

Relating Technology-based CRM, Market Orientation and Service Innovation in Thai Hotels

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The author conducted the study to investigate the impact of e-CRM (Customer Related Management) practices, namely technology-based CRM, IS, and HR decision of CRM (people) on the service innovation performance of hotels of Thailand. In addition to that the mediating role of market orientation in the relationship between the CRM practices, namely technology-based CRM, IS, and HR decision of CRM (people) on the service innovation performance of the Thai hotels. The data is collected using a questionnaire, and the response rate is turned out to be 63 percent. For the operationalization of we have used five-point Likert scale for variables and their constructs. The questioner is adapted from the previous studies. For the analysis of data, we have employed the PLS-SEM approach in this study. The study is carried out to explore one of the most unexplored areas of marketing known as relationship marketing, which basically advocate a continuous relationship with the customer. There are many areas in marketing, where technology is playing a key role. The CRM literature is among one of these areas that's why we have taken the technological CRM as one of the dimensions of CRM and has examined its impact on innovation performance... The findings of the study support the hypothesis of the study. The study will be helpful for future researchers and marketers in the hotel industry.

Key words: *CRM, Market orientation, service innovation, Thailand.*

Introduction

Innovations and services are the key components for the economic growth of countries (Jermittiparsert, Sutduean, & Sriyakul, 2019). Countries that relied in the past on the manufacturing sector, specifically developed economies, are reforming and relying more on the service sector. In OECD countries, the service sector is currently 70% of GDP, and still rising (Faiz Gallouj, 2002). Innovation in services is recognized as the major factor of

economic development. In terms of organizations, innovation is the centre of growth and existence. It is the main driver of sustainable competitive advantage, performance, and survival. In the service sector, it is one of the key industries in the hotel industry (Faiz Gallouj & Windrum, 2009).

The hotel industry is critical for the national economy, employment generation and customers. In tourism, it contributes 10.7% of global GDP. It is the major employment generator in countries relying on tourism. Among such countries, Thailand is prominent. International customers regularly visit Thailand every year (Chon, Singh, & Mikula, 1993). In 2018, more than 38.12 million tourists visited Thailand. This figure is expected to amount to 39 million in year 2019. All these figures highlight the importance of the hotel industry to so many tourists.

Scholars have mentioned that innovation is very important for the service sector, but still it is very under-researched, as researchers have mentioned; there is a need to focus on innovation. (Droege, Hildebrand, & Heras Forcada, 2009).

Relationship marketing focuses on developing and bonding relationships with customers. The basic objective is to enhance customers value and bond long-term with such stakeholders. CRM (Customer Related Management) provides an opportunity for companies to understand customer needs more. Organizations can then properly design customized products and services to fulfil needs, and so retain customers long-term. The growth of direct marketing is accelerated by relationship management. Scholars and marketers have mentioned that acquiring new customers is important for organizations, but retaining current customers is more important, because targeting new customers can be more costly than targeting new ones (Chen & Popovich, 2003). Despite that, CRM systems have been adopted by a number of organizations. Still, its success depends upon the amount of attention being given to it. Organizations must consider CRM as the strategic concept, one that has important factors like IS (IS), technology and human resources (Mendoza, Marius, Pérez, & Grimán, 2007).

Few scholars define the concept of CRM without its link to technology. Few other scholars have defined it as a close association with technology. According to scholars, CRM is the horizontal integration of business, involving customers through direct, web, email, and telephone interaction. Its application combines both analytical as well as operational technologies (Thompson et al., 2000). For numerous reasons, organizations are bound to build relationships on the basis of technology. These include globalization and competition, which make it important that organizations strategize for their survival (Thompson et al., 2000). The key infrastructure of Technology-based CRM includes management tools also known as business management process, internet, and data warehousing. Enterprise resource planning is also used as the interface of a management tool, technology-based CRM, which

aims to work with customers and companies to earn long-term profits for stakeholders. Therefore, technology plays a critical role in developing and sustaining relationships among customers and organizations (Zineldin, 2005).

