



## Factor Analysis of E-commerce Website Affects Consumer Purchasing Decision in Lampang Province

การวิเคราะห์องค์ประกอบของเว็บไซต์พาณิชย์อิเล็กทรอนิกส์  
ที่มีต่อการตัดสินใจซื้อสินค้าของผู้บริโภค จังหวัดลำปาง

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### บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ 1) วิเคราะห์องค์ประกอบของเว็บไซต์พาณิชย์อิเล็กทรอนิกส์ และ 2) วิเคราะห์ความสัมพันธ์องค์ประกอบของเว็บไซต์พาณิชย์อิเล็กทรอนิกส์ที่มีผลต่อการตัดสินใจซื้อสินค้าของผู้บริโภค กลุ่มตัวอย่างคือ ผู้บริโภคที่ผ่านการซื้อสินค้าผ่านเว็บไซต์พาณิชย์อิเล็กทรอนิกส์ที่อยู่ในพื้นที่ อำเภอเมือง จังหวัดลำปาง จำนวน 600 คน สุ่มตัวอย่างแบบตามความสะดวก เครื่องมือที่ใช้ในการวิจัย คือ แบบสอบถาม สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน ค่าสัมประสิทธิ์สหสัมพันธ์ การวิเคราะห์องค์ประกอบเชิงสำรวจและการวิเคราะห์ความถดถอยเชิงพหุ

ผลการวิจัยพบว่า 1) เว็บไซต์พาณิชย์อิเล็กทรอนิกส์ ประกอบด้วย 8 องค์ประกอบ เรียงลำดับตามค่าน้ำหนักองค์ประกอบคือ ด้านบริบทเว็บ ด้านการพาณิชย์ ด้านช่องทางสื่อสาร ด้านการเชื่อมโยงและร่วมมือ ด้านการบริการลูกค้า ด้านการปรับแต่งข้อมูล ด้านความสะดวกสบาย และด้านความชัดเจนและปลดภัยของข้อมูล 2) องค์ประกอบของเว็บไซต์พาณิชย์อิเล็กทรอนิกส์ด้านการบริการลูกค้า สามารถพยากรณ์การตัดสินใจซื้อสินค้าของผู้บริโภคได้สูงสุด รองลงมาคือ ด้านความชัดเจนและปลดภัยของข้อมูล ด้านความสะดวกสบาย ด้านการพาณิชย์ และด้านช่องทางสื่อสาร ตามลำดับ

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## คำสำคัญ

การวิเคราะห์องค์ประกอบ เว็บไซต์ พานิชย์อิเล็กทรอนิกส์ การตัดสินใจซื้อ

### Abstract

This research has objectives to 1) analyze factors of E-commerce website and 2) analyze the relationship between factors of E-commerce website affecting consumer purchasing decision. The sample group was a group of 600 consumers in Muaeng Lampang district, Lampang province, Thailand, who have done their purchase on E-commerce website. This sample group was selected by convenience sampling method. Research instrument using in this research was a questionnaire, the statistics used in data analysis were percentage, mean, standard deviation, correlation coefficient, exploratory factor analysis and multiple regression analysis.

The results found that 1) E-commerce website consists of eight factors that can be put in order according to their weight as followed: context, commerce, communication, connecting and collaboration, customer service, customization, convenience, and clarity and security 2) Customer service is the factor of E-commerce website that can predict consumer purchasing decision the most. The latter factors are clarity and security, convenience, commerce, and communication respectively.

### Keywords

Factor Analysis, Website, E-commerce, Purchasing Decision

### Introduction

Nowadays, we can expand the market and create more opportunities for entrepreneurs by supporting and developing the usage of E-commerce for small and medium-sized enterprises (SMEs), community enterprises, clusters, and agricultural co-operatives. This is to improve process in business, trade, service, and access market in order to increase capacity in competition (Ministry of Information and Communication, 2011, 44)

A survey of National Statistics Office shows that the value of E-commerce in Thailand continually growing, which had the total value of 744,419 million baht in 2012. From this value, 121,392 million baht was the value of E-commerce between business and customers (B2C), which is accounted for 16.3 percent of the total value (Office of National Statistics, 2013). In 2013, it increased to 768,014 million baht. From this value, 182,033 million baht was the value of



