

บทความวิจัย (Research Article)

กลยุทธ์การตลาดผ่านโทรศัพท์มือถือและผลการดำเนินงานของธุรกิจ  
พาณิชย์อิเล็กทรอนิกส์ในประเทศไทย

Mobile Marketing Strategy and Firm Performance:  
An Empirical Study of E-Commerce Business in Thailand

เกรียงศักดิ์ จันทินอก<sup>1\*</sup> และศิริลักษณ์ ไกยวินิจ<sup>1</sup>  
Kriangsak Chanthinok<sup>1\*</sup>, and Sirilak Kaiwinit<sup>1</sup>

บทคัดย่อ

เป็นเรื่องที่น่าสนใจอย่างยิ่ง เมื่อกลยุทธ์การตลาดผ่านโทรศัพท์มือถือได้รับความนิยมในโลกดิจิทัลมากขึ้น ในปัจจุบันธุรกิจส่วนใหญ่ได้ใช้แพลตฟอร์มผ่านอุปกรณ์โทรศัพท์สมาร์ทโฟน เพื่อใช้เป็นสื่อในการวางกลยุทธ์ในการเข้าถึงลูกค้าของตนเอง อย่างไรก็ตามในประเด็นนี้ยังต้องมีการทดสอบว่ากลยุทธ์การตลาดบนโทรศัพท์มือถือจะมีผลต่อประสิทธิภาพการดำเนินงานของบริษัทมากน้อยเพียงใด ดังนั้นงานวิจัยนี้จึงมีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างมิติของกลยุทธ์การตลาดผ่านโทรศัพท์มือถือ (MMS) กับผลลัพธ์ทางธุรกิจ โดยใช้แบบสอบถามเก็บข้อมูลจาก บริษัทที่ประกอบการด้านพาณิชย์อิเล็กทรอนิกส์ ในประเทศไทย ซึ่งได้รับการตอบกลับมาจำนวน 39 บริษัท การวิจัยในครั้งนี้ใช้การวิเคราะห์แบบถดถอย เพื่อทดสอบสมมติฐานจากผลการวิจัยชี้ให้เห็นว่าการมุ่งเน้นการบูรณาการด้านเทคโนโลยีมีผลกระทบเชิงบวกอย่างมีนัยสำคัญต่อผลการดำเนินงานของธุรกิจทุกด้าน ทั้งประสิทธิภาพในการให้บริการลูกค้าและความได้เปรียบด้านการตลาดเป็นผลดีอย่างมากต่อผลการดำเนินงานของบริษัท การค้นพบนี้ไม่เพียงแต่ให้ข้อคิดและประโยชน์ในการนำไปประยุกต์ใช้ในธุรกิจ แต่ยังมีข้อเสนอแนะสำหรับการวิจัยในอนาคตด้วยเพื่อนำไปพัฒนาต่อยอดได้

**คำสำคัญ:** กลยุทธ์การตลาดผ่านโทรศัพท์มือถือ การมีส่วนร่วมในสื่อสังคมออนไลน์ การโฆษณาเฉพาะบุคคล

<sup>1</sup> คณะการบัญชีและการจัดการ มหาวิทยาลัยมหาสารคาม

Mahasarakham Business School Mahasarakham University

\*Corresponding author; email: kriangsak.c@acc.msu.ac.th

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## Abstract

Incontestably, mobile marketing has come to a higher degree of popularity in the digital world. Currently, most businesses have been utilizing any smart device platforms for mobile marketing in their strategy. Yet, in this sense it still has to be explored concerning how mobile marketing strategy affects firm performance. Therefore, this paper aims at investigating the relationship between dimension of mobile marketing strategy (MMS) and business outcomes. The questionnaires of 39 e-commerce firms in Thailand were collected. Regression analysis was employed to verify the hypotheses. The evidence highlights that technology integration management orientation has the strongest positive significance for all business outcomes. Both customer service effectiveness and marketing competitive advantage are significantly positive to firm performance. The finding not only provides contributions but also recommendation for future research.

