction effect, the interaction of TIS and ID ($\beta = 0.29, p > 0.05$) and DD ($\beta = -0.17, p > 0.05$) was insignificantly related to PI. Therefore, Hypothesis 3 was not supported. However, online shopping experience (p < 0.000) was positively related to PI in all equations.

Table 4. The Results of Regression Analysis

	<i>E0</i>	<i>E1</i>	<i>E2</i>	<i>E3</i>	<i>E4</i>	<i>E5</i>
Gender	-0.01	0.00	-0.02	-0.01	0.00	-0.01
Under 30	0.06	0.07	0.08	0.05	0.06	0.08
Above 31	0.09	0.10	0.09	0.08	0.09	0.09
Education	0.04	0.01	0.04	0.03	0.01	0.03
Online Shopping Experience	0.22***	0.22***	0.23***	0.21***	0.21***	0.22***
ID		0.12*			0.00	
DD			0.26***			0.34
TIS				0.05	-0.21	0.17
ID*TIS					0.29	
DD*TIS						-0.17
F-Value	4.32**	4.46**	7.96***	3.72**	3.44**	6.01***
R ²	0.06	0.08	0.13	0.07	0.08	0.13

*p < 0.05, **p < 0.01, ***p < 0.001

5. CONCLUSION AND DISCUSSION

5.1 Conclusion

According to the previous research results, this study found that internet shopping experience might be one of the most influential factors for agricultural product shopping by internet platform. Meanwhile, the design dimension of website content is more likely to have more influence on

internet purchasing intention, compared to that of the information dimension. However, the influence of trust in internet shopping was not as strong as we suggested. Furthermore, the interaction of website content and trust in internet shopping played insignificant role in this study. Consequently, the results of hypothesis testing were revealed in the following table.

Table 5. The Results of Hypothesis Testing

<i>Research Hypotheses</i>	<i>Result</i>
H ₁ : The importance evaluation of website content is positively related to online purchasing intention.	Supported
H ₁₋₁ : The importance evaluation of information dimension is positively related to online purchasing intention.	Supported
H ₁₋₂ : The importance evaluation of design dimension is positively related to online purchasing intention.	Supported
H ₂ : Consumer trust in internet shopping is positively related to online purchasing intention	Not Supported
H ₃ : The moderating effect of consumer trust in internet shopping has influence on the relationship between the importance evaluation of website content and online purchasing intention.	Not Supported
H ₃₋₁ : The moderating effect of consumer trust in internet shopping has influence on the relationship between the importance evaluation of information dimension and online purchasing intention.	Not Supported
H ₃₋₂ : The moderating effect of consumer trust in internet shopping has influence on the relationship between the importance evaluation of design dimension and online purchasing intention.	Not Supported

5.2 Suggestions

Compared to the design dimension, the information dimension of website content is less likely to have more influence on online purchasing intention. It suggests that the quality and quantity of information has become the essential component of website content. Consequently, companies should pay much more attention to how to increase positive interaction experience, such as having friendly interface and useful sorting option, plays vital consideration when they establish and manage website contents.

Second, trust in internet shopping (TIS) was expected to be positively related to online purchasing intention in this study. However, the result pointed out insignificant relation. Meanwhile, the mean value of TIS is a little lower compared to that of other research dimensions. Therefore, it is better to consider the antecedents of TIS and try to increase TIS. For example, in Cheung and Lee's study [7], perceived integrity, internet competency, security control, privacy control, third-party recognition, and legal framework may have influence on TIS. After several food safety events, customers may not increase TIS and may not increase online purchasing intention, if environmental factors have no anticipated standards and credibility.

Third, the respondents who have online shopping experience have more intention to conduct online shopping behavior. Therefore, it is better to attract potential customers to have more online shopping experience. For example, companies can provide real promotion, and

increase online shopping benefit such as membership advantage.

5.3 Research Limitations

Firstly, this research framework focused on the interaction between website content (including information and design dimensions) and trust in internet shopping. Hierarchical regression analysis may not be totally appropriate to deal with cross-level issue, since the trust in internet shopping is affected by environmental level factors such as legal regulation and third-party test. Secondly, this study used the potential customers of which the case farm was identified subjectively. It is better to use probability-oriented sampling to increase the validity of argument generalization. Thirdly, the low values of R^2 and not-supported hypotheses pointed out that the explanatory power of independent variables in this study may not totally match the literature arguments. It suggests that some independent variables, such as promotion and price setting are more likely to be appropriately employed in the regression analysis and research framework.

