

## A Comparative Study of Customers Satisfaction towards E-Commerce between Males and Females of Gen Y

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### Abstract

The main objective is to investigate the gender differs based on ease of use, customer attitude, brand image, personal innovation, and customer satisfaction towards e-commerce's buyer behavior including to find the most influence factor on customer satisfaction towards e-commerce's buyer behavior of males and females. The 410 respondents were the sample size, which collected the data from customers who have experienced to purchase mobile phone or electronic products from e-commerce online. The quantitative research and online survey were applied for this study. Simple Linear Regression, Multiple Linear Regression, and Independent t-test were designed to test all hypotheses. The results of hypothesis one and two, ease of use was a statistical significant influence on customer attitude based on males and female. The results of hypotheses three and four showed that ease of use and personal innovation were statistical significant influence on customer satisfaction towards e-commerce's buyer behavior except customer attitude, and brand image were insignificant. Based on the results of hypotheses three and four, the researchers found that personal innovation was the most influence factor on customer satisfaction. The results of hypotheses five, six, seven, eight, and nine to find a different between males and females, the researchers found that both males and female from generation Y, they were not statistical significant different in attitude, brand image, personal innovation, and satisfaction in e-commerce purchasing except ease of use between males and females, which was significant.

**Keywords:** Attitude; Ease of use; Brand image; Personal innovation; Satisfaction

### Introduction

The growth of the e-commerce has provoked changes in the technology-based service, which created many opportunities of online business in term of individual customer of both male and female including businessperson. The digital marketing, and e-commerce has been continuously

expanding especially year 2020 and 2021 have been accelerated growth in e-commerce as the COVID-19 situation. Most consumers encouraged to shop online and e-commerce platform are fastest growing in the online market based on the Statista published in July 2021, “in 2020, global e-retail sales grew 27.6 per cent compare to the previous year. During that period, retail e-commerce sales accounted for 18 per cent of global retail sales” (Coppola, 2021). Based on the adoption and development of e-commerce in Southeast Asia’s e-commerce, the revenues were tripled in 2015 to 2020 and estimated to triple again by 2025 as predicted by the Council on Foreign Relations (2021). In Thailand, the generation Y is the most significant consumers that use the internet including digital technology (Amornvivat, Homchampa, Poudpongpaiboon, Ratanapinyowong, Mintarkhin, & Arakvichanun, 2014). As gender of both male and female is an important factors that affects customer satisfaction in the e-commerce market, especially generationY. Based on many previous research of gender studies, the researchers revealed the results that sex-related social norms and traditions, males may consider less information and less confused to buy products with minimum time and take less effort than females (Rajagopal, 2015; Kuruvilla, Joshi & Shah, 2009).

### **Research Objective**

In this study, the researchers focused to investigate the gender differences based on ease of use, customer attitude, brand image, personal innovation, and customer satisfaction towards e-commerce’s buyer behavior including to find the most influence factor on customer satisfaction towards e-commerce’s buyer behavior of males and females.

### **Literature Review**

The Technology Acceptance Model (TAM): Davis, Bagozzi, and Warshaw (1989) adapted the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975) to develop TAM, which aimed to predict using of technology system. TRA model provided the basic of belief based on influence attitudes. TAM model proposed a basis of linkage between ease of use and customer attitude, which lead to relate satisfaction of buyer behaviors.

The Innovation Diffusion Theory: The Innovation Diffusion Theory or The Diffusion of Innovation (DOI), Rogers (2003) developed the DOI theory. The purpose of this theory aims to predict the rate of adoption, which influenced based on five factors of innovation. (1) Relative

advantage: Rogers (2003) defined as “the degree to which an innovation is perceived as better than the idea it supersedes.” (2) Compatibility: defined as “the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters.” (3) Complexity: defined as “the degree to which an innovation is perceived as relatively difficult to understand and use.” (4). Trialability: defined as “the degree to which an innovation may be experimented with on a limited basis.” (5). Observability: defined as “the degree to which the results of an innovation are visible to others.” As Davis (1989) defined perceived ease of use in TAM theory as “the degree to which a person believes that using a particular system would be free of effort”, which is fitted to use technology systems, which is coincided with the construct of the DOI theory in term of the “complexity”, which was supported by Venkatesh and Davis (1996) and also Rania (2020) revealed that customer attitude was impacted by ease of use that is the link between the DOI and the TAM theory. Based on DOI theory, innovation in term of trialability was related to rate of he/she or personal adoption. Late personal adopters are importance less than earlier personal adopters of innovation in term of trialability as earlier personal adopters may gain more benefit in order gain more knowledge as personal innovation including have a better opportunity to gain more market share as a businessperson (Fliegel, Kivlin, & Sekhon, 1968).