Customers in the market are now knowledgeable. Therefore a new CRM segment is created as information. Active groups must be given importance and attention by marketing practitioners. Scholars in past studies did not give much attention to the role of information, in positioning it to different patterns of relationship. A negative of internet use is that customers have an enormous amount of convenience at their doorstep, due to which this century is the era of information overload (Weiber & Kollmann, 1998). Scholars have mentioned that in last thirty years more information has been produced as was available in the past five thousand years. Moreover, the information available is doubling every five years. Thus, there are numerous points at which customers can be caught in the encyclopaedia of information. A variety of scholars have remarked that customers will choose those companies that provide more information to them. One important fact is that most are still using one-way communication with customers, providing irrelevant information in the form of emails. These customers may not be satisfied with the flow of irrelevant information. Ideally, companies are able to share information with customers that is relevant to them, to fulfil the requirements of both the customers and companies (Wong, Leung, & Chow, 2003).

Implementation of CRM means the level of involvement of human resource of functions of organization. These functions include master management, services, and marketing. Authoritative and quantitative human resources are one of the major factors for the durability and survival of organizations. It is critical for them that human resources are more important than financial and technological resources. The human resource that is learned and competent plays a critical role in learning and understanding the purpose of organization. CRM is designed for the people who are known as customers, and by the people who are known as employees of the organization. Therefore, people are the most important and critical factor of CRM strategy (Chen & Popovich, 2003). It is critical for marketers to realize that there is no strategy that is not dependent on cooperation that human resources. It is critical for organizations to realize what they are going to achieve and why they are going to achieve it. This also consists of the structure of the organization, training, and compensation which help the members of the team to learn to use and integrate the new process of information. Therefore, it is very critical for marketers to study the human resource factor of Customer Relationship Management (Ghalenoie & Sarvestani, 2016).

There is a need for market orientation (MO) to the organizations dealing in the service sector because of the intense competition and presence of organizations globally. This involves maintaining as well as establishing dialogue with customers. The key to retaining customers

is customer relationship management. The performance of the organization will definitely improve due to increases in MO. Therefore, the present study examines the impact of CRM factors like human resource, technology and IS, on the MO. It also examines the role of this mechanism on the service information system in the hotel industry of Thailand.

Literature Review

Technology

To redesign the business process, scholars and marketers have given a lot of importance to information technology. By utilizing information technology effectively, organizations can improve organizational performance (Sutduean, Jermstiparsert, & Jermstiparsert, 2019). The dimension of CRM which deals with technology denotes deployment of information effectively, and IT infrastructure which is designed to support the customer relationship. IT also plays a critical role in automating and managing internal operations, in the area of marketing, service, and sales (Chen & Popovich, 2003). The level of interaction improved in the twentieth century across channels, which helps improve interaction through different channels appropriate for using the knowledge and data of customers. By using technology, organizations can deliver personalized as well as customized services and products. Such products and services enhanced customer experience (Dubey & Sangle, 2019).

Information Sharing (IS)

The term is the informal and formal sharing of timely as well as meaningful information among firms. The information obtained can easily assist an organization in fulfilling customer needs. In this process, customers and companies share the information willingly with each other. Scholars in past literature have treated IS as an antecedent, and less attention has been given so far to this construct (Jraisat, 2010).

People (HRM Dimension of CRM)

All business processes are critical for the organizations. However, employees working in an organization are considered the building blocks for developing customer relationships. There are a number of CRM dimensions that need successful employees (Chen & Popovich, 2003). Organizational skills and knowledge are denoted by human resources for CRM activities. The HR dimension is based on the employees' relationships, attitude, experience, insight, and training. Research has shown people to be the key component of organizational success. For the success of the organization and the implementation of CRM throughout it, people working in it play a critical role. Its success depends upon the training of HR. Thus, the retention of the customers mainly depends upon the customer's relationship with the organization's human resources (Dubey & Sangle, 2019).

Market Orientation (MO)

MO is the concept that has a long-lasting impact on the organization, because the action and thinking of the organization are influenced by it. It is valuable for a number of reasons. First of all, information regarding customers is regularly collected regarding needs and desires. Moreover, importance is also given to competitors' capabilities. Secondly, continued superior value is also created, by using the information gathered (Mokhtar, Yusoff, & Ahmad, 2014).