E-commerce between business and customers, which is accounted for 23.7 percent of the total value (Office of National Statistics, 2014). Moreover, the increase continued in 2014-2015 from 411,715.41 million baht to 474,648.91 million baht for the consumer electronics business between business section and consumers (Electronic Transactions Development Agency [ETDA], 2015)

We can see that the value of B2C is increasing every year. The reason might be because the increasing rate of Internet access of population. Another reason is the familiarity of Internet usage in daily life makes consumers purchase more on Internet, which is more convenient and faster. Internet not only causes changes in business sector, but it also affects consumer behaviors, way of life, work, and activities for entertaining and consumption. At the same time, Internet is another channel for selling. Moreover, some organizations use Internet for other purposes related to business (Yingkriangkrai, 2013, 75)

Electronic business academic center organized a workshop on topic of the application of ICT for managing business network in order to build brand for Lampang Biz Club. This makes Lampang Biz Club or business enterprise in Lampang improve their skills more on using ICT and build a brand that is relevant to their business. From the evaluation of this project, the researcher found that those who already have their brands will process to register in order to use their brand in business. They also want to develop website for the purpose of E-commerce (Lampang Rajabhat University, 2016). E-commerce is a business that uses Internet as a channel in conducting business like communicating with customers, promotion, sale, and payment. E-commerce is easy to establish and does not require high capital. However, it is not so easy to become successful in this business, as it is not easy for customers to have interaction with entrepreneurs. This is an obstacle that makes customers have less trust toward entrepreneurs and do not come back to buy (Department of Business Development, 2011, 1).

Therefore, factors of E-commerce website affecting consumer purchasing decision in Lampang province are important for the development of websites that are relevant to customer preferences.

## Objectives

1. To analyze factors of E-commerce website.
2. To analyze the relationship between factors of E-commerce website and consumer purchasing decision.

## Literature Review

### 1. E-commerce Website

The four main factors of online store on website that should be taken into consideration before developing are as followed (Sawettikul, 2014, 53): 1) content is the most important thing that makes website looks attractive. There are many forms of content on website. Content should always be up to date. 2) Community is a communication channels for community or website society. It is like another society of users to interact to one another. 3) Customization should be done to make electronic store front attractive and 4) commerce is being done through website, which can create revenue for website. However, conducting E-commerce which is excellent in creating website requires attention on many details for the usability of the website. These details are complicated and affecting consumer purchasing decision like using email addresses instead of usernames, using breadcrumbs to ease navigation, visible contact information, visible search field, showing recommended and related products, calling to action, security badges, breaking up the order process, visible cart and content, showing every fee in the shopping cart, and confirming page. Usability of E-commerce website is very important in conducting business. If consumers satisfied, they will come back for the service again. Therefore, creating a good website experience for customers is one of important objectives for online stores. (Bangkok University, 2012, 105-109)

### 2. Factors affecting consumer behaviors in purchasing products online

Factors affecting consumer behaviors in purchasing products online that entrepreneurs can control and manage are 4Ps or marketing mix, which consists of product, price, promotion, and place. Factors affecting consumer behaviors in purchasing products online are also affecting consumer-purchasing decisions. Consumer purchasing decision process has the following steps (Armstrong & Kotler, 2012, 89-91 ; Department of Business Development, 2011, 21-27): 1) need identification is when consumers want to purchase a product or service due their needs or benefits of the products. In general, customers have different preferences, 2) information search is when consumers search for choices of particular products or services, 3) evaluation alternatives is when consumers make comparison of alternatives though online channels before making a decision to buy depend on price and trustworthiness, 4) purchase is proceeded, after consumers made a decision, 5) post purchase behavior: after consumers decided to buy, they usually evaluate by using price. So, if they are satisfied with the product or service, they will come back and buy again in the future.

For aforementioned details, it can be summarized that all four factors of online stores will support in planning for business direction including helping to set scope of ideas in order to create an online store, which can be started at determining content, information, and channels to communicate with customers as community or website society. As well as, to customize storefront is attractive for visitors. However, in order to make a website looks perfect, it requires adding some more details that respond to the usage of consumers, which affects consumer purchasing decision. The research model is shown in Figure 1.

