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THE IMPACT OF DYNAMIC CAPABILITIES AND DYNAMIC PERFORMANCE MEASUREMENT ON COMPETITIVE PERFORMANCE: EVIDENCE FROM THAI HOTEL ENTREPRENEURS*

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Abstract. This research aims to provide empirical evidence on the causal relationships among the effects of dynamic capabilities and the dynamic performance measurement on high performance organizations (HPOs) and the competitive performance of hotel businesses in a world-class tourism destination of Thailand. The research using questionnaires to collect data from 115 hotel businesses located at a world class tourism destination in Thailand. The data were first analysed using descriptive statistics and then confirmatory factor analysis and structural equation modelling were conducted. The study results reveal that the causal relationship model fit the empirical data ($\chi^2 = 74.39$, p -value = 0.15, $\chi^2/df = 1.18$, CFI = 0.99, GFI = 0.92, NFI = 0.96, RMSEA = 0.04, and SRMR = 0.03). In addition, the results also indicate that the dynamic capabilities have a direct positive effect on dynamic performance measurement. The study reflects that being a HPO not only has a direct positive effect on competitive performance but is also a complete mediator in transferring the effects of the dynamic capabilities and dynamic performance measurement to competitive performance. Under an increasingly dynamic environment, traditional performance measurement innovations that only consider measurement and management tend to lead to imperfections and lower benefits. Additionally, traditional performance measurements are static characteristics; therefore, it is essential to catch up with the dynamic environment. This research will provide empirical evidence of the causal relationship of how dynamic capabilities and dynamic performance measurement affect a HPO and competitive performance towards excellence under a dynamic environment.

Keywords: Dynamic Capabilities; Dynamic Performance Measurement; High Performance Organization

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1. Introduction

The World Tourism Organization (UNWTO) has ranked Thailand as one of the ten most popular tourist destinations on the globe (UNWTO, 2019). Subsequently, the hotel business, the core business of the country's tourism industry, has been continuously expanded and experienced crucial competition while attempting to maximize its number of customers. It is undeniable that quality of service is the heart of the hotel business since quality enhances customers' satisfaction and loyalty. Service quality also increases market share, provides satisfying returns to investors while reducing costs and the risk from price competition, and, above all, creates competitive capabilities (Lu, Berchoux, Marek, & Chen, 2015). Amid the current critically competitive environment, the survival of the hotel business, therefore, depends on the quality of the service provided to satisfy its customers (Moshin & Lockyer, 2010). Furthermore, it becomes imperative for hotel management to study and comprehend excellent service practices so that their organizations can achieve improved performance and be better than other organizations. In other words, in order to create sustainable competitive advantages for an organization, a hotel's service has to be excellent (Lu et al. 2015).

Thompson, Peteraf, Gambel & Strickland (2016) stated that a firm with a tendency to be more efficient than its competitors is the one with strategies and the abilities to practically perform according to the strategies. Likewise, Roshan & Jenson (2014) mentioned that having good competitive strategies does not mean that the organization can achieve its goals unless the strategies are efficiently performed. The main factor in implementing these strategies is a management system and measurement linked with the organizational strategies (Giovannoni & Maraghini, 2013). De Waal, Goedegebuure & Hinfelaar's (2015) study reveals that the management system and its performance results are strongly connected with a high performance organization (HPO) at a significant level. Obviously, the management system and the performance results of the enhancing and driving behaviours play important roles in creating overall performance regarding both financial and nonfinancial matters. (Aujirapongpan & Hareebin, 2020)

Nevertheless, with today's environment becoming increasingly more dynamic, the original performance measurement that solely considered evaluation and management tends to lead to imperfections and lower benefits (Srimai, Radford, & Wright, 2011), which is similar to the traditional measurement of fixed characteristics. Since it is essential to catch up with the dynamic environment, Kennerley & Neely (2003) proposed that performance measurement be managed in a dynamic operational pattern in order to maintain relationships and efficiency. It is imperative that the process of managing a performance measurement system reflect the organizational components' relationships (e.g., the system of manpower, infrastructure, culture, etc.) in transformed performance contexts and strategies. Bititci, Turner & Begemann (2000) additionally explained the necessity of dynamic performance measurement as the need to examine and respond to a firm's internal and external environmental changes and the necessity to review and prioritize its domestic goals. Bititci et al. (2000) further proposed that a dynamic performance measurement system should contain (1) an external control system, which will examine and continuously send signals of external environmental transformation to an organization; (2) an internal control system, which will continuously inspect and send signals on the changes within an organization; (3) a performance review system, which will allow important information to be part of the decision-making; and (4) a transmittal system toward real practice, which will perform based on the renewed strategies and component priorities. Moreover, Bititci, Nudurupati, Turner & Creighton (2002) indicated that dynamic performance measurement depends on a repetitive environment or circle, ongoing information technology development and new creations to support management decisions, and day-to-day operations. Kennerley & Neely (2003) also confirmed that a lack of effective information technology obstructs the utilization of a performance measurement system.

