Thailand VS. Indonesia: The Battleground of M-Commerce

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Abstract

Technology advancement has brought m-commerce into the limelight in the retailing industry. Many people now engage with online shopping especially through their mobile devices. This empirical research aims to investigate the influence of m-commerce design, content cues (web informativeness and web customization) and non-content cues (web navigability, web aesthetic and web interaction) on satisfaction and purchase intention and compare the different results between Thailand and Indonesia. The results mostly verify the proposed relationships. Among the five independent variables, web informativeness and web navigability were found to be the antecedent of satisfaction in Thailand and Indonesia. While web customization and web aesthetic significantly led to satisfaction only in Thailand, context and web interaction conversely showed their impact on satisfaction only in Indonesia. In addition, web informativeness, web aesthetic and web interaction statically and positively influenced the formation of purchase intention in both nations. A number of managerial implications are discussed.

Keywords: M-commerce, Satisfaction, Purchase Intention

1. Introduction

With the internet and mobile technology enabling new platforms of communication and business transaction, mobile internet usage has seen a remarkably growth globally over the past years. Undoubtedly, mobile commerce (m-commerce) and social shopping have played a critical role in the retail industry and become dreadful competitors for brick-and-mortar stores. This is all the more the case as people have become more familiar with mobile technology, including those residing in developing countries where technology and innovation generally is later adopted in comparison to innovators and early adopter countries. This has resulted in the increasing number of internet users and its usage rate on a global scale. Global mobile data traffic is expected to increase sevenfold from seven exabytes per month in 2016 to 49 exabytes in 2021 (The Statistics Portal, 2018a).

Even though the current market size of e-commerce is much smaller than the retail industry, its performance places it among the most promising markets. The growth rate of e-commerce outnumbers that of the retail industry. Electronic commerce (e-commerce) is expected to grow 78% from 2017 to 2020 while the retail industry is set to experience only 18% growth (The Statistics Portal, 2018b, 2018c). There are therefore good reasons for the optimistic outlook for the growth of e-commerce, especially the m-commerce market.

One of the successful m-commerce platforms has been introduced as social shopping (Turban, King, & Lang, 2010). It combines the functionalities of online shopping and social network within the online shopping context. A relationship among merchants, customers and interested parties is thus created (Lee & Lee, 2012). The characteristics of social shopping benefit both the demand and supply side of the business; customers receive free flow of information at the most convenience time. In addition, social shopping makes it possible for consumers to share their product experience and shopping experience after use (Hajli, 2015). On the other hand, service providers employ social shopping as a tool to boost up revenue,

maintain customer relationship, and track customer information. In essence, customers and sellers enjoy a number of benefits of social shopping that neither old-fashioned shopping webs nor physical stores can offer – especially the establishment of potential interaction among users and the initiative and simplification of purchase decisions (Olbrich & Holsing, 2011). Regardless of the business, social interaction among users is a great mechanism to deepen customer loyalty and retention, and perhaps the most important elements for continued success (C. L. Hsu, Chen, & Kumar, 2018).

All that said, differences in shopping behavior across cultures exist in various ways: prices (Ackerman & Tellis, 2001); shopping motivation (Evanschitzky et al., 2014; Gentina, Butori, Rose, & Bakir, 2014; Horváth & Adıgüzel, 2018); selection of retail channels (Lu, Pattnaik, Xiao, & Voola, 2018); impulse buying (Pornpitakpan & Han, 2013); and online purchase intention (Ganguly, Dash, Cyr, & Head, 2010; Pookulangara & Koesler, 2011). However, little is known about the different impacts of website quality on purchase intention from a cross cultural perspective especially in a m-commerce setting. Users across cultures may have different perceptions toward online shopping through m-commerce and consequently their purchase intention may be affected in several ways. It is necessary, though, to investigate its quality – including website quality and customer relationship quality – prior to evaluating the influence of m-commerce on other variables under study.