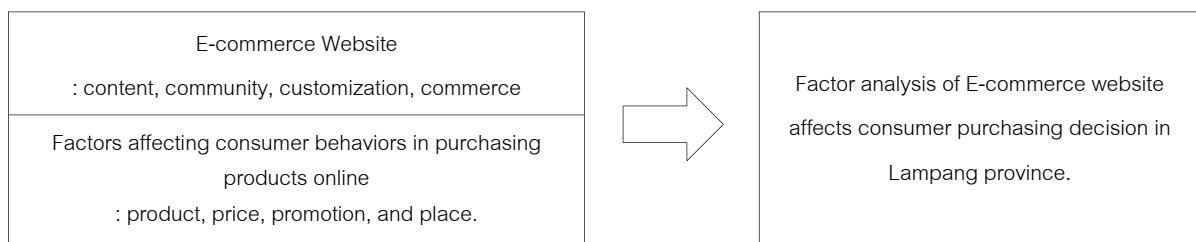


Figure 1: Research Framework

## Research Methodology

### 1. Population and Sample Group

Consumers who live in Muaeng Lampang district, Lampang province and have done their purchase through an E-commerce website since Muaeng Lampang has expanded either business, technology internet can be accessible. The sample group was selected by convenience sampling method. Referred to Nunally and Everitt, the sample size should be at least 10 times of number of used variable (Nunnally, 1978; Everitt, 1975 cited in Srisatidnarakul, 2012). Therefore, a total of 56 variables were used and the sample size was 560 to prevent an error from data collection, 56 samples were added. That the total sample size was 616. The questionnaire has returned with validity for 600, representing 97.40%.

### 2. Research Instrument

A questionnaire on factors of E-commerce website affecting consumer purchasing decision, which were reviewed for content validity by five experts and Cronbach's alpha coefficients of questionnaires were .910.

### 3. Statistics used in Data Analysis

The statistics used in data analysis were percentage, arithmetic mean, standard deviation, correlation coefficient, exploratory factor analysis, and multiple regression analysis. The data were analyzed by using a statistical software SPSS.

#### 4. Research Process

4.1 Study related methods and researches on factors of E-commerce website and consumer decision.

4.2 Create and develop instrument by using the following steps: (1) summarize related methods and researches on factors of E-commerce website affecting consumer purchasing decision and methods in creating instrument from (1), (2) write a draft for questionnaire, (3) send the edited questionnaire to the experts in order to evaluate on content validity and edit for improvement, which the experts who evaluate research tools are divided into three fields, which are information and communication technology including Dr. Oran Chieochan and Asst. Prof. Thanun Thothom, business field including Assoc. Prof. Dr. PaitoonInthakan and Asst. Prof. Dr. Anurak Arthid Gwinn, and Thai language fields to determine the correctness was Dr. Thanaporn Mucome. Five experts were selected by using purposive sampling by considering the criteria of doctoral degree or having an academic position at least an assistant professor, (4) find the confidence value of the whole questionnaire after editing by being tested with 30 master degree students of business major. Then, analyze the result from the confident value of the questionnaire by solving for Cronbach's Alpha coefficient, which was the rating scale questionnaire.

4.3 Collect data by sending the questionnaire to the sample group and received the answer from 600 cases.

5. Analyze Data by Using Exploratory Factor Analysis, Which Was Done As Followed: Analyze the data from sample group by testing for suitability of the data. Extracting the initial factors and perform orthogonal rotation of the factor axis in order to determine the factors of E-commerce website. Consider on selecting suitable and meaningful factors. The steps in selecting for suitable factors are as followed (1) the factors have variance value more than 1, (2) variance value can be noticed from the weight of each factor that required to have the weight value of at least 0.30. The highest factor value will be selected. In case, there are factors with equal weight, those with weight more than 0.10 will be considered. However, if the magnetic variation value is less than 0.10, this will be considered as redundant. This will show that this variable is not a factor, (3) there must be at least three variables that are noticeable for each factor. If there are less than three variables, that factor will be eliminated, as it is not a clear factor. (Tayraukham, 2009)

6. Analyzing the Data by Analyzing for Correlation as in the Following Steps: Analyzing correlation by using Pearson Correlation and testing the assumption for multiple regression analysis by computing for variance in flation factor (VIF), and tolerance value. Then, conduct multiple regression analysis between factors of E-commerce website and consumer purchasing decesion by taking the variation into the equation by using stepwise method. After that, write the regressionne quation.