**Personal Innovation or personal innovativeness:** Personal innovation is the degree of individual adopted innovation or new idea faster than others did (Rogers, 2003), which is similar to Goldsmith and Foxall's (2003) study who implied that personal innovation personality's trait means someone who are willing to try new things of both products/services (Goldsmith, d'Hauteville & Flynn, 1998). However, Goldsmith, R. E., d' Hauteville, and Flynn (1998) emphasized that personality-like trait that varied over individuals. In addition, Kim, Shin, and Lee (2013) represented two factors of personal innovation as product-specific innovativeness, which varied from one product to another product category, and life innovativeness, which mean innovativeness from his/her nature or based on the innate predisposition of innovativeness and sensory traits. Importantly, Agarwal and Prasad (1999) modified the TAM model, the researchers found that personal innovation was positive moderated influence on perceived ease of use, and compatibility, and also played a significant role to adopt an innovation including innovations' experience might

affect customer attitude to purchase or repurchase via perceived ease of use based on the level of technology system's ease of use.

#### **Literature review of hypotheses Ease of use and customer attitude**

Davis (1989) implied that ease of use is the degree of using particular technology or system in order to feel free of effort on the basis of individual believes. Davis et al. (1989) applied experimental research for their study and the researcher found that perceived ease of use was statistical significant influence on customer's attitude, which was supported by Taylor and Todd (1995) who applied survey research technique and found that customer attitude was significant influence by perceived ease of use as well as Mathiesson (1991), and Donald and Ricardo (2015).

H1: Ease of use is a statistical significant influence on customer attitude based on males of generation Y.

H2: Ease of use is a statistical significant influence on customer attitude based on females of generation Y.

#### **Ease of use, customer attitude, brand image, personal innovation, and customer satisfaction towards e-commerce's buyer behavior**

Sachan, Kumar & Kumar (2018) hinted that customer satisfaction or dissatisfaction was influenced by perceived ease of use towards e-commerce supported by Rana&Dwivedi (2016). Additionally, Lee and Lim (2017) implied that consumers' attitude towards e-commerce as the favourable or unfavourable manner will lead to customers' satisfaction to make a decision to purchase. According to Sastima's (2015) study, the researcher defined brand image as the powerful factor which bring competitive advantage and success, and also can compete in the market. Moreover, one more important variable towards new technology was personal innovation. Goldsmith and Foxall (2003) explained a personality trait of innovation as anybody who are willing to try new things supported by Aldahdouh, Korhonen, and Nokelainen (2019) who emphasized on personality trait that determined one's tendency to accept change and novel ideas. Therefore, the researchers have identified this study's third and fourth hypotheses as follow:

H3: Ease of use, customer attitude, brand image, and personal innovation are statistical significant influence on customer satisfaction towards e-commerce's buyer behavior based on males generation Y.

H4: Ease of use, customer attitude, brand image, and personal innovation are statistical significant influence on customer satisfaction towards e-commerce's buyer behavior based on females generation Y.

**Ease of use, customer attitude, brand image, personal innovation, and customer satisfaction based on males and females**

Based on this study, the researchers focused on how male and female differ in their satisfaction towards e-commerce and also, in their perceived ease of use, attitude, brand image, and personal innovation, which supported by Szymkowiak and Garczarek –Bak (2018) who studied about “Gender different in e-commerce”. The researchers tested in three areas: website visits, the infrastructure used to browse internet resources, and the activity on the website in case of different between males and females. The results showed that both males and females behaved similarly in many areas. However, Rajagopal (2015) found that most males comprehensively searched for product less than females as well as Baquedano, Sanz de Acedo Lizarraga M.L., Sanz de Acedo Baquedano M.T., & Cardelle–Elawar M. (2007) who concluded that women looked for information and spend more time on decision making, while men acted more dominant and realistic. Then, the hypotheses fifth, sixth, seventh, eighth, and ninth were established as follow:

H5: There is a difference in perceived ease of use of e-commerce towards customer satisfaction between males and females of generation Y.