Scholars have given a number of definitions regarding MO. MO has related the vertical and horizontal intelligence of the organization to the responsiveness and actions of the organization. Scholars also defined MO as market intelligence generation by the organization, regarding customers' future and current needs (Javalgi, Martin, & Young, 2006).

Service innovation performance (SIP)

A number of studies have measured service performance and service management. These areas have gained attention and emerged as important research areas, with growth potential in the field of management research (Mennens, et al, 2018). Researchers have defined SIP as the extent of strategic competitive advantage attained by the organization. It includes commercial success with respect to service innovation, by managing and sharing knowledge regarding innovation. Measurements of service performance are complicated, compared to the context of manufacturing (Hanif & Asgher, 2018).

Relationship of Technology-based CRM with MO and SIP

The literature has characterized MO by (1) usage, (2) sharing information, (3) collecting data regarding capabilities of the competitors, and (4) customers' data on a continuous basis. This gathered information creates value for customers. Past literature has shown positive impacts of MO on customer satisfaction (Singh & Ranchhod, 2004). This increases the profitability and retention of customers. MO is the top-down organizational culture in which the customer relationship is the main focus. Scholars have found that MO has the potential to influence the acceptability and functionality technology-based CRM. Thus, there will be greater MO as the result of greater technology used by the company for CRM (Richard, Huff, & Thirkell, 2005). It can be hypothesized that:

H1: Technology-based CRM significantly impacts the MO.

With the availability of technology-based applications, organizations can get real-time customer data. Customers can thereby update services as well as products, to fulfil their

requirements and preferences. Organizations with high level of CRM capabilities have better positions in terms of collection, organization, and prioritization of customer information (Sun, 2006). The product development team will be given the collected information. By the integration of information into product development, innovative products can be created by the firms. Additionally, new products can be created that fulfil customer needs. Researchers have found a significant impact of IT on SIP (Battor & Battor, 2010). So, it can be hypothesized that:

H2: Technology-based CRM significantly impacts the SIP.

Relationship of IS with MO and SIP

Organizational behaviours and processes are changed by information generated by CRM. That information and its usage determines the usability of CRM. Usability of CRM can easily be understood by three areas which are: Fields of information applied, scope of information processed, and the technology applied (Romano & Fjermestad, 2003). The processing of CRM information includes sales, marketing, customer services, and other fields. Whereas, the application of CRM information can include customer invention, customer retention, and customer service. In market-oriented organizations, the information can be formally shared in databases, newsletters, conferences and in meetings. Scholars have empirically investigated the impact of IS and MO. They have observed positive and significant impact of IS and MO (Shang & Wu, 2011).

H3: There is a significant association between IS and MO.

The literature stresses the need to share and manage information, to bring innovation and develop new strategies in the hotel industry. If hotels can enhance customer knowledge by understanding customer preferences, they can enhance the value of their service. Scholars examined empirically the impact of sharing information and service innovation. They found positive relationships among mentioned variables. Organizations can improve their services by positively focusing on IS with customers (Hussain, Konar, & Ali, 2016). It is hypothesized thus:

H4: There is a significant association between IS and SIP.

Relationship of People with MO and SIP

This is the era of high competition. Organizations need to be market-oriented and implement human resources strategically. Supportive HR policies have a positive impact on employees' behaviour, which is the foundation of a good relationship with customers and a foundation to

positively impact the organization's MO (Iglesias & Saleem, 2015). The capacity of the organization to align itself with its existing customer, brings profit for the organizations, and more customers as well. The base of internal marketing is the base of a business; creating motivated employees, who in turn focus on customer satisfaction (Liew, Ramayah, & Leen, 2013). So, it can be hypothesized that:

H5: There is a significant association between people and MO.

For the success of business in the current competition as well as fast pace market is based on the innovation in the products and services being provided. The organizations that are successful in the market describe innovation as the base of their success which they get because of people they hired in the organizations (Lawson & Samson, 2001). On the other hand, some of the organizations also develop system and environment that provide opportunity and encourage the innovation in which good ideas can be converted into successful services and products. Scholars have found empirically that organizations that give attention to the people are successful in bringing innovation in their products and services (Becker & Matthews, 2008). So, it is proposed that:

H6: There is a significant association between people and SIP.