## Research Results

### 1. The Results of Analysis Factors of E-commerce Website.

#### 1.1 The results of personal data analysis is in Table 1

Table 1

The results of personal data analysis

Measure	Item	Frequency	Percentage
Gender	Female	313	52.2
	Male	287	47.8
Education	Undergrad Degree	64	10.7
	Bachelor	456	76.0
	Master	70	11.7
	PhD	10	1.7
Career	Government / State Enterprises	120	20.0
	Employees	389	64.8
	Owner	36	6.0
	Student	55	9.2
Monthly income	Less than 10,000 baht	55	9.2
	10,001 - 20,000 Baht	94	15.7
	20,001 - 30,000 Baht	296	49.3
	30,001 - 40,000 Bath	118	19.7
	40,001 - 50,000 Bath	31	5.2
	More than 50,001 baht	6	1.0
Experience in buying products from website.	Less than 1 year	135	22.5
	1-2 year	396	66.0
	2-3 year	62	10.3
	Up to 3 year	7	1.2

From the Table 1, the most respondents were female 313 persons equal to 52.2%, their education was bachelor's degree for 456 persons equal to 76.0%, the respondents' career was employee for 389 persons, their monthly income was from 20,001 - 30,000 Baht equal to 49.3%, and 396 respondents have 1-2 years experiencing in buying products form website 66.0%.

1.2 The perspective Review of E-commerce website affecting consumer purchasing decision in Lampang province details are shown in Table 2.

Table 2

The mean and standard deviation

Item	Mean	SD
1. Speed in downloading and presenting data.	4.89	0.30
2. There are several payment methods such as E-Banking, Credit Card, and Atm.	4.87	0.32
3. There are links of webpage that are relevant to the current page.	4.87	0.34
4. The website is linked with social media like Facebook, Line, and Google plus.	4.86	0.34
5. There is a security system to secure the data.	4.67	0.47
6. The site displays openly honest information on the order.	4.66	0.48
7. Providing parcel tracking system.	4.65	0.47
8. Order form shows clear, accurate, and thorough information.	4.62	0.48
9. There is a system for encoding by using log in.	4.56	0.49
10. Providing a secure payment system.	4.55	0.50
11. Customers can make an order 24 hours.	4.55	0.54
12. Using personal information is appropriate.	4.49	0.51
13. Easy and convenient payment system.	4.48	0.53
14. There are many channels to contact the owner or webmaster.	4.45	0.53
15. Fast online purchasing process.	4.44	0.55
16. The website is accessible 24 hours.	4.36	0.53
17. Content classifications are clearly subdivided.	4.30	0.48
18. Users can make customization of products by themselves.	4.27	0.50
19. The information presented on the website has a consistent story throughout	4.23	0.43
20. There is a channel on the website to give opinions and discussion board for each group.	4.22	0.45
21. The information on the website is always up to date.	4.21	0.45
22. There is a clear explanation for product guarantee.	4.21	0.48
23. The website can present the detail of products users customized.	4.20	0.55
24. Reference the source of information.	4.16	0.41
25. Website display correctly on your web browser like Internet explorer, Firefox, Chrome.	4.10	0.33
26. The coherence of topics in website structure is appropriate.	4.10	0.34
27. The website has a tracking system in order to search for products and service that customers are interested.	4.10	0.45
28. The information presented in the website is both for selling products and service.	4.09	0.41
29. The website can show correct information of different devices like PC, notebook, tablet, and smartphone.	4.08	0.31
30. There are different ways of presenting information in the website like text, photos, audio, or multimedia	4.08	0.45

Table 2

The mean and standard deviation (cont.)

