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THE DETERMINANT OF ONLINE CUSTOMER LOYALTY OF E-PHARMACIES FOR HERB CITY IN SARABURI THAILAND

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ABSTRACT

It is well known that the 21st century is an era of innovation, technological solutions, and e-commerce which has a great impact on the internet and penetration. The following study has a primary aim is to understand the positive impact of tactile information, post order convenience and E-pharmacy aesthetics on online customer loyalty through the mediating role of E-pharmacy image. The data regarding E-pharmacy and online customer loyalty has been collected from the customer service officers of the entrepreneur pharmaceutical firms. Moreover, the data mainly has been collected through a survey questionnaire and distributed among the relevant authorities. Under the distributed survey the measurement scales are also used such as purchase intention, the price premium for online purchase intention. Under the analysis section, the various analysis techniques are used such as KMO, SEM, descriptive and demographic analysis as well as factor loading, Bartlett test. A convergent validity test is also being applied to measure and examine the convergent and self-correlation of the variables. The results further illustrate that post-order convenience has an insignificant impact on online customer loyalty related to the product or use of E-pharmacy. While, the results also indicated that the E-pharmacy image has also a positive mediating role in the relationship of post-order convenience, tactile information and E-pharmacy with online customer loyalty. In the end, it is recommended that future studies must use other useful variables in another sector.

INTRODUCTION

E-commerce sector has been growing rapidly and can be defined as "all electronically mediated information exchanges between an organization and its external stakeholders" (Chaffey, 2015). There are challenges that the online buyers face regarding this, like the perception of customer about the service, product or post purchase experience that would lead to repurchase of the product. So, Online business has become a complex and unique industry as compared to the actual and physical sell & buy process as a tangible product is missing in the online buying process (Chaffey, 2015; Kaushik, Khare, Boardman, & Cano, 2020).

Table 1.1: E-commerce activities in Thailand (Hootesuite)

Activities	%
Searching online for a product	91%
Visited an online retail store	87%
Purchased a product online	85%
Make an online purchase via mobile	74%

In order to flourish the e- business, loyal customers are very necessary. There are many attributes leading to loyalty of online customers, like company image and aesthetics and post purchase satisfaction. The company needs to portray their products in such design parameters that will attract the attention of its customers and create its positive image. The tactile information helps the clients to visualize the product, which can ease the process of online buying for the customer and lead to post purchase satisfaction, ultimately leading to long term online customer loyalty (Cano, Perry, Ashman, & Waite, 2017; Kaushik et al., 2020; Nisar & Prabhakar, 2017).

Graph 1.1: Number of online shoppers in Thailand (ystats.com)
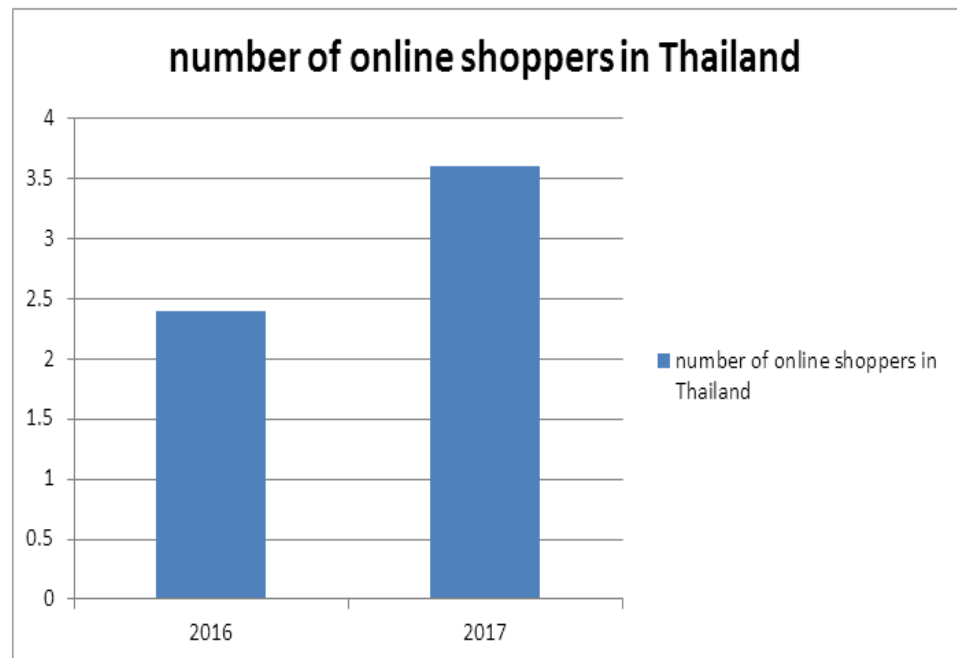
Previous research works have identified many factors that can contribute to the success of online retailers(Baek et al., 2015; Blut, Chowdhry, Mittal, & Brock, 2015; Chang, Cheung, & Tang, 2013; M.-Y. Chen & Teng, 2013; Cyr & Head, 2013; Dey, Jana, Gourisaria, Mohanty, & Chatterjee, 2015; Huang & Benyoucef, 2015; Olteanu, Peshterliev, Liu, & Aberer, 2013; Thakur & Srivastava, 2015) However, there is a paucity of research on the e pharmacy attributes and no study, to the best of the author's