Relationship between MO and SIP

Scholars have found four outcomes of the MO. They include employee consequences, innovation consequences, customer consequences and organizational performance. A number of studies have empirically linked innovation and MO despite its complexity (Al-Dmour, Basheer, & Amin, 2012). Scholars have empirically proved the link among MO, on innovation performance and firm innovativeness. Organizational performance is impacted by the intangible known as MO. MO is the culture of the business that impacts the performance and produces superior value for the customer (Erdil, Erdil, & Keskin, 2004). It is very important for the organization to bring innovation in their products regularly, so they can compete effectively with competitors. Customers' market needs can be addressed by the organization bringing innovation and introducing new services to the market. Scholars mention that superior performance on the basis of innovation is led by MO. It is result of regularly reviewing customers' preferences and competitors' activities, and using this information in the organization (Al-Dmour et al., 2012). Therefore, based on above literature, hypothesis can be made as:

H7: There is a significant association between the MO and SIP.

As MO mediates the relationship of CRM (technology, IS, and the human resource factor) and SIP, so the following hypotheses are proposed:

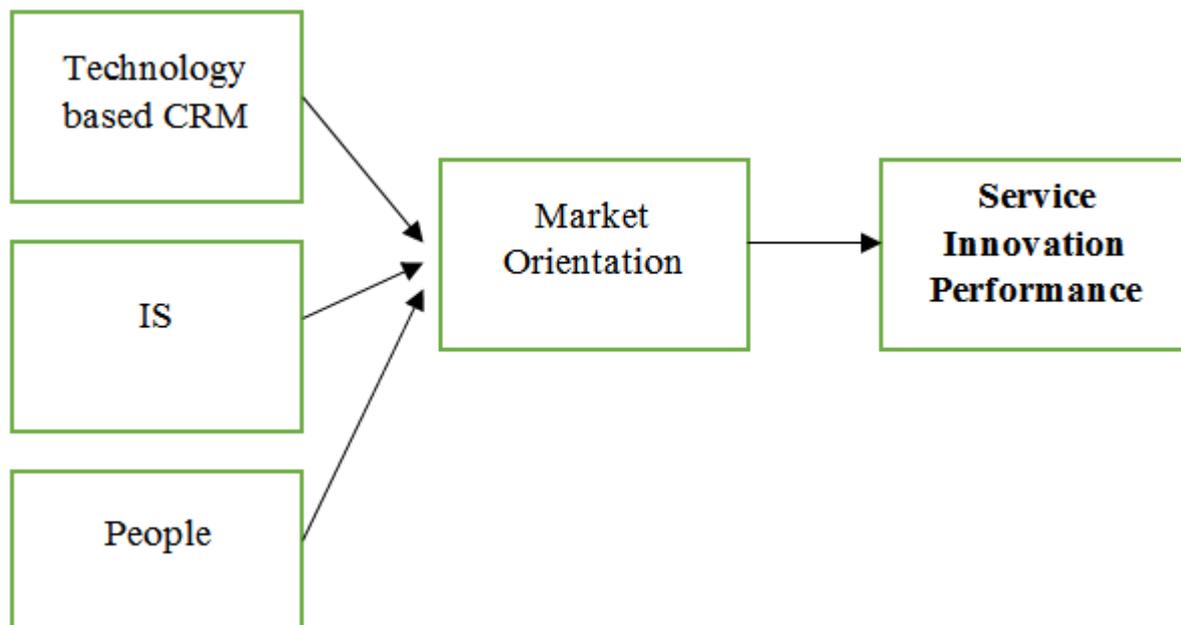
H8: MO mediates the relationship between technology-based CRM and SIP.

H9: MO mediates the relationship between IS CRM and SIP.

H10: MO mediates the relationship of the human resource factor of CRM and SIP.