Item	Mean	SD
31. There is return policy within specific time.	4.07	0.52
32. Users can access information or service of the website accurately and thoroughly.	4.06	0.46
33. There are many channels to receive orders from customers like shopping Cart, email, and Telephone.	4.06	0.50
34. Providing detail of producers and distributors.	4.06	0.57
35. There is an easy and convenient way to contact webmaster.	4.06	0.57
36. Providing email address for contacting on business detail with users.	4.06	0.61
37. There is a menu (choices) to see website overview.	4.05	0.32
38. The information in the website should be complete, accurate and consistent.	4.05	0.33
39. There is an advertisement for the website on other media.	4.05	0.44
40. The beauty of the site is the style of the website, the colour scheme, the fonts displayed on the website.	4.04	0.40
41. The website has customer behaviour tracking system like number of visitors and duration of time spending on the website.	4.04	0.46
42. There is a classification of information in order to search and link information easily.	4.04	0.55
43. Website shows structure and data link in the overview.	4.03	0.50
44. Users share information on website to make interesting information.	3.99	0.67
45. There are internal and external links that are relevant and appropriate.	3.98	0.62
46. Users take part in giving opinions in order to improve the performance of the website.	3.96	0.67
<b>Total mean and standard deviation. (1-46)</b>	<b>4.28</b>	<b>0.17</b>
47. Short and attractive website titles.	4.70	0.49
48. Appropriate positioning of goods on web pages.	4.59	0.50
49. Product interest and want hard to buy in normal channels.	4.53	0.50
50. Presentation of interesting products during the festival.	4.53	0.51
51. Popular products and lack in the normal channel purchase.	4.48	0.54
52. Promote sales by offering online discount coupons.	4.41	0.56
53. Online prices lower than offline.	4.39	0.51
54. There is advertising on the website.	4.32	0.50
55. Website name corresponds to the item sold.	4.31	0.58
56. Website titles are appealing, easy to remember and attractive.	4.27	0.51
<b>Total mean standard deviation. (47-56)</b>	<b>4.45</b>	<b>0.29</b>
<b>Total mean standard deviation. (1-56)</b>	<b>4.31</b>	<b>0.16</b>

From the Table 2, the perspective Review of E-commerce website affecting consumer purchasing decision in Lampang province is at a high level ( $\bar{X} = 4.31$ ,  $SD. = 0.16$ )

The verification results of the suitability of techniques in analyzing factors are listed in Table 3 as followed:

Table 3

Analyzing the suitability of data by using Kaiser-Meyer-Olkin (KMO) and Barlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	13964.342
	Df	703
	Sig.	.000

From Table 3, the KMO Index was .812 indicating that the data set could be applied analytical technique, the Factor Analysis, at high satisfactory level. The result was consistent with Kaiser and Rice guideline (Wanitbancha, 2011). According to the Bartlett's Test of Sphericity result, it revealed that the Chi-Square was statistically significant ( $Sig < 0.05$ ), demonstrating that the Correlation Matrix of different variables had correlations. Therefore, the data could be further used for the Factor Analysis.

1.4 The results of extraction of the initial factor are listed in Table 4

Table 4

The Eigen values of initial factor by analyzing the main factors

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.014	15.587	15.587	7.014	15.587	15.587
2	6.365	14.145	29.732	6.365	14.145	29.732
3	3.474	7.719	37.451	3.474	7.719	37.451
4	2.397	5.327	42.779	2.397	5.327	42.779
5	2.062	4.583	47.362	2.062	4.583	47.362
6	2.011	4.468	51.830	2.011	4.468	51.830
7	1.783	3.962	55.792	1.783	3.962	55.792
8	1.440	3.199	58.992	1.440	3.199	58.992
9	1.327	2.949	61.941	1.327	2.949	61.941
10	1.232	2.738	64.679	1.232	2.738	64.679
11	1.118	2.484	67.163	1.118	2.484	67.163
12	1.007	2.238	69.401	1.007	2.238	69.401



The primary analysis can be summarized, as there are 12 suitable factors. However, it requires further studies in order to know variables of each factor. Therefore, it is required to further analysis by using varimax orthogonal rotation.