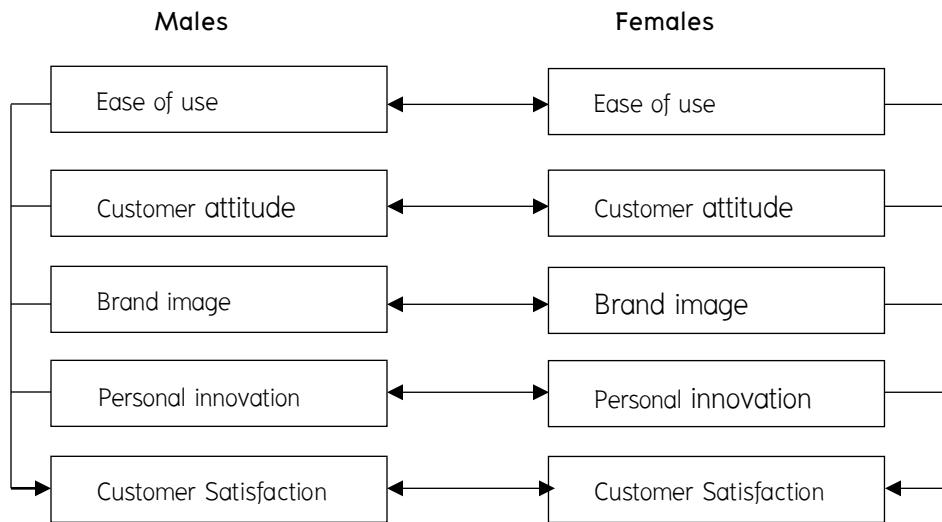
H6: There is a difference in e-commerce's customer attitude towards customer satisfaction between males and females of generation Y.

H7: There is a difference in e-commerce's brand image towards customer satisfaction between males and females of gen Y.

H8: There is a difference in personal innovation towards customer satisfaction between males and females of gen Y.

H9: There is a difference in customer satisfaction towards e-commerce between males and females of gen Y.

## Research Conceptual framework



**Figure 1:** The conceptual research model of “A Comparative Study of Customers Satisfaction towards E Commerce Buyer Behavior between Males and Females of Gen Y”

## Research Methodology

Two types of research designs for this research paper, the researchers designed to compare all independent and dependent variables between males and females of generation Y who are age between 21 to 41 years old or who were born between 1980s to 2000. Also, the researchers designed to find the most influence factor on customer satisfaction towards e-commerce purchasing of males and females. Both of comparative study and the most influence factor on customer satisfaction were tested by the Independent t-test, Simple Linear Regression, and Multiple Linear Regression, respectively. The different analyses were based on different hypotheses setting using three set of data, which are the total data (410 respondents), males (201 respondents) and females (209 respondents). The sample size of this study is 410 respondents. Based on many statisticians, they implied that the sample size should be between 200 to 500 (Hair, Celsi, Ortinau, & Bush, 2013). The researchers collected data from customer who are generation Y and have experienced to buy electronic products by using e-commerce application from Shopee or Lazada. Online survey technique was designed to collect the data between September 2021 to January 2022. The questionnaire was designed by using a five-point Likert scale.