Research Framework

The above hypotheses form the following framework:



Methodology

We employed a qualitative approach for this study. The quantitative approach used surveys-based methodology. Quantitative research design has been framed for this study. It helps the researcher thoroughly examine the large sample of respondents, and then generalize their responses. It also helps a researcher summarize the behaviour of respondents. Quantitative method was used to adapt a questionnaire, to quantify responses and opinions regarding issues raised in this study. A questionnaire also helped researchers relate a set of dependent, independent and intervening variables. We designed the questionnaire according to the hypotheses of the study, its problems and its objective hypotheses, to determine relative importance of factors that may control the SIP of hotels in Thailand. The survey data was loaded into Microsoft Excel, IBM SPSS, and Smart-PLS. A total of 570 questionnaires was received. The response rate was 63 percent. For operationalization, we used a five-point

Likert scale for variables and their constructs. Questions are adapted from previous studies. For data analysis, we employed PLS-SEM. Hair Jr et al., (2017) recommends two stages for reporting results in PLS analysis: in the first, measurement model (MM) assessment; and in second, structural model (SM) assessment.

There are several reasons for the current study employing PLS-SEM. According to several studies, PLS-SEM is a second-generation SEM technique. That is not only new but also robust, as it integrates all the models into a structure of the equation. It then produces results with a simultaneous operation, by producing a relationship with all direct and intervening phenomena. Today SEM-PLS is one of the more vigorous statistical tools for analyzing data on social issues. It is used in the current study. Recently many researchers such as Hair et al., (2016) have employed it and argued that whenever we are dealing with some novelty in conceptual models or need an advance assessment of any existing phenomena, SEM-PLS is preferable to other tools like multiple regression analysis. Hair et al., (2011) argued that the PLS-SEM is a two-step equation; an advanced form of multiple regressions that accounts for both the inner model assessment and the outer model assessment. The first step is an estimation of the model's validity and reliability. In Smart PLS, after obtaining the results of validity and reliability for each construct, the structural model results necessary for testing the hypothesis, are examined.

Data Analysis

There are five steps or procedures in examining the SM results; (1) examining the collinearity issues of SC; (2) path coefficients significance; (3) followed by examining the degree of R² values; (4) assessment of effect of f² size; and last but not least, (5) examining the forecasted relevance in Q² and the effect of size for q². The reason why the SEM-PLS is preferred, over the multiple regression, is that the former handles the multiple equations simultaneously, and can produce results with a simultaneous operation, by producing a relationship with all direct and intervening phenomena (Hair et al., 2011).

Several authors have observed and realized the problem of non-response bias in research studies can occur for multiple reasons. They are as follows: respondents may have limited or no time for filling in the survey, sensitivity of certain questions involved in the questionnaire, fear of top management, lack of interest or cooperation by the respondents, unable to provide desirable information, or failure to reach or target desirable respondents. In dealing with non-response biases, researchers need to ensure the appropriate selection of desirable and interested respondents.