Therefore, this empirical research takes cultural consideration into account by investigating the determinants of purchase intention, emphasizing two major facets: website quality and customer relationship quality between users in Thailand and Indonesia, which are the two largest economies in the ten-member Association of South East Asian Nations (ASEAN). Indonesia's retail e-commerce sales hit $5.29 billion in 2016 and are soon to reach $45.6 billion or the equivalent of a 52% share of ASEAN e-commerce by 2025 (Chadha, 2016; Tempo Magazine, 2016). This spells of huge opportunities for Indonesia, which is the next frontier for the world's e-commerce boom. In the meantime, in Thailand, the amount of time spent daily on mobile internet is among the highest in the world with an average of 9.34 hours per day (Thai Visa, 2018).

In addition, Thailand's social media penetration is among the world's top ten. This reflects the fact that a vast majority of the Thai population is already engaged with the use of digital technologies and m-commerce across platforms. This is evidenced by its total e-commerce market value of $2.9 billion in the past year (Yongjiranon, 2018), which makes Thailand the second largest e-commerce market in ASEAN, next to Indonesia. Undoubtedly, Indonesia and Thailand continue to be promising markets for e-commerce, not only for ASEAN but also in the global marketplace that is likely to attract a number of investors and make this battleground even more competitive.

2. Literature Review
- *M-Commerce*
As a result of technology advancement, consumers have access to the necessary information at the most convenience time through various devices and platforms. M-commerce is part of the disruptive technology that has totally changed the world of the retail industry. With the speedy development of information communication technology, m-commerce technology is inevitably affected. The growing popularity of mobile and internet penetration in the past decades has brought opportunities for businesses to have new trade platforms in e-commerce, ever since (Tredinnick, 2006). Since consumers are now experiencing less of a gap between the online and offline world, m-commerce has become one of the trade phenomena in the digital era.

A number of definitions have been given to m-commerce. While Varshney and Vetter (2002) stated that m-commerce is an extension of traditional e-commerce, Moshin, Mudtadir, and Ishaq (2003) differentiated m-commerce by focusing on the occurrence of transaction that has been taken place over wireless devices rather than on desktop computers. Some scholars believe that m-commerce is not a subset of e-commerce due to capabilities that e-commerce totally lacks, namely, its interaction style, usage pattern, mobility and reachability (e.g. Feng, Hoegler, & Stucky, 2006). From the above discussion, the definition of m-commerce in this study particularly refers to the commerce activities and transactions operating through mobile internet and wireless handheld devices (i.e. smartphones, tablets).

The growth of m-commerce market is parallel to the increasing usage of mobile devices and vice versa. The more people using mobile devices, the larger the pool of potential consumers available to the supply side of the business. Undoubtedly, the application of m-commerce has been adopting by many companies in several ways. Some design their official web to be mobile-friendly to ensure that the webpage will perform well across the devices as intended. Some create mobile applications to simplify all activities and seamlessly interact with users. M-commerce utilizes the key advantages of mobile devices to deliver better transaction services to users. The ubiquity of mobile phones not only offers unique services (customization service) among users, it also enables customers to have 24/7 access to information (Chong, Chan, & Ooi, 2012; Faqih & Jaradat, 2015). This means that users are a click away in accessing information regardless of location and time conditions. The information is also presented in real-time manner. The feature of customization service (also known as content customization) is the data-driven creation to individual customers on their interests and preferences. This requires less users' efforts in finding information within m-commerce settings (Eastin, Brinson, Doorey, & Wilcox, 2016).

To date, many of m-commerce operators have applied the dominant features of social media in their platforms. Global users are encouraged to share their shopping experience with others within virtual communities (Liang, Ho, Li, & Turban, 2011). From this perspective, m-commerce becomes a strong mechanism, which enables consumer to share commercial-related information (i.e. ratings, reviews, and recommendations) with consumer peers (Lin, Li, & Wang, 2017). With more organic information available, product evaluation and purchasing decision is therefore improved (Wang & Zhang, 2012). Given that such unique functions were previously available to none in the market, the popularity of m-commerce is on the rise. In 2015, the share of m-commerce in e-commerce saw an almost 200% increase from its previous year (Millwood, 2015).

Table 1 shows the differences between traditional e-commerce and m-commerce. With the limited resources small companies possess, the competitive capability to beat giants in the industry is near to impossible. With m-commerce, small firms, however, stand a chance of winning over competitors not only because they can adapt such technology to transform consumers' shopping experience but consumers become more impressive as well. Still, due to the rapid change of technology, managers and practitioners may find it challenging to make proper use of m-commerce functions. It is therefore necessary to understand what could help to make m-commerce websites more effective by taking website quality into consideration.