## Research results

Based on the data analysis, two different analysis techniques were applied to analyze the data, which are descriptive analysis and inferential analysis. Descriptive analysis was analyzed the basic information based on the data collection. Inferential analysis was applied to test all hypotheses, which applied different statistical treatments based on different hypotheses setting. In this study, the researchers applied Simple Linear Regression to test hypothesis one, and two; Multiple Linear Regression to test hypothesis three and four; and Independent t-test analysis to test hypothesis five, six, seven, and eight, which presented in the following tables. In order to apply the statistical software to analyze both descriptive and inferential analysis, the data were divided to be three parts as a total data (410 respondents), males (201 respondents) and females (209 respondents). 410 respondents were used to test hypotheses five, six, seven, eight, and nine using Independent t-test analysis based on males and females of gen Y. 201 respondents of males were used to test hypothesis one and three using Simple Linear Regression and Multiple Linear Regression. Finally, 209 respondents of females were used to hypothesis two and four using Simple Linear Regression and Multiple Linear Regression. Three parts of descriptive analysis are as following statements: Demographic factors of 410 respondents as a total sample size, the highest aged level was aged between 21 to 30 years 293 (71.5%), most respondents were bachelor's degree 313 (76.3%) and work with corporate employed 211 (51.5%) with a monthly income between 25,001–30,000 187 (45.6%) baht. Most of them were single 319 (77.8%). Demographic factors of 201 respondents of males, the highest aged level was aged between 21 to 30 years 145 (72.5%), most respondents were bachelor's degree 150 (74.6%) and work with corporate employed 91 (45.3%) with a monthly income between 25,001–30,000 baht 95 (47.6%) and 20,001–25,000 baht 75 (37.3%). Most of them were single 151 (75.1%). Demographic factors of 209 respondents of females, the highest aged level was aged between 21 to 30 years 148 (70.8%), most respondents were bachelor's degree 163 (78.0%) and work with corporate employed 120 (57.4%) with a monthly income between 25,001–30,000 baht 92 (44.0%) and 20,001–25,000 baht 84 (40.2%). Most of them were single 168 (80.4%). For the inferential analyses of all hypotheses are as follow:

**Table 1:** The Analysis of ease of use influenced on customer attitude using Simple Linear Regression for hypothesis one and two of males and females

H1: Ease of use is a statistical significant influence on customer attitude based on males of generation Y.

H2: Ease of use is a statistical significant influence on customer attitude based on females of generation

Hypothesis	R <sup>2</sup>	Standardized Coefficient <b>Beta (<math>\beta</math>)</b>	t-statistics	Sig.	Collinearity Statistics	
					Tolerance	VIF
Hypothesis 1	.200	.447	7.049	.000	1.000	1.000
Hypothesis 2	.228	.478	7.819	.000	1.000	1.000

The results from hypothesis one and two, ease of use was a statistical significant influence on customer attitude based on males and female of gen Y at the significance .000 level, and also at the beta ( $\beta$ ) .447 and .478, respectively. Also, both the tolerance and VIF values meet the criteria of both independent variables showing freedom and accurate data for each variable as all tolerance values are greater than 0.10. Also, all values of variance inflation factors are equal to 1, which mean that both independent variables have no relationship, therefore there is no problem with multicollinearity.

**Table 2:** The Analysis of ease of use, customer attitude, brand image, and personal innovation are influenced on customer satisfaction using Multiple Linear Regression for hypothesis three and four of males and females  
 H3: Ease of use, customer attitude, brand image, and personal innovation are statistical significant influence on customer satisfaction towards e-commerce's buyer behavior based on males of generation Y.

#### Coefficients

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients <b>Beta</b>	t	Sig.	95.0% Confidence Lower Bound	Interval for B Upper	Collin earity Tolera	Stati stics VIF
1	(Constant)	1.976	.394		5.021	<.001	1.200	2.752		
	MeanATT	.058	.080	.057	.720	.472	-.100	.215	.655	1.528
	MeanEOU	.183	.078	.201	2.46	.014	.039	.347	.626	1.596
	MeanIMA	.078	.062	.081	1.249	.213	-.045	.200	.979	1.021
	MeanPEI	.211	.082	.228	2.57	.011	.050	.373	.532	1.879

Based on the results from Multiple Linear Regression analysis, the results showed that ease of use and personal innovation were statistical significant influence on customer satisfaction towards e-commerce's buyer

behavior at significant level of .014, and .011, respectively. Also, the beta ( $\beta$ ) of perceived ease of use, and personal innovation were .201 and .228, respectively. However, customer attitude, and brand image were insignificant influence on customer satisfaction towards e-commerce's buyer behavior.

H4: Ease of use, customer attitude, brand image, and personal innovation are statistical significant influence on customer satisfaction towards e-commerce buyer behavior based on females of generation Y.