Figure 1. Outer model

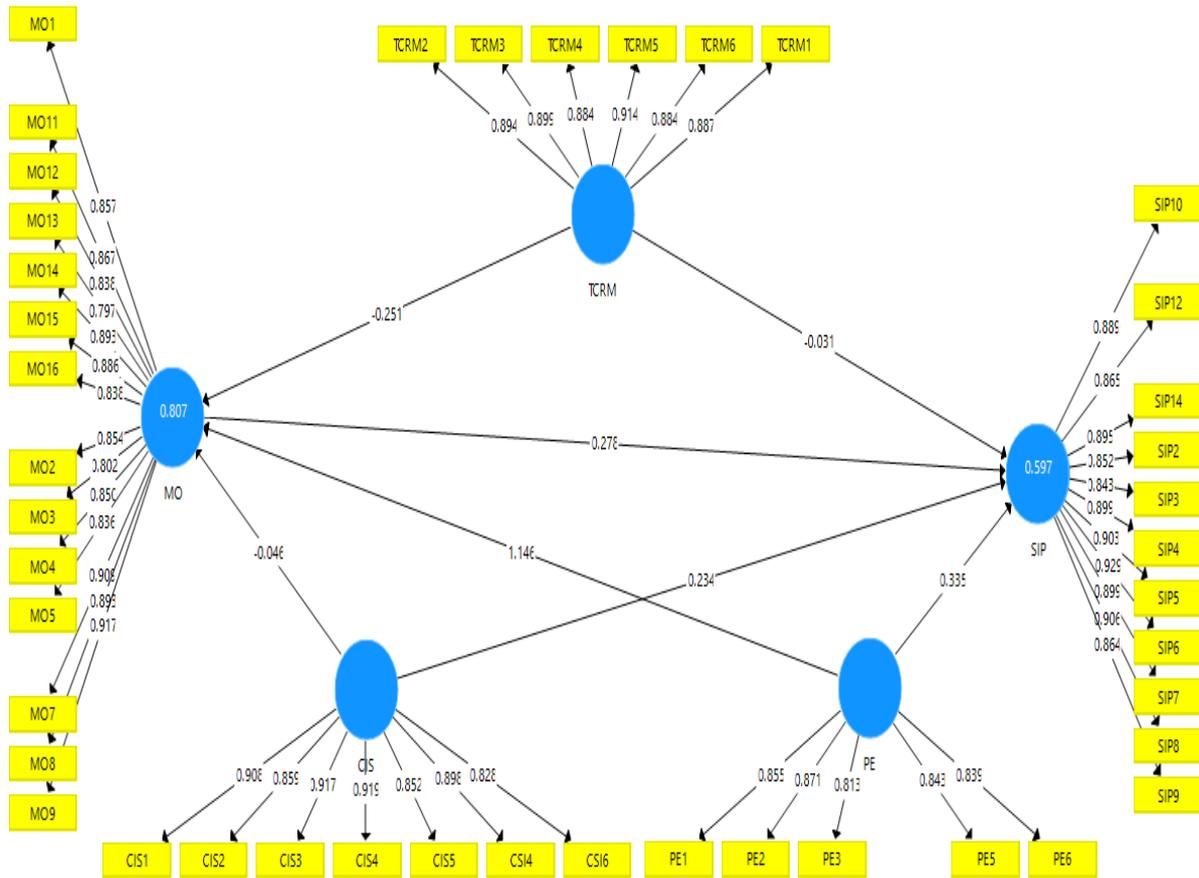


Table 1: Outer Loading

	CIS	MO	PE	SIP	TCRM
CIS1	0.908				
CIS2	0.859				
CIS3	0.917				
CIS4	0.919				
CIS5	0.852				
CSI4	0.898				
CSI6	0.828				
MO1		0.857			
MO11		0.867			
MO12		0.838			
MO13		0.797			
MO14		0.893			
MO15		0.886			
MO16		0.838			

MO2		0.854			
MO3		0.802			
MO4		0.850			
MO5		0.836			
MO7		0.909			
MO8		0.893			
MO9		0.917			
PE1			0.855		
PE2			0.871		
PE3			0.813		
PE5			0.843		
PE6			0.839		
SIP10				0.889	
SIP12				0.865	
SIP14				0.895	
SIP2				0.852	
SIP3				0.843	
SIP4				0.899	
SIP5				0.903	
SIP6				0.929	
SIP7				0.899	
SIP8				0.906	
SIP9				0.864	
TCRM2					0.894
TCRM3					0.899
TCRM4					0.884
TCRM5					0.914
TCRM6					0.884
TCRM1					0.887

The key criteria used to evaluate the MM are reliability, discriminant validity and internal consistency (Hair et al., 2017). For the evaluation of CV of reflective constructs, researchers consider the AVE and the outer loadings of the indicators. The recommended values for the outer loadings, according to (Hair, Black, Babin, Anderson, & Tatham, 2006), are ≥ 0.5 , and preferably ≥ 0.70 ., the value of AVE must be greater than 0.5 and the value of CR must be greater than 0.7. The researcher conceptualized CRM, as first order constructs, which is consistent with theoretical concept and supported by (Henseler et al., 2014), who recommended reducing the many relationships in the model. Thus, the method suggested according to Joe F Hair Jr et al. (2017) for the constructs of second order PLS-SEM is the

frequent indicator approach. **Table 2** shows the results of convergent validity exceed the recommended values, that indicate sufficient convergent validity.