Table 1: E-commerce vs. M-Commerce

	E-commerce	M-Commerce
Transaction	Managed directly over the internet	Transactions occur through mobile devices with internet or cellular data
Commerce activities	With the aid of computers and laptops	With the aid of handheld devices including smartphones, tablets, iPad, PDA's (Personal Digital Assistant)
Connectivity	Narrow. Only available where internet and electivity is reached	Broader, as internet is not a prerequisite and due to is portability
Payment	Mainly credit cards	Mobile banking and credit cards
Platform	Official store websites	Official store websites (mobile version/web app)
Security	Regular security	More extensive with the potential use of biometric authentication (finger scan, face ID)

- M-Commerce Design

M-commerce design is second to none when it comes to m-commerce quality since it significantly impacts consumers' intention to purchase (Bai, Law, & Wen, 2008; Hasanov & Khalid, 2015). Once customers get into a m-commerce website, the initial interface between customers and their shopping experience occurs through the m-commerce homepage. Therefore, the perception of a shopping experience is firstly influenced by the m-commerce design. M-commerce design assessment is made up of a number of constructs no matter how varied they are from one study to another depending on the research's focus.

Examples of m-commerce design include, but are not limited to, information/content quality, usability, design/appearance, perceived control, shopping enjoyment, navigability, reliability, security, and speed (Bai et al., 2008; Hasanov & Khalid, 2015; Kim & Niehm, 2009; Koufaris, 2002; Nunthiphatprueksa & Suntrayuth, 2017; Webb & Webb, 2004). Specifically, this paper investigates the impact of m-commerce design by emphasizing two major dimensions; content design (web informativeness and web customization) and non-content design (web navigability, web aesthetic and web interaction). The details of each are fully discussed in following paragraphs.

- Content Design

- Website Informativeness: Website informativeness refers to the characteristics of website's information. As perhaps the most important dimension as far as website quality is concerned, website informativeness delivers key values to a pool of consumers (L. Hasan & Abuelrub, 2011). It is therefore derived from consumers' overall evaluation towards information quality assessed by the degree of accuracy, completeness, understandability, timeliness, and availability as provided in m-commerce websites (C.-L. Hsu, Chen, Kikuchi, & Machida, 2017; Kim & Niehm, 2009; Nunthiphatprueksa & Suntrayuth, 2017). Website informativeness does not only enable consumers to have access to requested information in a most convenient manner, it facilitates m-commerce to convey projected information and delivers value-adding piece of information to consumers as well. From this perspective, the likelihood of satisfaction and behavioral intention is increased (L. Hasan & Abuelrub, 2011). Unlike traditional stores where employees remain at customers' disposal when needed, website informativeness is the only point from which customers can get information.

Therefore, website informativeness highly influences how consumers evaluate and engage their future shopping action (Kim & Niehm, 2009). Since online shopping involves some information related to the product, price, promotion, delivery, reviews from previous user, and comparison among brands, the conveyed message within a m-commerce website is capable of enhancing consumers' satisfaction, eventually leading to intention to purchase (Chiu, Hsieh, & Kao, 2005). On the other hand, once customers are exposed to irrelevant information provided through m-commerce websites, customer dissatisfaction is initially formed, and customers end up giving resources and exit websites even before the transaction is made (B. Hasan, 2016; Sismeiro & Bucklin, 2004). Thus, it can be hypothesized that:

H1A: *Web informativeness positively impacts satisfaction.*
H1B: *Web informativeness positively impacts purchase intention.*

- Web Customization: Web customization is a key contributor to m-commerce success. It refers to the degree to which information delivered is tailored to individual customers based on their selected preferences and interest (Kalakota & Robinson, 1990). With easy access to m-commerce information, it brings advantages and convenience to customers. However, a huge disadvantage lies within the overwhelming amount of information customers are exposed to that creates a difficulty to readily access the information needed. Besides, the amount of information is overwhelming and simply leads to information overload. Web customization therefore needs wide attention from m-commerce web developers in order to help potential customers find the information sought within a short time.