**Keywords:** Mobile marketing strategy, Social media engagement awareness, Personalized advertising flexibility focus

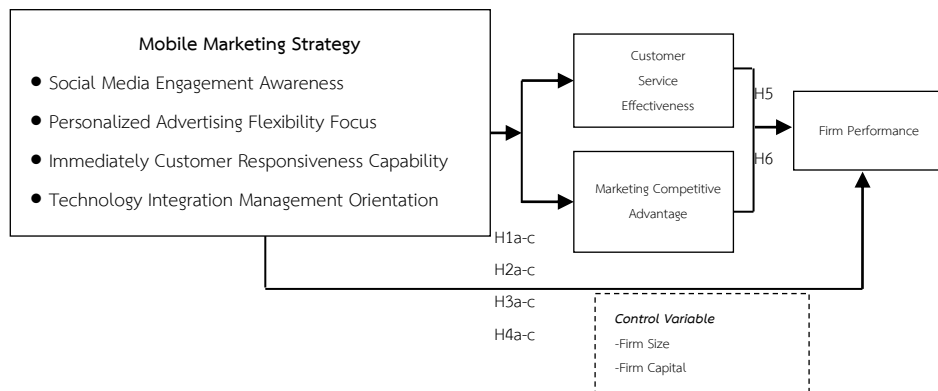
## Introduction

Mobile marketing is a topic of growing interest and importance. While the evidence of mobile marketing effectiveness is still scarce, marketers around the world are spending increasing amounts of money on mobile marketing activities. Especially, media advertising has more important for one-to-one marketing communication (Leppäniemi & Karjaluo, 2008). Moreover, mobile marketing is turning this paradigm on its head. Retailers can now enter the consumer environment through the mobile device, and because the mobile device stays with the consumer, the retailer can be accessed anywhere, anytime (Shankar et al., 2010).

Although mobile marketing strategy is very essential to E-commerce growth that operated over a wireless network, researches were conducted in Thai context still minimal. These address shed light on research gaps in the literature. The main purpose of this research is to investigate the effects of mobile marketing strategy (MMS) on firm performance of E-Commerce business in Thailand. Thus, the key research question of this study is “How does each dimension of MMS have an impact on firm performance?” Consequently, the specific questions are as follows: (1) How does each dimension of MMS influent on customer service effectiveness, marketing competitive advantage and firm performance?; and (2) How do customer service effectiveness and marketing competitive advantage effect on firm performance?.

## Theoretical and Literature review

The dynamic capability theory explains the ability of the firm to reestablish, and incorporate their resources to fit with changing business environmental pressures (Teece et al., 2007). Based on this theory, mobile marketing strategy and firm performance are elaborately examined. Therefore, the conceptual, linkage, and research model present in Figure 1.



**Figure 1** A Conceptual Model of the Relationships

## Mobile Marketing Strategy

The Mobile Marketing Association (MMA, 2008) defines mobile marketing as, “A set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through any mobile device or network.” Therefore, mobile marketing helps in increasing the existing network and creates new paths to market the products (Jain et al., 2011). The context of marketing strategy applied by mobile marketing composes key feature as ubiquity, personalization, two-way communication, localization, and industry background (Smutkupt et al., 2010).

The key of marketing decisions under a mobile marketing strategy include marketing communication (advertising and sales promotion), delivery of digital products and services, and customer relationship management (customer service and support) (Shankar & Balasubramanian, 2009). Thus, in this study, the dimension of mobile marketing strategy includes social media engagement awareness, personalized advertising flexibility focus, immediately customer responsiveness capability, and technology integration management orientation, respectively.

## Social Media Engagement Awareness (SMEA)

The social media engagement awareness can be defined as marketing strategy which uses internet technology to apply to social media, blog, video conference, content sharing, and live experience to audiences who participate and interact between company and customer (Hutter et al., 2013). Although mobile technology presents companies with challenges as well as opportunities, the increasing of smartphone technology adoption opens up even more possibilities for mobile marketing. However, the company should not violate the customer privacy thus the privacy policy must be accepted by their customer before the company sends any notification or promotion message (Muk, 2007).

