

Determining the Online Purchasing Loyalty for Thai Herbal Products

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Abstract—The objective of this study is to identify the factors that influence the online purchasing loyalty for Thai herbal products. Survey research is used to gather data from Thai herb online merchants to assess factors that have impacts on enhancing loyalty. Data were collected from 300 online customers who had experience in online purchasing of Thai Herbal products. Prior experience consists of data from previous usage of online herbs, herb purchase and internet usage. E-Quality data consists of information quality, system quality, service quality and the product quality of Thai herbal products sold online. The results suggest that prior experience, E-quality, attitude toward purchase and trust in online merchant have major impacts on loyalty. The good attitude and E-Quality of purchasing Thai herbal product online are the most significant determinants affecting loyalty.

Keywords—e-Commerce, Thai herb, E-Quality, satisfaction, loyalty.

I. INTRODUCTION

IN 2008, the Thai National Statistics agency conducted surveys on the internet user profiles of Thailand [11]. This survey found that most e-Commerce purchases are in fashion, clothes, jewelry and accessories as well as electronic equipment and herb products. 29.4% of Thai people purchasing online buy fashion, clothing, jewelry and accessories. The electronics equipment and other products only have a rate of 21.10%.

In 2004, [17] the number of entrepreneurs that established their own websites, using e-mails and exchanging information rose to more than 61% over 2001. These were B2C more than B2B which combined business on internet and the traditional shops. This development opens new ways for SME to generate more income from commissions, rendering services, business fees, advertising, bank charges, and credit card payments. The value of Thai SMEs total e-Commerce was 193,478 million Baht [22]. This included about 1,568 SME entrepreneurs who participate in E-Commerce.

During 2009, it was also expected that the current market of herbal products will experience significant growth. However, there are many problems which are expected to increase.

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These problems relate limited development and enhancement of herbal products. The SMEs lack of knowledge in using wireless technology and earning customer's trust to purchase through internet. There are few studies about loyalty Thai herbs online. The objective of this research is to examine the factors that have impacts on enhancing loyalty of Thai herbal products via the internet?

II. LITERATURE REVIEW

E-Commerce (Electronic commerce) is the trading transaction between consumers and suppliers using the web channel. The process of purchasing Thai herbals via e-Commerce includes online presentation of catalog, placing orders, making payments, shipping and delivery of products [14].

Prior Experience

In purchasing herbal products online, the consumers need to have previous product experience with the herb that is being sold online and some knowledge on how to use computers and the internet. Previous and after experience in purchase are significant predictor to trust for e-Commerce [3].

Hypothesis 1: Prior experience factors will have a positive relation with trust in online purchasing.

Prior experience are consists previous usage of online herbal products, herb purchase and internet usage. Previous product experience is a significant indicator of behavior on internet shopping [9]. Prior purchase experience has direct impact on intention to search for information online and intention to purchase online [2]. In addition, the study shows that internet purchase experience had a moderating effect in predicting intention to use the internet for information search and intention to use the internet for purchasing [21].

Hypothesis 1a: Prior usage factor of herbal products will have a positive relation with trust in online purchasing.

Hypothesis 1b: Prior online herb purchase factor will have a positive relation with trust in online purchasing.

Hypothesis 1c: Prior internet usage factors will have a positive relation with trust in online purchasing.

E-Quality

E-Quality consists of data quality, system quality, service quality and product quality. Data quality is the quality of information on the typical website of Thai herbal products such as its contents and specification. System quality is the quality of purchase system of online Thai herbal products. This system involves purchasing and network enhancement.

Service quality is the quality of services being rendered to customers by the website. While product quality pertains to the quality of Thai herbal products offered. The study of use internet [18], that electronic quality is significant predictor to electronic trust.

Hypothesis 2: E-Quality factors will have a positive relation with trust in online purchasing.

The factors that could measure the success of e-Commerce [5] are information quality, system quality and service quality have moderate effects to intention of use and user satisfaction in relation to information quality and system quality. In prior research, [4] the results reveal that information quality and system quality related satisfied customers. Information quality and system quality increase satisfaction significantly [20].