1.5 The result from the orthogonal rotation in order to consider the variables of each factor found that there are eight factors. Factor 1 consists of eight variables, which their weight is ranging from .658-.924. Factor 2 consists of five variables with the weight ranging from .685 - .886. Factor 3 consists of 6 variables with the weight ranging from .652 - .828. Factor 4 consists of five variables with the weight ranging from .699 -.915. Factor 5 consists of four variables with the weight ranging from .653 - .886. Factor 6 consists of 4 variables with weight ranging from .452 – .862. Factor 7 consists of three variables with weight ranging from .768 - .827. Factor 8 consists of three variables with the weight ranging from .424 - .744. Factor 9, 10, 11, and 12 were eliminated due to their variables are not relevant to the criteria of Tayraukham (2009).

1.6 Results from defining meaning and factors' name by examining from factor loading. If factor loading of variable in the factor has high value (approaching +1 or -1), that variable belongs to that factor. For the factor names that are just defined, we considered it from variables in that factor. The results of defining meaning and name are listed in Table 5.

Table 5

Results of defining meaning and factor name

Factor order	Factor name	Variables	Factor loading
1	Context	1) The coherence of topics in website structure is appropriate. 2) The information presented in the website is both for selling products and service. 3) overview to see website (choices)There is a menu . 4) The website has customer behavior tracking system like number of visitors and duration of time spending on the website. 5) There is a channel on the website to give opinions and discussion board for each group. 6) Referencing the source of infomation 7) There are different ways of presenting information in the website like text, photos, audio, or multimedia. 8) The website has a tracking system in order to search for products and service that customers interested.	.924 .727 .715 .715 .696 .692 .685 .658

Table 5

Results of defining meaning and factor name (cont.)

Factor order	Factor name	Variables	Factor loading
2	Commerce	1) Fast online purchasing process. 2) There are many channels to contact the owner or webmaster. 3) Customers can make an order 24 hours. 4) Easy and convenient payment system. 5) The website is accessible 24 hours.	.886 .865 .820 .771 .685
3	Communication	1) There is an ads for the website on other media. 2) Providing detail of producers and distributors. 3) Providing email address for contacting on business detail with users. 4) There is return policy within sepecific time. 5) Users can access information or service of the website acurately and thoroughly. 6) There are many channels to receive orders from customers like shopping Cart, email, and Telephone.	.828 .761 .758 .758 .707 .652
4	Connection & Collaboration	1) There are internal and external links that relevant and appropriate. 2) There is a classification of information in order to search and link information easily. 3) Users share information on website to make interesting information. 4) Users take part in giving opinions in order to improve the perfomance of the website. 5) There is an easy and convenient way to contact webmaster.	.915 .841 .791 .752 .699
5	Customer Service	1) Providing parcel tracking system. 2) Order form shows clear, accurate, and thorough information. 3) Using personal information is appropriate. 4) Providing a secure payment system.	.886 .852 .754 .653
6	Customization	1) The information on the website is always up to date. 2) Users can make customization of products by themselves. 3) The website can present the detail of products users customized. 4) The website can show correct information of different divices like PC, notebook, tablet, and smartphone, etc.	.862 .793 .718 .542

Table 5

Results of defining meaning and factor name (cont.)

Factor order	Factor name	Variables	Factor loading
7	Convenience	1) Speed in downloading and presenting data. 2) There are links of webpage that relevant to the current page. 3) The website is linked with social media like Facebook, Line, and Google plus.	.827 .784 .768
8	Clarity and Security	1) There is a system for encoding by using log in. 2) There is a security system to secure the data. 3) There is a clear explanation for product guarantee.	.744 .665 .424

## 2. The results of analysis relationship between factors of E-commerce website and consumer purchasing decision.

The results from analyzing regression in order to predict the factors of E-commerce website affecting consumers purchasing decision in Lampang province have the following details, which results of correlation analysis by using Pearson correlation listed in Table 6.