Table 2: Reliability

	Cronbach's Alpha	rho_A	CR	(AVE)
CIS	0.953	0.954	0.961	0.781
MO	0.973	0.974	0.976	0.741
PE	0.900	0.903	0.925	0.713
SIP	0.973	0.974	0.976	0.785
TCRM	0.950	0.950	0.960	0.799

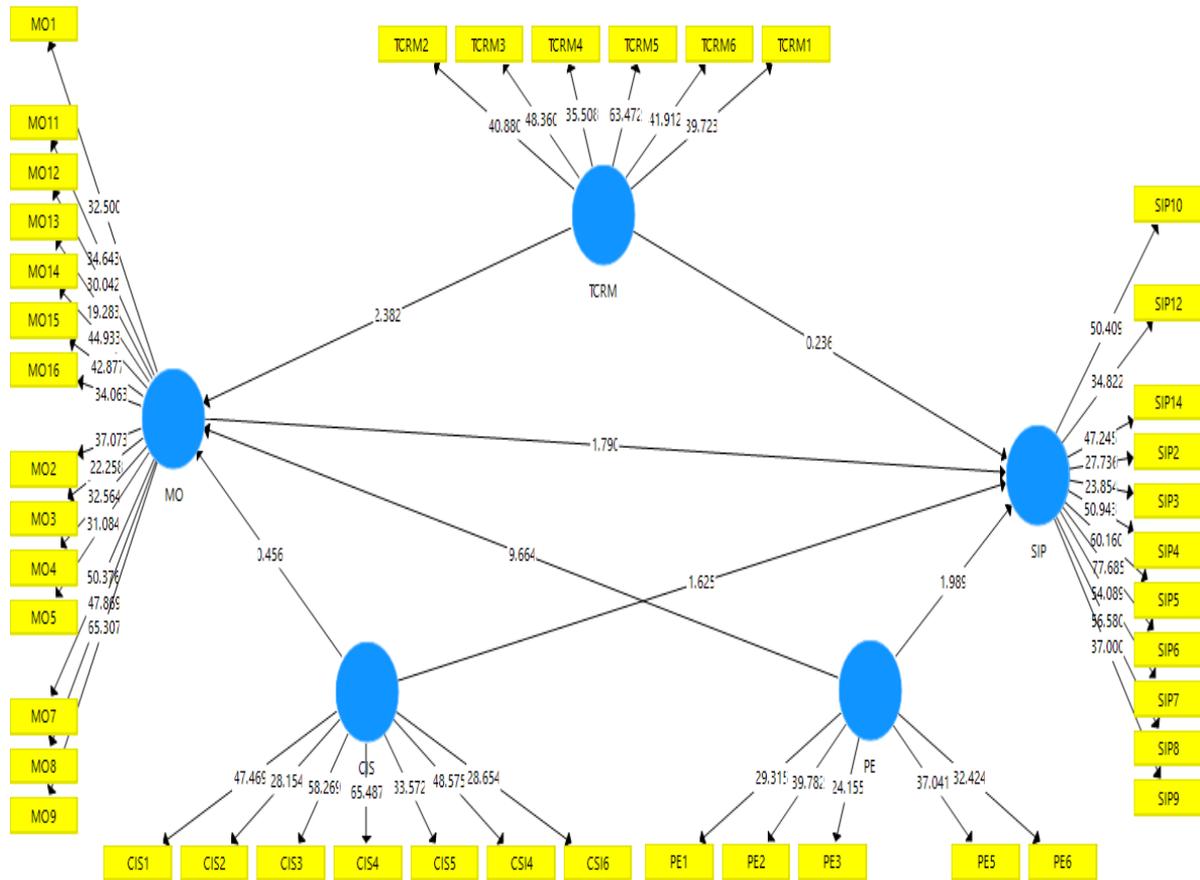
The second criterion, to examine the measurement model, is discriminant validity. There are several methods to calculate discriminant validity; one of the highly recommended methods is related to the Fornell and Larcker (1981) criterion. It compares the associations of latent variables with the AVE square root. The value of AVE must be higher than association with other constructs specifically for all the construct's square root. This criterion is considered as a more conservative method for the assessment of DV (Hair et al., 2014). **Table 3** shows the Fornell-Larcker criterion results, which achieves the requisite criteria.