This one-on-one marketing sheds light on individual preferences. Therefore, the information and promotions offered vary. Web customization and user-driven content allow firms to fasten the decision-making process as well as enhance their shopping experience. The higher the degree of dynamic adaptation of content, the more outputs are relevant and the less customizing user's needs (Kalakota & Robinson, 1990). Web customization can significantly influence customer satisfaction in m-commerce setting (Choi et al., 2008). Therefore, it is hypothesized that:

H2A: *Web customization positively impacts satisfaction.*
H2B: *Web customization positively impacts purchase intention.*

- Non-Content Design
- *Web Navigability:* Website design, one of the mainstreams in website quality study, refers to the attractiveness of the website's appearance (Li & Yeh, 2010). The elements of website design include two major aspects; navigability and visual elements (Cyr, 2008). While web navigability discusses the organization of the website, the visual elements refer to aesthetic appearances, including color, shapes, images, or streaming videos. Navigability impacts the amount of effort consumers use while navigating the website or searching for information (Vance, Elie-Dit-Cosaque, & Straub, 2008). Therefore, the ease of navigability should be designed in order to minimize consumers' effort and enable consumers to reach information at their soonest convenience. Since customers in the digital era have less tolerance, navigability should be direct and simplify the purchase transaction. Complicated navigation design disturbs consumers and results in perceived irritation (B. Hasan, 2016). Thus, it is hypothesized that:

H3A: *Web navigability positively impacts satisfaction.*
H3B: *Web navigability positively impacts purchase intention.*

- Web Aesthetic

How aesthetic design helps traditional stores attract consumers reflects the importance of website design as far as the online marketplace is concerned. Web aesthetic can effectively change visitors to customers (Gudigantala, Bicen, & Eom, 2016). Pleasing website design is more likely to attract potential consumers to visit and make a purchase transaction (Mithas, Ramasubbu, Krishnan, & Fornell, 2006). Simon (2001) found that website design is critical to satisfaction with different interpretations of color appeal across cultures. Moreover, website design contributes to the formation of positive consumers' perception and favorable responses in the online shopping context (Kim & Niehm, 2009). In other words, the consumer shopping experience is established prior to the actual purchase through website design. It is therefore important to develop a pleasing website design in order to improve consumer's perception and arouse behavioral intention. Based on the above discussion, it is hypothesized that:

H4A: *Web aesthetic positively impacts satisfaction.*
H4B: *Web aesthetic positively impacts purchase intention.*

- Web Interaction

Website interaction within m-commerce website refers to the mutual interaction among users within m-commerce context. Such interaction can be achieved through user-generated content (UGC) and the sharing of shopping experiences (Zhang, Lu, Gupta, & Zhao, 2014). Social interaction in m-commerce environment allows users to present themselves. Equally important, social interaction makes it possible for a customer to become a source of either informational or emotional support to other users (Liang et al., 2011). As a result, social interaction influences customers' emotion (Hassanein & Head, 2005). Social factor is a significant determinant of relationship quality (i.e. satisfaction) as well as intention to perform in the future in m-commerce context (Liang et al., 2011). Users emotionally satisfied with social interaction in m-commerce website may become more comfortable and even more satisfied and enjoy their shopping experience. Thus, it can be hypothesized that:

H5A: *Web interaction positively impacts satisfaction.*
H5B: *Web interaction positively impacts purchase intention.*

- Satisfaction

Satisfaction can be defined as customers' feeling of pleasure deriving from the comparison between one's expectations in relation to the perceived performance. If perceived performance exceeds expectations, customer satisfaction is established (Parasuraman, Zeithaml, & Malhotra, 2005). On the other hand, dissatisfaction or disappointment are formed once customer-perceived performance is below one's initial expectation. Satisfaction has been long verified as a prerequisite and a major driver of purchase intention across research settings (i.e., Liang et al., 2011). Specifically, in the online shopping context, selling price is a primary key success factor in early years. As time passes, website quality rather becomes a prominent mechanism in enhancing customer satisfaction and loyalty (Parasuraman et al., 2005). Therefore, it is hypothesized that:

H6: *Satisfaction in m-commerce websites positively impacts purchase intention.*

3. Research Methodology

- Research Model

The research model in this study was developed based on the related literature discussed above and is presented in Figure 1. The model proposes that the three independent variables, which include website informativeness, website design, and website interaction, positively impact customers' satisfaction and purchase intention in a m-commerce website context.
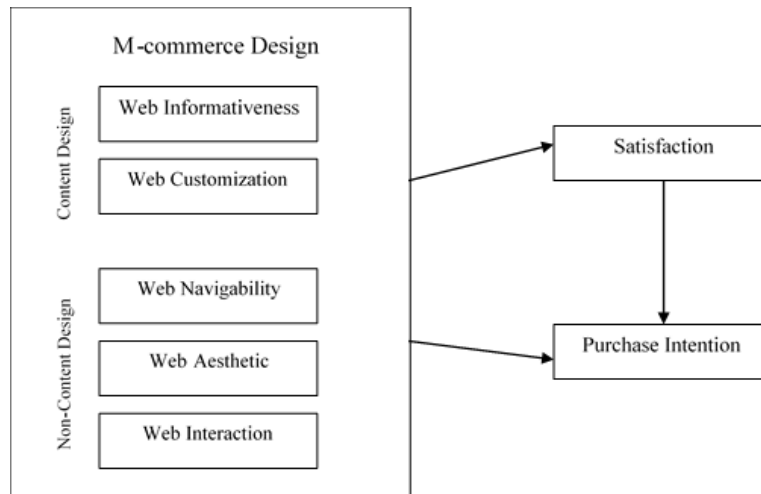
Figure 1: Research Model (Created by the Author for this Study)

- Construct Measurements

Whenever possible and wherever appropriate, the measurements of each key construct were developed from existing scales employed in previous literature related to e-commerce and website quality. Except for the respondents' profile, all constructs were measured by a 5-point scale (1 = strongly disagree; 5 = strongly agree). The questionnaire is sectioned into five main parts: content design, non-content design, customer satisfaction, purchase intention and respondent's profile. Website quality is operationalized by four variables: web informativeness, web customization, web design, and web interaction. Web informativeness is evaluated based on five statements adapted from C.-L. Hsu et al. (2017), Kim and Niehm (2009), and Zheng, Zhao, and Stylianou (2013). For example, one of the statements is "Accuracy of information will influence my decision to shop on this store". Web customization was adopted from Choi et al. (2008) and Kassim and Ismail (2009).

Three statements aim to evaluate participants' opinions towards the degree of web customization. Regarding website design, six statements were adopted from B. Hasan (2016) and Zheng et al. (2013). While three statements are about accessing website navigability, the rest evaluates website visual design. Website interaction is measured by the items primarily constructed by Zheng et al. (2013), e.g. "This store allows me to interact with other users by various methods." Participants were also asked to rate their opinion towards their customer satisfaction through three statements; I'm satisfied/pleased/delighted with the overall experience of shopping in this store (Zheng et al., 2013).

The final variable, the measurement of purchase intention was modified based on the study of Wei et al. (2008). Participants responded to the following statements: "Assume that I have access to m-commerce systems, I intent to use them"; "I intend to use m-commerce if the cost is reasonable for me"; "I believe I will use mobile commerce in the future"; and "I believe my interest towards m-commerce will increase in the future".

- Sample and Data Collection

This quantitative study employed an online self-administrative questionnaire as a research tool to investigate the hypothesized relationships. The questionnaire was distributed using a convenience sample drawn from college students, aged between 18-25 years. This is not only because their mobile activity is expected to increase but because on average they are 2.5 times more likely to shop online than other age segmentation (Burstein & LaMontagne, 2015). A

prescreen question was first used to ensure that participants had engaged in any kind of online shopping over the past three months. This prescreen question ensured that participants actually experienced online shopping and were able to recall their perception and attitude towards m-commerce before answering the questionnaire. Obviously, meaningful perception of m-commerce attributes could not be received from non-experienced participants.

From a total of 600 questionnaires distributed to Thai and Indonesian respondents, 334 valid responses were returned, yielded a response rate of 55.6 percent. There was a fairly even proportion between both nationalities; 166 (49.7%) were Thais, and 168 (50.3%) Indonesians. Table 2 summarized respondents' profile for both nationalities in terms of gender, age, monthly income, average spending on m-commerce, and product categories.