Prior study points out that customer service and sustainability could expand a set of possibilities to research smartphones capabilities owing to marketers practice (Persaud & Azhar, 2012). Likewise, Merisavo et al. (2006) studied the effectiveness of mobile advertising in sales of mobile services and discovered that there was a significant increase in sales to customers who were exposed to mobile advertising compared to those who were not exposed. Therefore, we propose the following hypotheses:

***H1: SMEA is positively related to a) customer service effectiveness b) marketing competitive advantage and c) firm performance***

## Personalized Advertising Flexibility Focus (PAFF)

The Mobile Marketing Association (2003) defines mobile advertising as a method of presenting that transfers advertisement communications to customers via tablets, mobile phones, or any wireless communication devices. Meanwhile, personalized advertising was defined as content publication which is created specifically for client using individual information (Wolin & Korgaonkar, 2005). This information includes either personalized identifying information such as name, date of birth, e-mail address, habitation or personal information such as shopping history, websites visited, preference for a specific product, or one's hobby. Furthermore, personalized advertising flexibility focus in this study is defined as capability of the firm to promote both marketing activity and marketing content which individual preference and specific message will send directly to their customers (Yuan & Zhang, 2003; Wolin & Korgaonkar, 2005).

Consequently, as literature aforementioned can be assumed that personalization advertising flexibility focus is more likely to positive influent to individual customer service, competitive advantage, and firm performance. Thus, our hypotheses are postulated:

***H2: PAFF is positively related to a) customer service effectiveness b) marketing competitive advantage and c) firm performance***

### **Immediately Customer Responsiveness Capability (ICRC)**

In this study, immediately customer responsiveness capability defined as a firm ability to discover and be aware of the needs of customers by learning customers' behavior. In order to meet those needs in time as well as faster than the competitor (Lee & Lin, 2005). Especially, social media on mobile technology is an instrument to gather information for both existing customers and their prospects. According to the work by Patino et al. (2012), it was demonstrated that new instruments help marketers in marketing research by using social media.

For repeating customers, telephone reservation mail resulted in positive effects on the shop visit probability, but no effect for ordinary mail and negative effects for hyperlink mail. Accordingly, this study points out that mobile marketing not only immediately respond to the customers by responsive promotion marketing content, but also there are the most accessible to all market segments. Due to mobile device has more than other electronic that the people used in daily life. Therefore, the marketers are more likely to promote immediate customer responsive capability by mobile marketing to enhance customer service effectiveness, marketing competitive advantage and firm performance. Hence, it can be hypotheses that:

***H3: ICRC is positively related to a) customer service effectiveness b) marketing competitive advantage and c) firm performance***

### **Technology Integration Management Orientation (TIMO)**

Technology integration management orientation can be defined as the ability of the firm that is professional to adapt all technology to support their business process, such as Internet and network technology, mobile technology, software development, and database management. These can be combining together to resolve current and future problem.

Empirically, in addition, Wu et al. (2003) found that the technology communication and integration of technology in the firm have positive effect on firm performance that can be assumed as customer service, and competitive advantage. Hence, the hypotheses are suggested as follows:

***H4: TIMO is positively related to a) customer service effectiveness b) marketing competitive advantage and c) firm performance***

### **Customer Service Effectiveness (CSE)**

In this study, customer service effectiveness refers to the firm capability to provide customer satisfaction, cost reducing, customize responding, and customer need fulfillment in service of the firm such as hospitality, tourism, airlines, or even e-commerce website service. For example, Continental Airlines has applied a database warehousing platform to authorize online accessibility of customer service and flight information that enable a better understanding and recognize their passengers' needs (Watson et al., 2006).

However, the training for customer service will increase an effectiveness of customer service with large firm size that improves the knowledge, skills and ability of employees. As aforementioned, it seems that customer service effectiveness will influence a performance of the firm. Thus, the hypothesis is below.

***H5: CSE is positively related to firm performance***

### **Marketing Competitive Advantage (MCA)**

Marketing competitive advantage refers to the firm's superior competitive position gained through superior products, lower prices, extensive distribution, and effective promotion (Fotopoulos & Krystallis, 2003). That is, marketing advantage concerns with new product offering with a high quality and reasonable prices, outstanding and up-to-date, new strange, unique identity, and reputation over competitors.

In marketing literature, the firm performance can be enhancing by the product and image-based advantage such as high product quality, innovative, unique, modern product features and quality reputation (He & Nie, 2008). The factor of the excellence of new product development, pricing control, several of distribution and superior promotion program were indicators that influence the greater sales volume and the growth of market share. The relevant existing findings indicated that competitive marketing advantage has a positive effect on firm's financial performance (Wei & Wang, 2011). It can be stated that the firms having

marketing competitive advantage will be more likely to achieve firm performance. Thus, the hypothesis as below:

***H6: MCA is positively related to firm performance***

## Research Methods

### Sample Selection and Data Collection Procedure

In this study, E-Commerce businesses of Thailand were selected. In all, 198 firms were chosen from the database list of the Department of Business Development, Ministry of Commerce in Thailand (DBD, 2016). Data were collected with a mail survey procedure. The key participants in this study were marketing directors or marketing managers of E-Commerce businesses of Thailand.