Table 3: Discriminant Validity

	CIS	MO	PE	SIP	TCRM
CIS	0.884				
MO	0.718	0.861			
PE	0.866	0.787	0.844		
SIP	0.696	0.722	0.758	0.886	
TCRM	0.709	0.702	0.869	0.768	0.894

Joe F Hair Jr et al. (2017), suggested the evaluation criteria for the assessment of PLS-SEM results for the size, path coefficients significance and values of R^2 . The f^2 effect sizes, predictive relevance (Q^2), and the Q^2 effect sizes provide extra insights into the quality of the PLS path model estimations, followed by the mediating effect. The result of bootstrapping illustrated in Table 4, and Table 5 and Figure 2 shows the estimates for the full SM.

Figure 2. Inner model



The next step, after checking the reliability and validity of instruments, is estimation of structured relationship between the variables. Unlike other techniques, the SEM-PLS of the structural model analyses the effects of indirect and direct effects of variables. The SM is also shown below. The procedure is the bootstrapping over number of 5000 bootstrapping on the samples and 331 sample size for the significance and assessment of path coefficients is applied. Hair Jr et al. (2014) suggested the reliance and requirement of association in the SM.

Table 4: Direct Results

	(O)	(M)	Std. dev	T	P
CIS -> MO	0.046	0.033	0.102	0.456	0.324
CIS -> SIP	0.234	0.239	0.144	1.625	0.052
MO -> SIP	0.278	0.287	0.156	1.790	0.037
PE -> MO	1.146	1.131	0.119	9.664	0.000
PE -> SIP	0.335	0.325	0.168	1.989	0.023
TCRM -> MO	0.251	0.248	0.106	2.382	0.009
TCRM -> SIP	0.031	0.031	0.130	0.236	0.407

Table 5: Mediation

	(O)	(M)	Std. dev	T	P
CIS -> MO -> SIP	0.013	0.008	0.033	0.392	0.348
PE -> MO -> SIP	0.319	0.324	0.179	1.785	0.037
TCRM -> MO -> SIP	0.070	0.072	0.052	1.339	0.090

For the assessment of the PLS-SEM in SM the R-square is also a key criterion. F. Hair Jr et al. (2014) also suggested the value of R² for the representation of proportionate change in independent variables which can be described by the other hypothesized variables. Though the context of research defines the satisfactory level for the value of R², Hair et, al., 2014 have recommended the minimum level for the value of R², which is 0.10. Meanwhile, Duarte and Raposo (2010) also recommended that it can be measured when the value of R- square is 0.19 is weak, and if R²= 0.67 shows the moderate and if R²= 0.67 is considerable value. The values of R-square for the endogenous latent variables are mentioned in Table 6.

Table 6: R-Square

	R Square
MO	0.807
SIP	0.597

Conclusion

The study was conducted to examine the link between CRM practices, namely technology-based CRM, IS, and HR decisions of CRM (people), on the SIP of Thai hotels. In addition to that the MO is examined in the relationship between the CRM practices, namely technology-based CRM, IS, and HR decision of CRM (people) on the SIP of the Thai hotels. The study has focused on relationship marketing. The study has argued that relationship marketing ensures long-term relationships with customers, and firms do so by offering continuous value to the clients. Relationship marketing is an emerging strategy which has increased the effectiveness of direct marketing. Employees known as HR in the service industry are considered the face of the organization. They are dealing directly with customers. Thus, they must have proper and full knowledge regarding services so they can inform the customers.

For the current study, Thai hotels were chosen as the final sample. Purposive sampling was used. The data was collected using a questionnaire, and the response rate turned out to be 63 percent. For operationalization we used a five-point Likert scale for variables and their constructs. The questionnaire was adapted from previous studies. To analyse data we employed PLS-SEM. The study was carried out to explore one of the most unexplored areas of marketing known as relationship marketing, which basically advocates a continuous relationship with the customer.



Current study findings have proved that the CRM practices, namely technology-based CRM, IS, and the HR decision of CRM (people) has a significant impact on the SIP of Thai hotels. The findings indicate that CRM practices are effective in developing an innovative culture. Similarly, the CRM practices, namely technology-based CRM, IS, and HR decision of CRM (people) have a significant impact on most Thai hotels. The MO appears as a significant mediator in the relationship between CRM practices, namely technology-based CRM, IS, and the HR decision of CRM (people) and the SIP of Thai hotels.

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