### Coefficients

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Lower Bound	Interval for B Upper	Collinearity Tolera	Statistics VIF
1	(Constant)	1.757	.357		4.92 <.001	1.053	2.460		
	MeanATT	.113	.081	.105	1.390 .166	-.047	.247	.687	1.455
	MeanEOU	.174	.076	.176	2.30 .025	.025	.323	.665	1.503
	MeanIMA	.057	.050	.072	1.142 -.041	-.041	.155	.980	1.020
	MeanPEI	.213	.066	.250	3.22 .083	.083	.343	.653	1.531

**Note:** .022 sig. at .05, and .001 sig. at .001 or .022\* and .001\*\*\* and also, ATT = attitude, EOU = ease of use, IMA =brand image, PEI = personal innovation

Based on the results from Multiple Linear Regression analysis, the results showed that ease of use and personal innovation were statistical significant influence on customer satisfaction towards e-commerce's buyer behavior at significant level of .022, and .001, respectively. Also, the beta ( $\beta$ ) of perceived ease of use, and personal innovation were .176 and .250, respectively. However, customer attitude, and brand image were insignificant influence on customer satisfaction towards e-commerce's buyer behavior.

**Table 3:** The comparative analysis of ease of use, customer attitude, brand image, personal innovation, and customer satisfaction by independent t-test

Hypotheses	t-value	Sig (2-tailed)	Results
H5: There is no difference in ease of use of e-commerce towards customer satisfaction between males and females of generation Y.	-2.280	.023	Rejected Ho
H6: There is no difference in e-commerce's customer attitude towards customer satisfaction between males and females of generation Y.	-.198	.843	Failed to eject Ho
H7: There is no difference in e-commerce's brand image between males and females of generation Y.	1.689	.094	Failed to reject Ho
H8: There is no difference in personal innovation towards customer satisfaction between males and females of generation Y.	-1.559	.120	Failed to reject Ho
H9: There is no difference in customer satisfaction towards e-commerce between males and females of generation Y.	1.887	.060	Failed to reject Ho

Based on the results from hypothesis five, six, seven, eight, and nine in Table 3; the researchers concluded that there were no difference in e-commerce's customer attitude, brand image, personal innovation, and customer satisfaction between males and females of generation Y at significant of .843, .094, .120, and .060; respectively. Only one variable of ease of use was statistical significant difference between males and females of generation Y at significant of. 023