REFERENCES

- [1]Ali, M. A.: An investigation of customers to explain the purchase intentions of expensive mobile phone. *Journal of Basic and Applied Scientific Research*, Vol. 11, No. 3, pp: 87-96 (2013)
- [2]Andreopoulou, Z., Tsekouropoulos, G., Koutroumanidis, T., Vlachopoulou, M. and Manos, B.: Typology for E-business activities in the agricultural sector. *International Journal of Business Information Systems*. Vol. 3, No. 3, pp. 231-251 (2008)
- [3]Athapaththu, J.C. and Kulathunga, K.M.S.D.: Factors affecting online purchase intention: a study of Sri Lankan online customers. *International Journal of Scientific & Technology Research*. Vol. 7, No. 9, pp. 120-128 (2018)
- [4]Beth, R., Mary, S., Hansa, B. and Mithu, Z.: Design planning by end-user web developers. *Journal of Visual Languages and Computing*, Vol. 19, No. 4, pp. 68–484 (2008)
- [5]Bhatti, A.: Consumer purchase intention effect on online shopping behavior with the moderating role of attitude. *International Journal of Academic Management Science Research*. Vol. 2, No. 7, pp. 44-50 (2018)
- [6]Bukhari, F.A., Rizwan, M., Liaquat, K., Ashraf, R., Ali, S. M., Azeem, S. R., Siddique, M. and Ali, M. A.: An investigation of customers to explain the purchase intentions for expensive mobile phone. *Journal of Basic and Applied Scientific Research*. Vol. 3, No. 12, pp.87-96 (2013)
- [7]Cheung, C.M.K. and Lee, M.K.O.: Understanding consumer trust in Internet shopping: A multidisciplinary approach. *Journal of the American Society for Information Science and Technology*. Vol. 57, No. 4, pp.479-492 (2006)
- [8]Detlor, B., Sproule, S. and Gupta, C.: Prepurchase online information seeking: search versus browse. *Journal of Electronic Commerce Research*. Vol. 4, No. 2, pp. 72–84 (2003)
- [9]Ha, S. and Stoel, L.: Consumer e-shopping acceptance: antecedents in a technology acceptance model. *Journal of Business Research*, Vol. 62, No. 5, pp. 565–571 (2009)
- [10]Heang, J.F. and Khan, H.U.: The role of internet marketing in the development of agricultural industry: a case study of China. *Journal of Internet Commerce*, Vol. 14, pp:65–113 (2015)
- [11]Hoffman, D.L., Novak, T.P. and Peralta, M.: Building consumer trust online. *Communications of the ACM*. Vol. 42, No. 4, pp.80–85 (1999)
- [12]Honeycutt, E.D., Flaherty, T.B. and Benassi, K.: Marketing industrial products on the Internet. *Industrial Marketing Management*. Vol. 27, No. 1, pp. 63–72 (1998)
- [13]Jarvenpaa, S. L., Tractinsky, N. and Saarinen, L. Consumer trust in an Internet store: a cross-cultural validation. *Journal of Computer-Mediated Communication*. Vol.5, No. 2: JCMC526 (1999)
- [14]Lederer, A. L., Maupin, D. J., Sena, M. P. and Zhuang, Y.: The technology acceptance model and the World Wide Web. *Decision Support Systems*. Vol. 29, No. 3, pp: 269-282 (2000)
- [15]Lee, M.K.O. and Turban, E.: A trust model for consumer internet shopping. *International Journal of Electronic Commerce*. Vol. 6, No. 1, pp. 75–91 (2001)
- [16]Moon, J.W. and Kim, Y.G.: Extending the TAM for a World-Wide-Web context. *Information & Management*. Vol.38, No. 4, pp: 217-230 (2001)
- [17]Okazaki, S. and Rivas, J.A.: A content analysis of multinationals' Web communication strategies: cross-cultural research framework and pre-testing. *Internet Research*, Vol.12, No. 5, pp:380-390 (2002)
- [18]Pavlou, P. A.: Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*. Vol. 7, No. 3, pp.101-134 (2003)
- [19]Rahimnia, J. and Hassanzadeh, F.: The impact of website content dimension and e-trust on e-marketing effectiveness: the case of Iranian commercial saffron corporations. *Information & Management*, Vol. 50, pp. 240–247 (2013)
- [20]Raza, M. A., Ahad, M. A., Shafqat, M. A., Aurangzaib, M. and Rizwan, M.: The determinants of purchase intention towards counterfeit mobile phones in Pakistan. *Journal of Public Administration and Governance*. Vol. 4, No. 3, pp:1-19 (2014)
- [21]Robbins, S.S. and Stylianou, A.C.: Global corporate websites: an empirical investigation of content and design. *Information and Management*. Vol 40, No. 5, pp. 205–222 (2003)
- [22]Wen, I.: Factors affecting the online travel buying decision: a review. *International Journal of*

Contemporary Hospitality Management, Vol.21, No. 6,
pp. 752-765 (2009)

[23]Zarrad, H. & Debabi, M.: Online purchasing
intention: factors and effects. International Business and
Management. Vol. 4, No. 1, pp. 37-47 (2012)

[24]Zhao, X., Deng, S. & Zhou, Y.: The impact of
reference effects on online purchase intention of
agricultural products. Internet Research Vol. 27, No. 2,
pp. 233-255 (2017)