knowledge, has focused on the success of pharmacies and the loyalty of their customers (Boardman, McCormick, & Lindridge, 2019; Kaushik et al., 2020; Morton, 2018; Oghazi, Karlsson, Hellström, & Hjort, 2018). The present study attempts to fill this gap. This study has the following research objectives:

- To examine the impact of E- pharmacy aesthetics on Online Customer Loyalty
- To examine the impact of E- pharmacy image on Online Customer Loyalty
- To examine the impact of post order convenience on Online Customer Loyalty
- To examine the impact of tactile information as a mediator in the relationship of E-pharmacy aesthetics and Online Customer Loyalty
- To examine the impact of tactile information as a mediator in the relationship of E-pharmacy image and Online Customer Loyalty
- To examine the impact of tactile information as a mediator in the relationship of post order convenience and Online Customer Loyalty

The main scope of this study is to explore the effects of E- pharmacy aesthetics, e-pharmacy image and post order convenience on online customer loyalty in the pharmaceutical services in Thailand and tactile information as a mediator in these relationships. Theoretically, this study adds contribution to the Regret theory and the literature content by investigating the underlying mechanism by examining the effect of tactile information as a mediator. Practically, this study has implications for firms that strive for improving loyalty of the online customers by improving aesthetics & image of the e- pharmacy and post order convenience of its customers through tactile information.

This paper is organized in the following way. The first section gives the Introduction to the topic of research and the variables under study. The second section gives a detailed review of the literature on these variables. Next, the research methodology is explained in detail. The fourth section provides the result of the statistical analysis, followed by discussion, conclusion, limitation and the theoretical & managerial implications.

LITERATURE REVIEW AND THEORETICAL BACKGROUND

This study is based on the theory of "Consumer Regret", which describes that the incidence of regret on the purchase of a product or service depends on the relationship the consumer has with the brand and this relationship then influences the decision of purchase in the future.

Impact of E- pharmacy aesthetics

The aesthetics play an important role in attracting the online clients, because they create a positive attitude towards the web page of pharmacy that in turn encourages them to purchase and repurchase and can lead to positive word of mouth (H.-M. Chen et al., 2016; Fang, George, Shao, & Wen, 2016; Hasan, 2016). This implies that aesthetics can contribute to loyalty of online customers and has direct links to OCL (Kaushik et al., 2020). So, this study can hypothesize:

Hypothesis 1: E- pharmacy aesthetics is significantly linked to online customer loyalty

Impact of E- pharmacy image

Research has suggested that the image of the product can create interest and involvement of the product that can in turn help the customer remember it and information about it that can stimulate positive response from the customer (Blanco, Sarasa, & Sanclemente, 2010). This way their confidence for the product is gained and the loyalty of online customers is gained (Blanco et al., 2010; Ganguly, Dash, Cyr, & Head, 2010; Ha &

Lennon, 2010; O'Brien, 2010). This shows that image has direct links to the online customer loyalty. So, this study can hypothesize:

Hypothesis 2: E- pharmacy image is significantly linked to online customer loyalty to online customer loyalty

Impact of Post order convenience

The e- pharmacy retailers must ensure adequate amount of support to the customer when they products have been purchased and this process must be made convenient for him. The support to clients can be improved by prompt delivery (Ahmad, Rahman, & Khan, 2017; Ballestar, Grau-Carles, & Sainz, 2016; Cao, Ajjan, & Hong, 2018) and having a toll free number that can listen to the queries or complaints and can offer instant solutions in case. Also, an order tracking facility can be included to satisfy the clients and make them loyal for further purchases (Çelik, 2011; Ganguly et al., 2010; Ha & Lennon, 2010; Luo, Ba, & Zhang, 2012; O'Brien, 2010; Oghazi et al., 2018). This implies that post order convenience has direct association with the trust and loyalty of online customers (Kaushik et al., 2020). So, this study can hypothesize:

*Hypothesis 3: Post order convenience is significantly linked to online customer loyalty*

Mediation of tactile information

Tactile information can be improved by providing details on the product like the manufacturing processes, the style, usage instructions and precautions. This information is very vital as this provides details for stimulating the purchase decision and purchase after use (Karimov, Brengman, & Van Hove, 2011). Since the customers are not able to touch and feel the product physically, so tactile information can aid in the purchase and loyalty as well (Boardman et al., 2019; Cano et al., 2017; Kaushik et al., 2020; Liu, Batra, & Wang, 2017; Morton, 2018; Nisar & Prabhakar, 2017). This implies that tactile information can create trust and loyalty in online customers (Kaushik et al., 2020), so, this study can investigate TC as mediating variable in these relationships and can hypothesize:

Hypothesis 4a: Tactile information acts as a mediator in the relationship of E- pharmacy aesthetics and online customer loyalty
Hypothesis 4b: Tactile information acts as a mediator in the relationship of E- pharmacy image and online customer loyalty
Hypothesis 4c: Tactile information acts as a mediator in the relationship of post order convenience and online customer loyalty
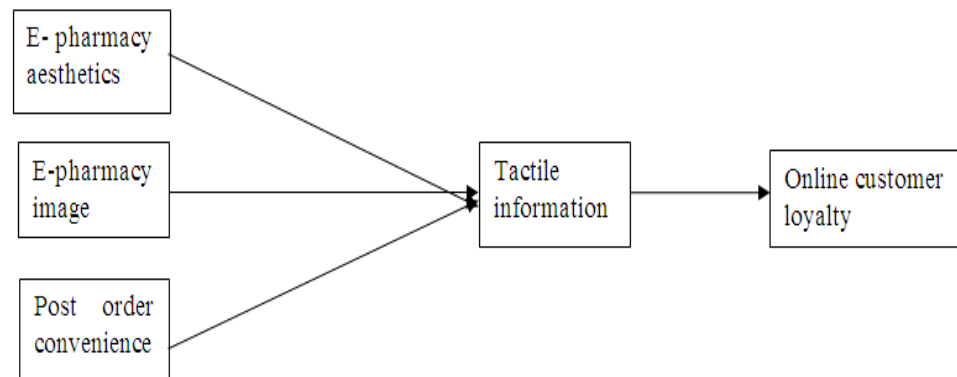
Research framework

METHODS
Sample characteristics

A survey design was used for this study. The research instrument was a self-administered questionnaire. The method of purposive sampling was used to locate the customer service officers from all of the entrepreneur pharmaceutical who were operating via an online store. In order to retain participant anonymity the names of the organizations and respondents have not been disclosed. The researcher implied the method of item response theory following the criteria of twenty responses against each item i.e. 26*20=520. All of the questionnaires were distributed after getting permission from relevant authorities.

Measures

The constructs were developed after significant literature review was carried out. The scales that have been incorporated have been verified by a number of studies. All of the scale items had significant reliability and validity scores in former studies. The validity and relevance of the scale items were confirmed by pretesting the questionnaire on managers and academicians and then changes were made according to their feedbacks. According to the directions of Campbell, Brislin, Stewart, and Werner (1970) the questionnaire was first formulated in English and then translated into Thai using the forward and back translation method. Two linguists and academicians who are fluent in both Thai and English were consulted for the translation. All of the scale items have been measured at a five point Likert scale, ranging from "1=strongly disagree" to "5=strongly agree".