The quality of service determines the difference between the expectation of customers, and the service rendered. This will be evaluated through the various services that a website offers to its clients [15]. Service quality is significant predictor to trust and loyalty in website [7].

User acceptance of health food products in Finland showed that consumers continue the use of herbal products because of their efficiency and good formulation [12]. The products that have excellent quality can enhance trust in herbal product industry [10].

Hypothesis 2a: Information quality factors will have a positive relation with trust in online purchasing.

Hypothesis 2b: System quality factors will have a positive relation with trust in online purchasing.

Hypothesis 2c: Service quality factors will have a positive relation with trust in online purchasing.

Hypothesis 2d: Product quality factors will have a positive relation with trust in online purchasing.

Attitude towards purchase

Customer's attitude towards purchase is highly important for e-Commerce. The attitude can influence the customers buying behavior [1]. A person who purchase with trust in the internet reliability tends to purchase product online [8]. Perceived ease of use, previous benefit of internet and website are positive supports attitude and intention to purchase.

Hypothesis 3: Prior experience factors will have a positive relation with attitude toward purchase.

More experience was related high level of satisfaction and loyalty [19].

Hypothesis 3a: Prior usage factors of herbal products will have a positive relation with attitude toward purchase.

Hypothesis 3b: Prior online herb purchase factors will have a positive relation with attitude toward purchase.

Hypothesis 3c: Prior internet usage factors will have a positive relation with attitude toward purchase.

Trust in online merchants

Customers trust is directly connected with the positive attitude for the products and purchasing behavior [6]. A study of 100 websites indicate entrepreneur not consumer conviction has 4 dimensions: existence, affiliation, policy achievement and propensity to trust. Trust is significant predictor to attitude toward behavior [16].

Hypothesis 4: Trust in online merchant factors will have a positive relation with attitude toward purchase.

Loyalty

Loyalty of customers begins with educating customers about the goods and a service that the website is offering.

Hypothesis 5: E-Quality factors will have a positive relation with loyalty.

Greater information quality, system quality and service quality is a significant predictor of loyalty [19].

Hypothesis 5a: Information quality factors will have a positive relation with loyalty.

Hypothesis 5b: System quality factors will have a positive relation with loyalty.

Hypothesis 5c: Service quality factors will have a positive relation with loyalty.

Hypothesis 5d: Product quality factors will have a positive relation with loyalty.

Online consumer should be trust in online merchant and trust has a significant predictor to electronic loyalty [18]. Good attitude can create loyalty [13].

Hypothesis 6: Trust in online merchant will have a positive relation with loyalty.

Hypothesis 7: Attitude toward purchase factors will have a positive relation with loyalty.

III. METHODOLOGY

The study used a survey questionnaire to collect data from online herbal consumers. The 300 questionnaires were sent to customers who has purchased Thai herb through e-commerce. The respondents' profile is shown in Table I.

TABLE I
RESPONDENTS PROFILE

Characteristic	Percentage
Gender	
Male	37%
Female	63%
Age	
20-30	39.3%
34-40	37.3%
41-50	13.0%
> 50	10.3%
Education	
Bachelor's degree	61.7%
Master's degree	22.7%
Other	15.6%
Experience in purchase Thai Herb online	
Less than 1 year	84%
1-5 year	14%
More than 5 year	2%
Type of Thai Herbal Products	
Cosmetic	38.2%,
Medicine	23.6%
Food	23.0%,
Beverage	14.3%
Other	0.8%

IV. RESULT

The result of survey of Thai consumer who purchases Herb online shows in Table II, Table III and Table IV.