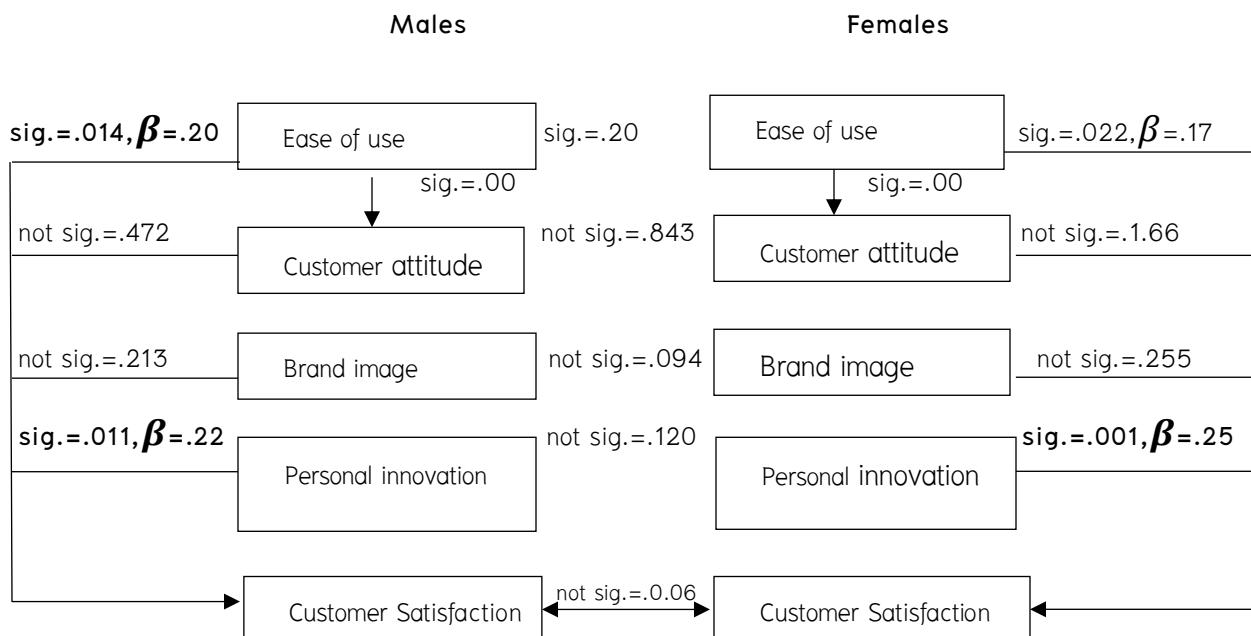


Figure 2: Summary the results of all hypotheses testing

The conclusion of demographic factors of 410 respondents as a total sample size, the highest per cent of each factors were aged level between 21 to 30 years (71.5%), bachelor's degree (76.3%), corporate employed (51.5%), monthly income between 25,001 – 30,000 45.6% baht and single (77.8%). For 201 respondents of males, aged level between 21 to 30 years (72.5%), bachelor's degree (74.6%), corporate employed (45.3%), monthly income between 25,001 – 30,000 baht (47.6%) , and single (75.1 %) . For 209 respondents of females, aged level between 21 to 30 years (70.8%), bachelor's degree (78.0%), corporate employed (57.4%), monthly income between 25,001 – 30,000 baht (44.0%) , and single (80.4 %). The results of hypothesis one and two, ease of use was a statistically significant influence on customer attitude based on males and female using Simple Linear Regression. The fact finding of hypothesis three using Multiple Linear Regression analysis, the results showed that ease of use and personal innovation were statistical significant influence on customer satisfaction towards e-commerce's buyer behavior at significant level of .014, and .011, respectively. Conversely, customer attitude and brand image were ininificant influence on customer satisfaction. The results of hypothesis four using Multiple Linear Regression analysis, ease of use and personal innovation were statistically significant influence on customer satisfaction towards e –commerce's buyer behavior. However, customer attitude and brand image were insignificant influence on customer satisfaction. Based on the Multiple Linear Regression analysis, the results of hypotheses three and four, the researchers found that personal innovation was the most influence factor on customer satisfaction towards e-commerce' buyer behavior on the basis of the beta value. The results of hypotheses five, six, seven, eight, and nine using the independent t-test analysis to find a different between males and females. The researchers found that both males and female from generation Y, they were not statistically significant different in attitude, brand image, personal innovation, and satisfaction in e- commerce purchasing, which means that both males and females are not different in terms of attitude, brand image, personal innovation, and satisfaction in e-commerce purchasing, except ease of use between males and females, which was significant. It means that both are different in order to feel free of effort to use e-commerce.

## Research Suggestions

Based on the results of hypothesis testing, The researchers would like recommend the e-commerce's company that the company may create the marketing strategy or marketing campaign that has practical value to help the user to update the knowledge of new technology such as set the short video, generate user's content for free, encourage customer to share their own ideas and so on. If the user feel that using new technology is easy or feel free of effort, it means that the innovativeness from his/her nature or knowledge is equivalent to the degree of individual adopted the new products' version or his/her innovations' experience might affect their attitude to satisfy towards e-commerce purchase via perceived ease of use based on the level of technology system's ease of use. Personal innovativeness always showed a direct effect on perceived ease of use.

In order to test hypotheses five, six, seven, eight, and nine using the independent t-test, the results showed that males and females are different in perceived ease of use, which may cause from the limitation of data collection as the researchers aimed to collect the data from customers who have experience to buy smart phone and electronic products from e-commerce. Based on the nature of men and women exhibit certain shopping and spending behaviors, they are different in shopping stereotypes, perspectives, motives, rationales and considerations towards e-commerce. Most women always satisfy to buy more beauty and personal care products. Most men like to buy more high-tech applications or automotive spare parts. Then, the possibility of recommendation: the companies can adapt their e-commerce strategy and marketing campaign targets based on males and females' data analysis of companies' customers, and also visually design the online store in order to understand customers' mind in order of what and how males and females buy, which may help to keep the e-commerce's customers, and also increase the company's benefit.

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