E-planning aesthetics

The planning aesthetics of an online store are measured upon 5 factors; "visual design, navigation design, information design, responsive web-design, home page design and E-store niche". These factors were identified by reviewing the studies conducted by Brun, Kluge, Königsfeld, Fassnacht, and Mitschke (2013), Wang, Minor, and Wei (2011), Hasan (2016) and Ganguly et al. (2010).

Post-order convenience

Post order convenience was measured on the factors of "good customer support, order tracking facility, on-time delivery, flexible return policy and easy order cancellation". The items were adapted from the studies of Dholakia and Zhao (2010), Lawrence and Tar (2010), Chang et al. (2013) and Hasan (2016).

Tactile Information

Tactile information was measured on the basis of 5 factors; "enlarged image, modelled product, visual merchandise, extensive product details and product video". These factors were extracted from the studies of M. Kim and Lennon (2008), Blanco et al. (2010), Song and Kim (2012) and Ha and Lennon (2010).

E-planning image

The image of the online store was measured on the factors of "online shop recognition, secure transactions and personal information, online ratings and review, gender/ age-group specific store". These factors were drawn from the studies of Park and Kim (2003), J. Kim and Lennon (2013) and Wei and Lu (2013).

Online customer loyalty

Online customer loyalty measures the dimension of "purchase intention, browsing intention, price premium and recommendation to friends". These dimensions were established on the basis of the studies conducted by Oliver (1997) and Kandampully and Suhartanto (2003).

RESULTS
Demographics

A sample of 520 entrepreneurs was finalized to be used for the analysis. A total of 56.7 percent of the respondents were male and 43.3 percent were female. Gender equality in employment initiatives are still being developed in Thailand, thus the difference in gender employability is observed. The ages of 76.1 percent respondents were up to 35. And the working experience of 72.6 percent of the respondents ranged between 2 and 8 years. The managers, supervisors and assistant managers were the constituents of the sample therefore the age and experience statistics are high.

Descriptive analysis

The mean values are advancing to 4 demonstrating the comprehension and conformity in acceptance of respondents with the statements of the variables. The skewness values are within the range of -1+1, thus the data fulfills the assumptions of a normal distribution. However, outliers were present in the responses for Online CLoy, demonstrated by the high maximum value of 5.28.

Table 1: Descriptive Statistics.

		N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
		Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
EPHAet		411	1.00	5.00	3.1298	1.11369	-.078	.120
PostOC		411	1.00	5.00	3.3361	1.06110	-.286	.120
TeaInf		411	1.00	5.00	3.4327	1.21722	-.446	.120
OnlinCLoy		411	1.00	5.28	3.3659	1.19949	-.416	.120
EPHImage		411	1.00	5.00	3.4378	1.17819	-.434	.120
Valid N (listwise)		411						

KMO and Bartlett's

KMO measures the adequacy of the sample, as demonstrated in table 2. The KMO indicator is approaching 1 and the sphericty is also significant, thus the sample is adequate.

Table 2: KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.938
Bartlett's Test of Sphericity	Approx. Chi-Square	11912.741
	df	325
	Sig.	.000

Factor loading

Factor loadings are generated by constructing a rotated component matrix. The primary purpose of this matrix is to evaluate the contribution of each individual item in the overall construct. The loadings are all greater than 0.7 as demonstrated by table 3, and the items do not load against each other as well.