There are two reasons choosing e-commerce firms for an empirical test. Firstly, mobile marketing advances can make more profits by attracting and alluring potential buyers via social media channels by realization of the value of e-commerce operations (Shadkam & O'Hara, 2013). Lastly, mobile marketing is a part of marketing strategy that is useful for e-commerce firms (Constantinides, 2014). Regarding the questionnaire collections, 6 surveys were undeliverable because some firms were no longer in business or had moved to unknown locations. Deducting the undeliverable from the original 198 mailed, the valid mailing was 192 surveys, from which 39 responses were received. Of the surveys completed and returned, only 39 were usable. The effective response rate was approximately 20.31%. According to Aaker et al. (2001), the response rate for a mail survey, without an appropriate follow-up procedure, can be acceptable when the response rate is not less than 20%. Thus, the response rate of this study is considering decent.

To verify the non-response bias that suggest by Armstrong & Overton (1977), the t-test statistic was assessed to compare between two groups by using the demographics of the firm. The result indicated that no significance between early and late responses. Therefore, the non-response bias was not problematic in this study.

## Questionnaire Development

The questionnaire was conducted through six sections based on adopted question in the literature review. Firstly, the author employed to ask personal profile of respondents such as gender, age, status, education, experience, salary, and employment position. Secondly, the question contains general business profile that included business type, product type, number of employee, firm age, and firm capital. Thirdly, the perceived evaluation of respondents in terms of mobile marketing strategy that were composed social media engagement awareness, personalized advertising flexibility focus, immediately customer responsiveness capability, and technology integration management orientation. Fourthly, the results of firm's operation that included customer service effectiveness, marketing competitive advantage, and firm performance. The multiple-items scales are employed in each construct. Each of these variables is measured by five-rating Likert's scales that are ranging from 1 to 5 (strongly disagree and strongly agree), respectively. Finally, the open-ended question was provided for opinions and suggestions.

## Methods

The content analysis was first considered process to judgmentally verify the quality of the research instrument. There are three experts proofreading each item question, to essence of the scale represents the construct. Moreover, construct validity was trying a scale correctly measures what it is supposed to measure. The factor analysis was utilized to examine and assess the underlying relationships of a large number of items and to determine whether they can be reduced to a smaller set of factors (Ussahawanitchakit, 2012). All factor loadings are greater than 0.40 cut-off and are statistically significant (Nunnally & Bernstein, 1994). Moreover, the reliability scale was estimated by using Cronbach's alpha coefficient. The suggested score that is sufficient internal consistency would be greater than 0.60 (Malhotra, 2004). The validating result both factor loadings and Cronbach's alpha for multiple-item scales are provided in Table 1.



**Table 1** Result of Measure Validation

Measurement	Cronbach Alpha	Factor Loading	Item Total Correlation
<b>Social Media Engagement Awareness (SMEA)</b> (Jain et al., 2011; Persaud & Azhar, 2012)	<b>0.89</b>		
- Firm promotes the use of internet via mobile phone that announces to the client.		0.90	0.82
- Firm encourages the use of social media via mobile phone that engages to the client.		0.91	0.83
- Firm focuses the use of social media via mobile phone that supports word-of-mouth channel to the client.		0.87	0.79
- Firm concerns with the use of social media via mobile phone on facilitating sharing interest topic to the client.		0.82	0.72
- Firm emphasizes the use of social media via mobile phone that connects customer's feedback.		0.67	0.54
<b>Personalized Advertising Flexibility Focus (PAFF)</b> (Zegreanu, 2013)	<b>0.85</b>		
- Firm believes that advertising via mobile platform can help present different product features.		0.84	0.69
- Firm orientates that mobile platform can help offer various product information and provide product interactive.		0.89	0.78
- Firm strives that mobile platform can help excite to senses in different product design.		0.77	0.61
- Firm encourages that social media platform enables lively in different brand image.		0.81	0.66
<b>Immediately Customer Responsiveness Capability (ICRC)</b> (Lee & Lin, 2005)	<b>0.81</b>		
- Firm always analyzes trend of product and service continuously by using online mobile platform.		0.87	0.73
- Firm supports to customer demand, evaluates marketing trend by using online mobile platform, in order to response customer timeliness.		0.79	0.61
- Firm is aware to product and service matching by using online mobile platform, in order to response right product in the right time.		0.76	0.58
- Firm believes that shopping online via mobile platform will be helpful to delivery and response to customer expectation.		0.78	0.59