TABLE II
FACTORS THAT HAVE IMPACTS ON TRUST IN ONLINE MERCHANT

Variable	B	Beta	t	Sig.
Prior experience				
Prior usage	.031	.029	.734	.463
Prior online herb purchase	.016	.020	.382	.702
Prior internet usage	.082	.095	1.926	.055
E-Quality				
Information quality	.119	.117	2.868	.004*
System quality	.281	.287	5.117	.000*
Service quality	.160	.162	2.734	.007*
Product quality	.283	.289	5.360	.000*

R = .877, R² = .769, SE = .460, F = 139.002, Sig. = .000*

Dependent variable: Trust in online merchant.

The result indicated that Hypothesis 2a: Information quality factor has a positive relation with Trust in Online Purchasing, Hypothesis 2b: System Quality factors will have a positive relation with Trust in Online Purchasing, Hypothesis 2c: Service Quality factors will have a positive relation with Trust in Online Purchasing, and Hypothesis 2d: Product Quality factors will have a positive relation with Trust in Online Purchasing, so hypothesis 2a, 2b, 2c and 2d are confirmed (Table II).

TABLE III
FACTORS THAT HAVE IMPACTS ON ATTITUDE TOWARD PURCHASE

Variable	B	Beta	t	Sig.
Prior experience				
Prior usage	.067	.061	1.501	.135
Prior online herb purchase	.205	.242	4.647	.000*
Prior internet usage	.119	.133	2.646	.009*
Trust in online merchant	.551	.535	12.875	.000*

R = .867, R² = .752, SE = .488, F = 224.072, Sig. = .000*

Dependent variable: Attitude toward purchase.

Prior online herb purchase factor has a positive relation with attitude toward purchase, so hypothesis 3b is confirmed. Prior internet usage factor has a positive impact on attitude toward purchase. Hence, H3c is confirmed. Trust in online merchant factor has a positive relation with attitude toward purchase, so hypothesis 4 is confirmed (Table III). Hypothesis 5c: Service Quality factors will have a positive relation with Loyalty, Hypothesis 5d: Product Quality factors will have a positive relation with Loyalty and Hypothesis 7: Attitude toward Purchase factors will have a positive relation with Loyalty, so hypothesis 5c, 5d and 7 are confirmed (Table IV).

V. CONCLUSION

The results revealed that the major factors for enhancing customer loyalty were prior experiences, E-Quality and the attitude toward purchasing. The prior experience consists of prior online herbal product usage, prior herb purchase and prior internet usage.

TABLE IV
FACTORS THAT HAVE IMPACTS ON LOYALTY

Variable	B	Beta	t	Sig.
E-Quality				
Information quality	.004	.003	.072	.943
System quality	-.012	-.012	-.182	.856
Service quality	.209	.194	2.910	.004*
Product quality	.166	.156	2.370	.018*
Trust in online merchant	.001	.001	.017	.987
Attitude toward purchase	.581	.551	8.535	.000*

R = .844, R² = .713, SE = .556, F = 121.309, Sig. = .000*

Dependent variable: Loyalty.

E-Quality consists of information quality, system quality, service quality and product quality, price, deliver method, ease of order, responsibility for damages of goods and guarantee satisfaction, which can create positive attitude toward purchase. The good attitude and E-quality of purchasing Thai herbal product online are the most significant determinants affecting loyalty. Loyalty affects the future usage of online herbal. Service quality and product quality are the most significant determinants affecting loyalty. Thus, herbal product manufactures need to secure the safety of their products before selling them to the market. The information quality and system quality are not significant factors affecting loyalty. Prior experience and trust in online merchant are significant predictors to attitude toward purchase. The prior online herb purchase and prior internet usage are the most significant inferences on attitude toward purchase. But prior usage of herbal product is not significant affecting attitude toward purchase Thai herbal product online. E-Quality is a very good indicator of trust for all online merchants. Product quality, system quality, service quality and information quality are the most significant affecting trust of online merchant. So, the online merchants have to trust in quality of information, system, services and products. This research recommend by comparing online purchase and store buyer. In addition the future research might be specific studying in one Thai herbal product or they can apply with another product which is familiar.