Table 3: Rotated Component Matrix[a]

	Component				
	1	**2**	**3**	**4**	**5**
PA1	.816				
PA2	.859				
PA3	.836				
PA4	.805				
PA5	.840				
PA6	.840				
PO1					.763
PO2					.761
PO3					.796
PO4					.849
PO5					.815
TI1			.835		
TI2			.838		
TI3			.857		
TI4			.884		
TI5			.894		
CL1		.852			
CL2		.864			
CL3		.858			
CL4		.873			
CL5		.878			
EP1				.814	
EP2				.846	
EP3				.876	
EP4				.869	
EP5				.855	

Convergent and discriminant validity

Convergent validity is measured on the basis of CR and AVE. The CR values are more than 0.7 and AVE values are greater than 0.5 (Hassan, Hameed, Basheer, & Ali, 2020; Iqbal & Hameed, 2020), thus CV persists. Discriminant validity is also present as the MSV values are figuratively less than the AVE values and self-correlation coefficients are also higher than those of the variable-variable correlation.

Table 4: Convergent and Discriminant Validity

|	CR	AVE	MSV	MaxR(H)	CL	PA	PO	TI	EP
CL	0.930	0.827	0.287	0.962	**0.910**				
PA	0.958	0.790	0.332	0.980	0.479	**0.889**			
PO	0.918	0.694	0.332	0.984	0.431	0.576	**0.833**		
TI	0.915	0.848	0.287	0.991	0.536	0.504	0.419	**0.921**	
EP	0.942	0.764	0.230	0.992	0.342	0.443	0.480	0.419	**0.874**

Model Fitness

CFA test was performed on the construct items in order to check the fitness of the measurement model. The CMIN value is 2.713 (under 3), IFI and CFI are 0.958 (greater than 0.9), GFI is 0.866 (greater than 0.8) and RMSEA is 0.065 (less than 0.08). All factors are in accordance with the threshold ranges, thus the model is proclaimed to be fit.

Table 5: Confirmatory Factors Analysis

| Indicators	Threshold range	Current values
CMIN/DF	Less or equal 3	2.713
GFI	Equal or greater .80	.866
CFI	Equal or greater .90	.958
IFI	Equal or greater .90	.958
RMSEA	Less or equal .08	.065

Figure 1. CFA
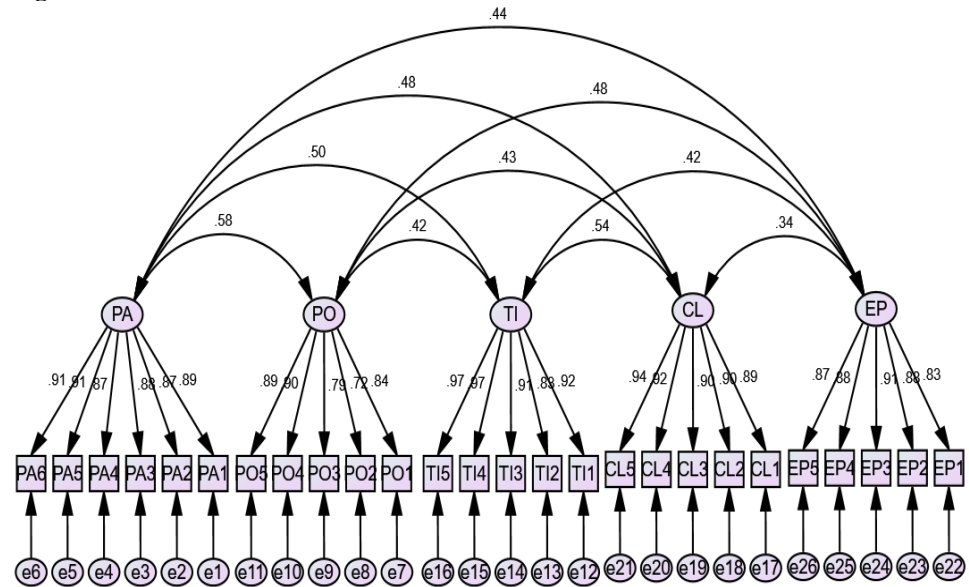
SEM

A unit increase in TeaInf produces an effect of 24.2 percent on OnlinCLoy, the hypotheiss os accepted as the relationship is significant. A unitary change in PostOc produces an effect of 6 percent in OnlinCLoy., the hypothesis is rejected as the relationship is insignificant. A unit increase in EPHAet produces a change of 14.3 percent in OnlinCLoy. The mediation of EPHImage produces an effect of 9.1 percent through TeaInf, 7.9 percent through PostOc and 7.2 percent through EPHAet. The hypotheses are accepted as the relationships are significant.