Table 2: Respondents' Profile

	THA		IND	
	N	%	n	%
Gender				
Male	73	43.98	69	41.1
Female	93	56.02	99	58.9
Age				
<20	81	48.8	40	23.81
20-29	66	39.76	79	47.02
30-39	10	6.02	23	13.69
>39	9	5.42	24	14.29
Monthly Income				
<$350	92	55.4	89	53
$350-$1,000	53	31.9	49	29.2
$1,001-$1,500	17	10.2	14	8.3
>$1,500	4	2.4	16	9.5
Average Spending				
<$30	75	45.2	83	49.4
$31-$60	68	41	54	32.1
$61-$100	14	8.4	19	11.3
>$100	9	5.4	12	7.1
Product Category				
Fashion	93	22.63	95	20.3
Health & Beauty	86	20.92	72	15.38
Electronic devices & Accessories	60	14.6	78	16.67
Sport & Travel	54	13.14	68	14.53
Home & Lifestyle	32	7.79	47	10.04
Babies & Toys	24	5.84	11	2.35
Home appliances	23	5.6	41	8.76
Groceries & Pets	16	3.89	12	2.56
Others	14	3.41	25	5.34
Automotive	9	2.19	19	4.06

4. Data Analysis and Results
- *Reliability and Validity Analysis*

Prior to testing the hypothesized relationships, the research instrument was not only evaluated for its internal consistency, composite reliability, and convergent reliability but for its validity as well. The internal reliability (Cronbach's alpha) and composite reliability (CR) of all items measuring the constructs was above 0.8, thereby higher than the acceptable value of 0.7 as suggested by Fornell and Larcker (1981). In addition, the average variance extracted (AVE) also verified the convergent reliability of this research instrument since the AVE's scores exceeded the threshold value of 0.5 (Fornell & Larcker, 1981). In summary, all reliability scores were found satisfactory and adequate for further analysis. On the flip side, the validity was accessed through an exploratory factor analysis. For the principal component analysis as a factor extraction, Varimax was employed as a factor rotation method. Factor loadings are fully reported in Table 3. Once reliability and validity had been examined, the proposed hypothesizes were tested by using Multiple regression analysis. The full analysis is presented in the next section.

Table 3: Reliability and Validity

	Factor loading		CR		AVE		Cronbach's	
	THA	IDN	THA	IDN	THA	IDN	THA	IDN
Web Informativeness			.823	.836	.509	.513	.899	.845
Web info 1	.758	.833						
Web info 2	.769	.707						
Web info 3	.840	.736						
Web info 4	.542	.722						
Web info 5	.537	.540						
Web Customization			.769	.795	.535	.572	.855	.760
Web cus 1	.842	.930						
Web cus 2	.537	.650						
Web cus 3	.780	.656						
Web Navigability			.785	.755	.553	.518	.831	.701
Web navi 1	.814	.501						
Web navi 2	.623	.842						
Web navi 3	.780	.772						
Web Aesthetic			.835	.808	.629	.590	.870	.896
Web aes 1	.764	.600						
Web aes 2	.777	.817						
Web aes 3	.837	.862						
Web Interaction			.868	.792	.687	.563	.896	.816
Web int 1	.823	.859						
Web int 2	.849	.710						
Web int 3	.816	.669						
Satisfaction			.896	.908	.743	.767	.906	.936
Satis 1	.852	.898						
Satis 2	.858	.871						
Satis 3	.877	.858						
Purchase Intention			.855	.879	.599	.647	.864	.890
PI 1	.735	.747						
PI 2	.847	.737						
PI 3	.833	.856						
PI 4	.667	.869						

- *Multiple Regression Analysis*

The influence of all the independent variables (web informativeness, web customization, web navigability, web aesthetic, and web interaction on satisfaction and purchase intention) was identified through a multiple regression analysis. In order to perceive the nationality effect, the multiple regression analysis was performed separately for Thailand and Indonesia. The two sets of regression results are shown in Table 4.