Measurement	Cronbach Alpha	Factor Loading	Item Total Correlation
<b>Technology Integration Management Orientation (TIMO)</b> (Sryamkin & Sryamkina, 2015; Kouziokas, 2016)	<b>0.87</b>		
- Firm encourages the better information technology management, the better trust of marketing activity.		0.83	0.68
- Firm supports novelty of information technology development to promote marketing activity for the competitive advantage.		0.89	0.79
- Firm emphasizes to information technology resource planning, in order to support performance in business policy.		0.86	0.75
- Firm supports to customer demand, evaluates marketing trend by using online mobile platform, in order to response customer timeliness.		0.82	0.68
<b>Customer Service Effectiveness (CSE)</b> (Omoyza & Agwu, 2016)	<b>0.89</b>		
- Firm has higher expected customer service continuously.		0.89	0.78
- Firm has customer service control by marketing plan.		0.90	0.8
- Firm has excellent customer service and always be appreciated from their customer.		0.88	0.78
- Firm has level of customer service higher than their competitor.		0.82	0.69
<b>Marketing Competitive Advantage (MCA)</b> (Fotopoulos & Krystallis, 2003; Wei & Wang, 2011)	<b>0.90</b>		
- Firm has superior prominent marketing operation more than their competitor such as advertising online, media online, etc.		0.77	0.67
- Firm has expert to response customer more than competitor.		0.89	0.79
- Firm has marketing activity improvement continuously and archived firm performance.		0.88	0.87
- Firm has marketing tool adaptation and marketing database update continuously.		0.82	0.78
<b>Firm Performance (FP)</b> (Jumpapong & Ussahawanitchakit, 2012)	<b>0.90</b>		
- Firm has the better sale growth than the past.		0.84	0.73
- Firm has increased net profit continuously.		0.91	0.83
- Firm has more customer endlessly.		0.89	0.81
- In overall, firm has high level in satisfaction of executive management in business operational both efficiency and effectiveness.		0.86	0.76

The ordinary least squares (OLS) regression analysis is used to examine the hypothesized relationships and estimate factors affecting firm performance of E-Commerce firm in Thailand. Base on the relationship of hypotheses, this study was employed multiple regressions. The assumptions of regression were not ignored, especially, multicollinearity by assessing variance inflation factor (VIF) values (Eng, 2008; Ramanathan et al., 2012).

## Results and Discussion

The demographic respondents are shown in Table 2. The descriptive statistics and correlation between variables are analyzed as shown in Table 3. The maximum scale of variance inflation factors (VIFs) was 3.230 which does not exceed the value of 10, indicating no multicollinearity (Hair et al., 2010). Moreover, the auto-correlation effect was found 1.625 to 2.451, which is between the critical value of  $1.5 < d < 2.5$  (Durbin & Watson, 1971). Therefore, as to auto-correlation effect, there is no effect in this study.

**Table 2** the Demographic Respondent (N=39)

Descriptions	Categories	Frequencies	Percent
Gender	Male	14	35.9
	Female	25	64.1
Current position	Marketing director	8	20.5
	Marketing manager	19	48.7
	Others	12	30.8
Business types	Company Limited	35	89.7
	Partnership	4	10.3
Firm capital	Less than 1,000,000 Baht	7	17.9
	1,000,000-5,000,000 Baht	24	61.5
	5,000,001-9,000,000 Baht	1	2.6
	More than 9,000,000 Baht	7	17.9
Mobile marketing experience	Less than 1 year	9	23.1
	1 – 2 years	13	33.3
	3 – 4 years	8	20.5
	More than 4 years	9	23.1