Table 6: Structural Equation Modeling

Total Effect	TeaInf	PostOC	EPHAet	EPHImage
EPHImage	.253***	.220**	.199**	.000
OnlinCLoy	.333***	.139*	.215**	.360***
Direct Effect	TeaInf	PostOC	EPHAet	EPHImage
EPHImage	.253***	.220**	.199**	.000
OnlinCLoy	.242**	.060	.143*	.360***
Indirect Effect	TeaInf	PostOC	EPHAet	EPHImage
EPHImage	.000	.000	.000	.000
OnlinCLoy	.091**	.079**	.072**	.000

Figure 2. SEM
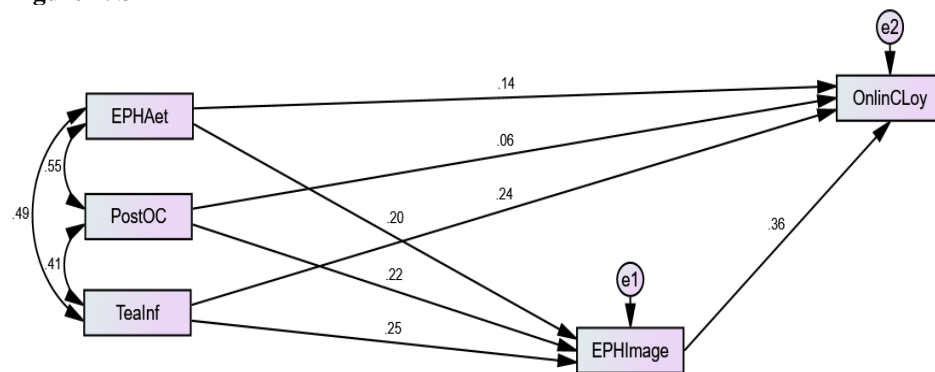
DISCUSSION

C.-F. Chen and Wang (2016) Demonstrate that in online retailing, customer loyalty programs play a significant role in understanding and improving the loyalty of customers. The era of technology also helped in maintaining the customer loyalty and vice versa. The results and findings of the study have illustrates that the role of e-aesthetic pharmacy has a significant impact on online customer loyalty. It has indicated that rapid technology and online learning have recognized the customer to loyal to the organizations (Islam, Rahman, & Hollebeek, 2018). Thus, there is a significant and positive impact between e-pharmacy aesthetic and online customer loyalty. Similarly, the results have also indicated that the e-pharmacy image has a significant mediating role in the relationship of tactile information, post order convenience, and e-pharmacy aesthetic and online customer loyalty. The more is the good and positive e-pharmacy image the more is the significant relationship of convince order and customer loyalty.

CONCLUSION

This research paper mainly examines the role of E-pharmacies activities like E-pharmacy activities, post order convenience and the tactile information on the online customer's loyalty, while considering the mediating impact of E-pharmacy image. The main aim of the study is to develop an E-pharmacy system with enhanced and better online customer loyalty. For this purpose, most of the data of the research are collected mainly from about 520 employees of the pharmaceutical sector of Thailand, in which 287 were female and 233 were male. For the calculation of data and information, the research study has also used some techniques and methods such as rotated component matrix, KMO, descriptive statistics, and SEM technique.

Implications and limitations

The verdicts of the following research paper will be very helpful and beneficial for the pharmaceutical sector of Thailand and also help the managers of the sector to understand the importance of E-pharmacy activities. The given research paper also has some practical implications, as it is useful for other online business in Thailand that wants to enhance the loyalty of their customers. Furthermore, the model evaluated in this research paper can mainly be used by pharmaceutical retailers to improve the customer's online experience. On the other hand, there are some limitations to the research. The research is exclusive to the pharmaceutical sector of Thailand, so the verdicts of the research may not be completely fit other sectors and firms. Hence, it is proposed to future studies that they should conduct a study that can be fitted to other sectors as well. Additionally, the cases explained are mainly based in Thailand and so the verdicts may be restricted to the Thailand market.

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