Table 6

Results of Correlation Analysis

Correlation	Consumer Purchasing Decision	Context	Commerce	Communication	Connecting and Collaboration	Customer Service	Customization	Convenience	Clarity and Security
ConsumerPurchasingDecision	1.00	-.040	.347 <sup>**</sup>	-.057	.062	.530 <sup>**</sup>	.177 <sup>**</sup>	.123 <sup>**</sup>	.473 <sup>**</sup>
Context	-.040	1.00	.004	.344 <sup>**</sup>	.155 <sup>**</sup>	.000	.015	.005	.007
Commerce	.347 <sup>**</sup>	.004	1.00	.017	.067	.374 <sup>**</sup>	.441 <sup>**</sup>	.000	.487 <sup>**</sup>
Communication	-.057	.344 <sup>**</sup>	.017	1.00	.427 <sup>**</sup>	.003	.070	.060	.044
Connecting and Collaboration	.062	.155 <sup>**</sup>	.067	.427 <sup>**</sup>	1.00	-.030	.054	.048	.028
Customer Service	.530 <sup>**</sup>	.000	.374 <sup>**</sup>	.003	-.030	1.00	.189 <sup>**</sup>	.054	.318 <sup>**</sup>
Customization	.177 <sup>**</sup>	.015	.441 <sup>**</sup>	.070	.054	.189 <sup>**</sup>	1.00	-.001	.206 <sup>**</sup>
Convenience	.123 <sup>**</sup>	.005	.000	.060	.048	.054	-.001	1.00	-.010
Clarity and Security	.473 <sup>**</sup>	.007	.487 <sup>**</sup>	.044	.028	.318 <sup>**</sup>	.206 <sup>**</sup>	-.010	1.00

<sup>\*\*</sup>Correlation is significant at the 0.01 level.

From Table 6, we found that correlation values of each factor of E-commerce website and consumer purchasing decision are between .040 - .530. Then, in order to test assumption, the regression analysis was done, which the value of variance inflation factor (VIF) is between 1.008 - 1.226, tolerance value is between .815 - .992. This shows that it is an independent variable and not related to each other. Later, multiple regression analysis was done by putting variables in the equation with the Stepwise method. The research could obtain multiple coefficient (R) value is equivalent to 0.642, which has coefficient of prediction ( $R^2$ ) of 41.2 percent and has standard error of .22383. When testing for linear relationship between independent variables and dependent variables, it is found that the significant level is at 0.000. This means that independent variables have linear relationship to the dependent relationship at the significant level of 0.01. The detail is listed in Table 7.

Table 7

Results of regression analysis

Variables	B	SEb	$\beta$	t	p-value
Customer service: C1	.300	.024	.419	12.598	.000
Clarity and security: C2	.298	.029	.344	10.344	.000
Convenience: C3	.115	.034	.106	3.365	.001
Commerce: C4	-.092	.025	-.129	-3.710	.000
Communication: C5	.065	.020	.115	3.298	.001
Constant value 1.295; $SE_{est} = \pm .22383R = .642$ ; $R^2 = .412$ ; $F = 83.371$ ; p-value = .000					

From Table 7, the results of regression analysis in order to predict factors of E-commerce website affecting consumer purchasing decision in Lampang found that customer service, clear and safety, convenience, commerce, and communication have multiple correlation with consumer purchasing decision in Lampang province. The multiple correlation value is 0.642, which can predict consumer-purchasing decision 41.2 percent. The standard error in prediction is equivalent to  $\pm 0.22383$ .

When considering the regression absolute value of predictors, the research found that customer service can predict consumer purchasing decision the most accurate, which has the absolute value as raw score and regression absolute values in standard form are .300 and .419. The latter factor is clarity and security has the absolute value as raw score and regression absolute

values in standard form are 0.298 and 0.344. Convenience is the third factor that can give accurate prediction on consumer purchasing decision, which the absolute value as raw score and regression absolute values in standard form are .115 and .106. Commerce is the fourth factor that can give accurate prediction on consumer purchasing decision, which the absolute value as raw score and regression absolute values in standard form are -0.92 and -0.129. Communication is the fifth factor that can give accurate prediction on consumer purchasing decision, which the absolute value as raw score and regression absolute values in standard form are 0.065 and .115 respectively. This can be written in prediction equation for consumer purchasing decision as raw score as follows:

$$\hat{Y} = 1.295 + 0.300(C1) + 0.298(C2) + 0.115(C3) - 0.092(C4) + 0.065(C5)$$

## Discussion

The results from exploratory analysis of factors of E-commerce website can be concluded that there are eight factors, which are 1) context, 2) commerce, 3) communication, 4) connection & collaboration, 5) customer service, 6) customization, 7) convenience, and 8) clarity and security. Context is the first variable that can explain variation the most, because context is website structure that shows overall picture of product details and form of product presentation, which stated that most of the websites have a lot of information to fit in only one page (Yang, Kim, Dhalwani & Vu, 2008, 7). So, it is necessary to make customers know what the information is available on this website. Designers are required to set the structure and design website in overall picture. Context should be classified in order for customers to acknowledge and follow to the other pages. This is relevant to the research of Premsukjai & Tungkuptanon (2012, 180), which studied on the analysis of factors that affect consumer purchasing decision in electronic business. They found that factor in terms of characteristics of web designing is the factor with the highest Eigen values and the most important factor. Naraphitakkul (2016, 28) has studied on factors of website that affect customer satisfaction level, which results in customer loyalty on E-commerce website for business to customers (B2C) in Thailand, which studied eight factors of website (8C Framework) and found that context is the factor that can attract customers to visit the website the most, as context is to arrange structure and design website that gives importance to presentation of website and data.

Results from correlation analysis of factors of E-commerce website affecting consumer purchasing decision can be summarized as customer service, clarity and security, convenience, commerce, and communication has multiple correlations with consumer purchasing decision. The other three components of the e-commerce website from factor analysis are context,

connection & collaboration and customization. It does not affect the purchasing decision as it is only one element of the website in determining the right place to present product or service information. In addition, it is a tool to facilitate the linking of data both inside and outside the website including the ability to update information will not affect the purchasing decision if the product or service does not meet consumer needs. Therefore, factors in context, connection & collaboration and customization elements are elements of e-commerce website that is required to focus on the activity through the website and makes the website interesting. It is consistent with Maneesong (2011, 77-79) who mentioned that the nature business must make the website be more accessible to consumers by the main purpose of website development is to provide information on products and services, to create a corporate image, advertising and customer service through the Internet in the link.

Customer service can predict consumer purchasing decision the most accurate, because E-commerce website usually provides post purchase service in order to facilitate and create impression toward customers. This is relevant to Social Commerce Constructs (Hajli, 2013) which contain 1) Forums and Communities 2) Rating and Reviews 3) Recommendation and Referrals, which users directly generated content in an active way with rate tag or write reviews or in a passive way by customers behavior (Wu, Xu, Mo & Liao, 2015). Moreover, the use of certain commercial features of the society can motivate consumers to engage in social commerce initiatives (Thomas, Sven & Sebastian, 2016) and it is relevant to the study of Rattanasuwan & Srijanya (2010) on consumer decision-making process, which stated that providing post purchasing service is a way to create impression toward customers in order to make a purchase again and become repetitive customers. This can be said to be a complete decision making process, which is relevant to the study of Thananimit (2016). This is a study on the effects of quality of electronic service on trustworthiness and usage of retail website in Thailand. The result found that quality of electronic service determined trustworthiness and satisfaction in electronic system with significant level at  $p=0.000$  as well.

## Conclusion

Customer Service is the factor that affects to the customer purchase since it is able to facilitate for presenting the information in order processing and tracking products in the environment of online product.

Therefore, developing to attain E-commerce website, aside from considering about the main components of the online store, must be engaged in the online customer service too. The website must be on hand to support the self service exhibiting clear information and consumer realizes about information security to satisfy and provide great convenience to customer. Consequently, these will influence on consumer purchasing decisions.

Suggestions from the research of business entrepreneurs through e-commerce websites should develop websites that respond to the target audience, most of which are employees who graduate bachelor degree with a salary of 20,001 - 30,000 baht and have 1 - 2 years of experience in purchasing products on the website. In addition, those employees will take a lot of time to work for the organization. Therefore, the website developed must provide information and business services clearly in limited time.

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