**Table 3** Descriptive Statistics and Correlation Matrix

Variables	SMEA	PAFF	ICRC	TIMO	CSE	MCA	FP	FS	FC
Mean	4.097	4.038	3.961	4.294	3.717	3.583	3.871	-	-
S.D.	0.632	0.577	0.611	0.590	0.649	0.752	0.683	-	-
SMEA	1								
FAFF	.623***	1							
ICRC	.650***	.628***	1						
TIMO	.535***	.593***	.602***	1					
CSE	.168	.196	.308	.467***	1				
MCA	.436***	.336**	.440***	.465***	.675***	1			
FP	.350**	.204	.299	.549***	.706***	.594***	1		
FS	.207	.230	.035	.271	-.257	-.184	.014	1	
FC	.002	.133	-.126	-.012	-.024	.114	-.115	.475***	1

Table 4 demonstrated the hypothesis testing results. As shown in model 2, the result indicated that coefficients of SMEA have a positive and significant influent on MCA (H1b:  $\beta_7=0.326$ ,  $p<0.01$ ). This empirical result is pointing out that mobile marketing strategy enables their customers to engage marketing activity via social networking. The firms are more likely to offer product or service in multiple channels with low cost and dynamic content, during promotion period. As a result, it generated marketing competitive advantage.

On the other hand, as show in model 1 and 3, SMEA has no significant relationship with both CSE (H1a:  $\beta_1=-0.065$ ,  $p>0.10$ ) and FP (H1c:  $\beta_{13}=0.221$ ,  $p>0.10$ ). Accordingly, Thai E-commerce may not pay attention to utilize social media as customer service tools. Statistically, most of Thai people utilize social media via smart phone for entertainment as such 40% for messengers, 33% for watching video and playing game, 30% for mobile banking, and 32% for mobile map service (We Are Social Report, 2016). Thus, it indicates that social media engagement is not effective to customer service in Thai E-commerce. Consequently, only social media engagement factors are insufficient to firm performance. *Thus, hypotheses 1b is supported but 1a and 1c are not supported.*

**Table 4** Results of Regression Analysis

Independent Variable				
	CSE	MCA	FP	FP
	Model 1	Model 2	Model 3	Model 4
SMEA (H1a-c)	-0.065 (0.195)	<b>0.326***</b> (0.182)	0.221 (0.205)	
PAFF (H2a-c)	-0.133 (0.202)	-0.138 (0.188)	-0.213 (0.212)	
ICRC (H3a-c)	0.069 (0.208)	0.113 (0.194)	-0.105 (0.219)	
TIMO (H4a-c)	<b>0.678***</b> (0.186)	<b>0.449***</b> (0.173)	<b>0.663***</b> (0.195)	
CSE (H5)				<b>0.575***</b> (0.139)
MCA (H6)				<b>0.323***</b> (0.140)
FS	<b>-1.211***</b> (0.382)	<b>-1.254***</b> (0.357)	-0.357 (0.402)	<b>0.841***</b> (0.289)
FC	0.627 (0.389)	<b>0.992***</b> (0.363)	-0.047 (0.409)	<b>-0.753***</b> (0.296)
Adjusted R <sup>2</sup>	0.315	0.403	0.242	0.636
Maximum VIF	2.398	2.398	2.398	1.829
Durbin-Watson	1.769	1.625	2.451	2.393

Surprisingly, there are no elements of PAFF being effective to neither CSE, MCA, nor FP. In this context, it can be described that PAFF is complexed and sophisticated in business process as well as more costly to operate. Likewise, ICRC has no influent to CSE, MCA, and FP. **Hence, hypotheses 2a-c and 3a-c are not supported.** Interestingly, the coefficients of TIMO have a positive and significant influent on CSE (H4a:  $\beta_4=0.678$ ,  $p<0.01$ ), MAC (H4b:  $\beta_{10}=0.449$ ,  $p<0.01$ ), and FP (H4c:  $\beta_{16}=0.663$ ,  $p<0.01$ ).