Table 4: Multiple Regression Analysis

	Path	Beta		t-value		p-value	
		THA	IDN	THA	IDN	THA	IDN
H1A	Web informativeness ➔ Satisfaction	.202	.378	2.803	4.805	**.006**	**.000**
H2A	Web customization ➔ Satisfaction	.79	.058	2.260	.784	**.025**	.434
H3A	Web navigability ➔ Satisfaction	.173	.205	2.286	2.999	**.024**	**.003**
H4A	Web aesthetic ➔ Satisfaction	.395	.026	5.290	.382	**.000**	.703
H5A	Web interaction ➔ Satisfaction	.010	.271	.183	3.936	.855	**.000**
Adjusted r squared: THA .754, IDN .677							
H1B	Web informativeness ➔ Purchase Intention	.267	.241	3.201	2.637	**.002**	**.009**
H2B	Web customization ➔ Purchase Intention	.082	.106	.894	1.224	.373	.223
H3B	Web navigability ➔ Purchase Intention	.065	.019	.746	.236	.457	.814
H4B	Web aesthetic ➔ Purchase Intention	.336	.327	3.885	4.110	**.000**	**.000**
H5B	Web interaction ➔ Purchase Intention	.186	.174	2.885	2.173	**.004**	**.031**
Adjusted r squared: THA .670, IDN .566							
H6	Satisfaction ➔ Purchase Intention	.753	.687	14.644	12.195	**.000**	**.000**
Adjusted r squared: THA .564, IDN .469							

Within Thailand's context, content design (both web informativeness and web customization) exhibited a significant influence on satisfaction. While only web navigability and web aesthetic impacted the formation of satisfaction, web interaction was not capable of explaining satisfaction. Among the influential roles of these independent variables, web customization contributed to user satisfaction the most (β = .790, p = .025), following by web aesthetic (β = .395, p = .000), web informativeness (β = .202, p = .006), and web navigability (β = .173, p = .024). Conversely, m-commerce in Indonesia showed different results. While web informativeness (β = .378, p = .000) proved to be an antecedent of satisfaction, web customization was not significantly related. Web navigability (β = .205, p = .003) remained important to satisfaction in the Indonesian context as it also did in Thailand. In contrast to Thailand, web aesthetic, however, had no influence over satisfaction while web interaction (β = .271, p = .000) became a significant factor influencing satisfaction.

On other matters, the role of content and non-content design on purchase intention in both countries was identical. Web aesthetic, web informativeness and web interaction were significantly related to purchased intention respectively. Even the standardized coefficient (β) suggested that web aesthetic had the greatest effect on purchase intention in a multiple regression model. That said, web aesthetic was a stronger predictor of purchase intention in Thailand (β = .336) than in Indonesia (β = .327). Neither web customization and web navigability significantly contributed to purchase intention, regardless of the country.

The last relationship in this multiple regression model was between satisfaction as the independent variable and purchase intention as the dependent variable. As expected, satisfaction strongly related to the purchase intention. However, the predictive power of satisfaction in Thailand (β = .753) was higher than in Indonesia (β = .687).

The overall results indicated that web informativeness and web navigability positively related to satisfaction in both countries. Web customization and web aesthetic contributed to satisfaction in Thailand but not in Indonesia. Conversely, web interaction was the only predictor of satisfaction in Indonesia. Regarding the antecedent of purchase intention, web informativeness, web aesthetic, and web interaction significantly explained the phenomenon of purchase intention in Thailand as well as in Indonesia. Lastly, satisfaction significantly and positively impacted purchase intention. This implies that each dimension of content and non-content design in m-commerce context plays a critical role in fostering customer satisfaction and its chain of effect on behavioral intention.

5. Discussion and Conclusion

The empirical results of this study contribute to the literature investigating the influence of web design in the m-commerce context in Thai and Indonesian settings and fulfill research gaps in previous studies. Most of the proposed relationships have been confirmed showing the various impacts of web informativeness, web customization, web navigability, web aesthetic, and web interaction on satisfaction and purchase intention. In addition, these findings enhance the understanding of the interrelation among constructs.

The antecedents of purchase intention within m-commerce context were investigated by having Thailand and Indonesia as the research settings. In so doing, the analytical framework proposed to integrate content design (web informativeness and web customization), non-content design (web navigability, web aesthetic, web interaction), satisfaction and purchase intention. The differential roles of content and non-content designs across the two nations appear in Table 5 with the priority provided according to their beta values derived from Table 4.