REFERENCES

- [1] Ajzen, I. and Fishbein, M. 1980. Understanding Attitudes and Predicting Social Behavior. Prentice-Hall, Englewood Cliffs, NJ.
- [2] Beccerra P. E. and Korgaonkar K. P. 2009. Hispanics' Information Search and Patronage Intentions Online. *Journal of Electronic Commerce Research*. 10(2): 76-93.
- [3] Chow W. S. and Angie N. K. O. 2006. A Study of Trust in E-Shopping before and after first-hand experience is gained. *The Journal of Computer Information System*. 46(6):125-130.
- [4] DeLone W. H. and McLean E. R. 1992. Information Systems Success: The Quest for the Dependent Variable. *The Institute of Management Science*. 60-95.
- [5] DeLone W. H. and McLean E. R. 2004. Measuring e-Commerce Success: Applying the DeLone & McLean Information Systems Success Model. *International Journal of Electronic Commerce*. 9(1):31-47.
- [6] Gefen D., Karahanna E. and Straub D. W. 2003. Trust and TAM in online shopping: An integrated model. *MIS Quarterly*. 27(1):51-90.
- [7] Harris L. C. and Goode M. M.H. 2004. The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of Retailing*. 80:139-158.
- [8] Helander M. G. and Khalid H. M. 2000. Modeling the customer in electronic commerce. *Applied Ergonomics*. 31:609-619.

- [9] Klein L. R. 1998. Evaluating the potential of interactive media through a new lens: search versus experience goods. *Journal of Business Research*. 41:195-203.
- [10] Leung Y. A. 1997. Use of herbs in consumer products--part II. *ABI/INFORM Global*. 160(5): 34-41.
- [11] National Statistical Office of Thailand (TNSO). 2009. Report of Thailand e-commerce status in 2008. retrieved on October 30, 2009 from <http://service.nso.go.th/nso/nsopublish/download/docdown.html>
- [12] Niva M. and Mäkelä J. 2007. Finns and functional foods: socio-demographics, health efforts, notions of technology and the acceptability of health-promoting foods. *International Journal of Studies*. 31: 34-45.
- [13] Odekerken-Schroder, G., de Wulf, K., Kasper, H., Kleinjnen, M., Hoekstra, J., Commandeur, H. 2001. The impact of quality on store loyalty: a contingency approach. *Total Quality Management*. 12(3):307-22.
- [14] Olson J. S. and Olson G. M. 2000. i2i Trust in E-commerce. *Communications of the ACM*. 43(12): 41-44.
- [15] Parauraman A., Zeithaml V. A. and Berry L. L. 1985. A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*. 49:41-50.
- [16] Pavlou P. A. and Chai L. 2002. What drives electronic commerce across cultures? A cross-cultural empirical investigation of the Theory of Planned Behavior. *Journal of Electronic Commerce Research*. 3(40):240-253.
- [17] Piyakate et al. 2004. Report of development analysis of merchant electronic project. retrieved on June 24, 2009 from <http://www.thairegistration>.
- [18] Ribbink D., Riel A. C. R. V., Liljander V. and Streukens S. 2004. Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality*. 14(6):446-456.
- [19] Rodgers W., Negash S. and Suk K. 2005. The Moderating Effect of On-line Experience on the Antecedents and Consequences of On-Line Satisfaction. *Psychology & Marketing*. 22(4):313-331.
- [20] Sendon P. B. 1997. A Respecification and Extension of the DeLone and McLean Model of IS Success. *Information Systems Research*. 8(3):240-253.
- [21] Shim S., Eastlick A. M., Lotz L. S. and Warrington P. 2001. An online prepurchase intentions model: The role of intention to research. *Journal of Retailing*. 77:397-416.
- [22] SMEs THAI. 2009. Upgrade SME to e-SME in 2009. retrieved on October 30, 2009 from http://www.iwisdom.co.th/v15/index.php?option=com_content&view=article&id=634:-sme-e-sme-52&catid=57:e-update&Itemid=330.

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