Accordingly, the empirical research as Wu et al. (2003) found that the communication technology and integrated technology in the firm have positive effect on firm performance. These communication and integrated technology can cover in both customer service and marketing competitive advantage. **As a result, hypotheses 4a, 4b, and 4c are supported.** As shown in Model 4, the coefficient of CSE has positive effect to FP that is consistent with

general research. Accordingly, the firm operation with customer service orientated both offer by employee and automatic support system will enhance firm performance (Omoyza & Agwu, 2016). **Consequently, hypothesis 5 is supported.** Likewise, the coefficient of MCA has positive relationship with FP. The empirical research of Wei & Wang (2011) evidenced that competitive marketing advantage has a positive effect on firm's financial performance. The result in this study is consistent with the prior research. **Hence, hypothesis 6 is supported.**

However, mobile marketing can be used to build customer engagement with a brand, through text messages, mobile advertising permission based marketing, the delivery of mobile content user-generated content, and mobile commerce (Watson et al., 2013). According to the Forester Research Report from the Business Communication Review, in 2005, 67% of the US American households had at least a mobile phone and the households with only one mobile phone were in minority. Moreover, more than 50% of the household has more than four mobile phones (Pelau & Zegreanu, 2010). The report of Digital Advertising Association Thailand (2015) stated that more than 80% of internet users have smart phone and mobile application utilization. In Thailand, there are 31% of e-commerce and online purchases via mobile device. Likewise, Electronic Transactions Development Agency (2015) reported that smart phone more than 77.1% connected to the internet, 69.11% is personal computer and also 49.5% is computer notebook, respectively. In this case, as aforementioned indicate that the mobile device is higher rate utilization via internet network. It will be influent consumer behavior to more shopping online, share review, social media engagement. Therefore, the smart marketers have to a focus mobile marketing strategy, in order to quick response and correspond dynamic marketing environment.

## Conclusion and Recommendations

The key purpose of the study is to investigate the relationship between MMS and marketing outcomes in Thai e-commerce firms. The sample includes 98 observations that are conducted by stratified random sampling methods. The OLS regression results show that SMEA has positive relationship with MCA. In the same vein, TIMO has a positive significance for CSE, MCA and FP. Furthermore, both CSE and MCA has a significant positive effect to FP.

The finding of this study sheds light on how the application of mobile marketing strategy could provide an understanding of consumer behavior thus business can build a superiority in business performance. Comprehensively, MMS supports almost every marketing outcome. Especially, the TIMO aspect is powerful in promoting among CSE, MCA, and FP.

## Contributions

The discovery provides several contributions as follows. Firstly, this research determines four dimensions of mobile marketing strategy including social media engagement, personalized advertising flexibility focus, immediately customer responsiveness capability, and technology integration management orientation. One can disseminate and expand this construct to verify the circumstances in other populations.

Secondly, it provides an acknowledgement of the relationship between mobile marketing strategy and business environments especially technology integration management orientation elements which powerfully influence to all business outcomes.

Thirdly, this research provides managerial contributions to executives, marketing managers, information technology managers, and top managers regarding the availability of social media application in organizations. Mobile marketing is a new challenge for not only marketing operations in product and service, but also understanding consumer behavior by location base service. In addition, novel ideas gather from applications of mobile marketing can rise an information richness beyond traditional marketing activities. The smart marketers should analyze customers' comments or conversations especially regarding brand, company, competitors, and industry as much as possible in order to align mobile marketing strategy with the business's goal and target customers. Therefore, mobile marketing strategy is an interesting issue that is able to serve the organization for supplementing business performance in the digital generation.

Finally, the essential supporters that contribute to mobile marketing strategy success is hi-tech vision leadership. In fact, mobile marketing is a part of technology and innovation which changes people's ways of communication, lifestyles, shopping behavior, or even working style. Therefore, the firm recruitment in a marketing department should regard technology skill, creativity, and innovative marketing experience to develop mobile marketing strategy and superior business performance accomplishment in the digital era.

## Recommendations

However, in order to build more interesting issues for marketing scholars, future research has a few recommendations. Due to the fact that the FS was a control variable that has an effect on some models, the researcher should examine it more carefully. Based on the result of model 1, 2, and model 4 that is control variables significance, in order to

maintain a high level of internal validity in future research that still remains relationships. It requires a separate sample group which is different in the e-commerce firm size between the two groups. For example, in data collection, only the firm has size of an e-commerce business that either not exceeds 30 employees or is more than 30 employees.

In addition, future research should investigate their antecedent effect of MMS. For example, the antecedent might be transformational marketing leadership, innovative marketing experience, firm research availability, and modern technology growth. Future research may also consider either a different population, or compare the result with other samples such as food, hotel, travel, or the electronic industry that has a high level of social media marketing strategy application.

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