Table 5: Priority of Web Design Development in Thailand and Indonesia

Web Design ➔ Users' Satisfaction	
Thailand	Indonesia
1st: Web Aesthetic	1st: Web Informativeness
2nd: Web Informativeness	2nd: Web Interaction
3rd: Web Navigability	3rd: Web Navigability
4th: Web Customization	

As can be seen in Table 5, web aesthetic was the strongest antecedent of Thai users' satisfaction followed by web informativeness, web navigability, and web customization. However, web interaction is excluded from Table 5 due to its insignificant predictive power on Thai users' satisfaction. On the other hand, the top three factors affecting m-commerce users' satisfaction in Indonesia are web informativeness, web interaction, and web navigability. Web aesthetic and web customization were removed since they both had no significant effect on Indonesian users' satisfaction. Suggestions for m-commerce in Thailand and Indonesia are as follows:

The most contributory factor of Thai users' satisfaction was *web aesthetic*. The choice of colors should be considered when it comes to website design, together with the use of photos, moving images, and graphics whenever and wherever appropriated. However, the result shows that, to some extent, web aesthetic does not lead to user satisfaction in the Indonesian market. Therefore, the use of web aesthetic in Indonesia is omitted from this discussion.

Web informativeness can result in higher satisfaction in Indonesia than in Thailand. Information presented in m-commerce should be well-crafted in order to provide what

customers need while minimizing the costs associated with information searching in both countries. Therefore, each dimension of web informativeness, including but not limited to accuracy, completeness, understandability, timeliness, and availability, should be managed properly in both countries. More specifically, this implies that up-to-date, relevance, easy-to-understand, and complete information should be provided by retailers in Thailand and Indonesia in m-commerce marketplaces to improve satisfaction as well as purchase intention.

While ***Web interaction*** became the critical factor affecting satisfaction in Indonesia's m-commerce context, it had no significant effect in the Thai context. Apart from the basic function of web interactivity, i.e., user generated content, retailers may consider using social commerce features where the key advantage of social media is adopted. With such web design, users are encouraged to share their shopping experience in their virtual community. Thus, the quality of web interaction can be enhanced through noncommercial-related information, i.e., ratings, reviews, and recommendations. In essence, operators in m-commerce should combine trading activities and social interaction within one platform and highlight the thesis of social shopping – the sharing of shopping experience among consumers and their social network.

Another determinant of satisfaction in both countries was ***web navigability***. The presence of web navigability improves user satisfaction since it helps customers find merchandise and the required information. Web navigability should be used as assistance while customers virtually walk in an m-commerce site. The improvement of the navigability of an m-commerce website can be effectively done by the use of a browser tab and navigation bar, product categories, clear navigation titles, and search features usability. Even though web navigability preferences between Thai and Indonesian users are dissimilar, it is certain that a responsive design and mobile- user friendly experience should be created for both markets.

While web customization comes into play as far as user satisfaction is concerned in Thailand, it has no significant effect on Indonesian users' satisfaction. This implies that retailers in m-commerce market should enhance the quality of their web customization, by simply going beyond the development of one-size-fits-all interfaces. E-retailers should allow users to customize their mobile shopping experience by configuring content and system functionalities. Examples of web customization features include, but are not limited to, most frequent or recent visited pages and "my favorite list/product" function. Doing so would help to increase traffic, satisfaction, and purchase intention. The most contributory factor of Thai users' satisfaction was web aesthetic. The choice of colors should be considered when it comes to website design, together with the use of photos, moving images, and graphics whenever and wherever appropriate.

- Limitations and Further Studies
There are some limitations to this research. First, this study was solely quantitatively conducted. In this respect, further studies can be improved by gaining insight from respondents through a qualitative or mixed methodology approach. Regarding the statistical analysis method, further studies should consider using advanced statistics such as the structural equation modeling (SEM) to compare the model fit between two or more countries. Despite the comparative nature of this paper, the generalization of the results is restricted to only Thailand and Indonesia. The application of results in other research settings may require further analysis. Finally, since only content and non-content designs were examined, further research can also study the effect of other important factors influencing purchase intention such as, for example, online review, perceived trust, price, promotion, etc.

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