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The above details indicate that effective performance management is a sustainable practice connected with strategies in every organizational activity, and effective performance management has to be dynamic in order to continuously build a repetitive circle and develop and create new information technology leading to uninterrupted systematic organizational learning and self-learning. Subsequently, ongoing consistency is created to be in line with new required positions or, in other words, the ability to be dynamically consistent is created so that an organization can achieve better performance measurements than its competitors (Srimai et al., 2011).

There is, however, some confusion in the literature on how the utilization of a performance measurement system affects the overall operations of an organization. De Waal, Beatrice, & Heijden (2015) showed that the impact of management on performances is not clearly understood. In addition, Bourne, Melnyk, Bititci, Platts & Andersen (2014) indicated that many studies on this impact towards on firm performances provide contradictory results since some studies claimed that the management of performance results helps increase both financial and nonfinancial outcomes of the organization while others found disadvantages of using a performance management system. Obviously, the comprehension of this issue is still far from perfect (Bourne et al., (2014). Additionally, among the papers investigating organizations having better performances than their competitors, or HPOs, none clearly studies the causal relationship (De Waal & Goedgeburre, 2017(since they mostly reveal the relationship between the conceptual framework of an HPO and the operational improvement. Similarly, Keller (2011) stated that there are several studies assessing organizations that perform better than their competitors; yet, the reason why they are better is unclear. Parnell, Dent, O'Regan & Hughes (2012) pointed out that the differences in performance outcomes can be because of local conditions, product types, service delivery methods, developmental history, cultural diversity, industrial complications, or even luck.

The aim of this paper is to provide empirical evidence on the causal relationship of dynamic capabilities and dynamic performance measurement with HPOs and performance results. The theoretical management framework was collected to create the frame of the reasons for different performance outcomes, and the framework included 3 main factors: (1) dynamic capabilities, (2) dynamic performance measurement, and (3) HPOs. The findings lead to the creation of guidelines for managing organizations towards intelligence in dynamic environments.

2. Theoretical Framwork

Dynamic Capabilities and High Performance Organizations

De Waal, Goedgebuure & Akaraborworn (2014) defined the phrase “high performance organization - HPO” as an organization that can reach its financial goals for a duration of 5 years or more in which such achievement does not have to be higher than other firms in the same field, whereas Holbeche (2005) stated that the core factors or components of a high performance organization is dynamic capabilities and innovation. Likewise, Eisenhardt & Martin (2000) explained that the ability to be dynamic means that a firm is effective and conducts the best practices; and De Waal (2012) stated that in the literature related to the perceptions of resource-based and dynamic capabilities, there are many important factors leading to an organization achieving high performance. For this paper, three components are set to explain dynamic capabilities: (1) sensing capability, (2) learning capability, and (3) innovative and reconfiguring capability.

Sensing capability is the ability to perceive and understand business changes, opportunities, and obstructions that threaten an organization while recognizing its existing capabilities compared to its competitors in order to adjust and improve itself to be better (Teece, 2012). Blackman, Buick, O'Donnell, O'Flynn, & West's (2012) study

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concluded that an organization able to respond and blend into the transformed environment must hold management and employees jointly responsible for performance outcomes, comprehend that their roles are significant for the firm and be able to attain the dynamic capabilities necessary to be a HPO by knowing that improved capabilities to manage operations will upgrade all levels of the firm towards high performance.

Learning capability is the ability to absorb, digest or learn new things externally and later adjust or apply this knowledge by blending the new knowledge with existing knowledge to create new knowledge for an organization and the ability to transmit this new knowledge throughout the entire firm (Teece, 2012). However, this practice overlaps knowledge management. Aujirapongpan, Vadhanasindhu, Chandrachai & Cooperat (2010) explained that knowledge management is a process of dynamic characters being related to an individual's ability to manage the data, information technology, knowledge, activities, experiences, beliefs, values and creativities in his/her firm in order to create new knowledge or new conceptions. Different organizational capabilities need to be developed to allow the access, exchange, transmission, and dissemination of the knowledge so that such knowledge can be efficiently applied in real practices. Bagorogoza & De Waal's (2010) study on the relationship between knowledge management and high performance using the performance results of a financial institution in Uganda disclosed that knowledge management affects organizational operations through high performance; or, in other words, knowledge management improves an organization and allows it to become high performance, which further leads to more effective operations.

Innovative and reconfiguring capability is the ability to transform, transfer, blend or integrate resources and competencies to construct a new capability (MacInerney-May, 2011) that accordingly leads to various creations of new products, services and processes (Wang & Ahmed, 2007; Lazonick & Prencipe, 2005) that are beneficial to the firm. There are several studies presenting the relationship between the innovative capability and performance results of an organization (Rujirawanich, Addison, & Smallman, 2011; Phusavat, Comepa, Sitko-Lutek & Ooi, 2011) and claiming that the innovative capability is a factor increasing competitive capabilities and the ability to create new ideas towards achieving high performance (Noordin & Mohtar, 2013). That is, a firm with dynamic capabilities composed of abilities in perceiving, learning, innovating and reconfiguring can upgrade its status. This is represented as the following hypothesis:

Hypothesis 1: Dynamic capabilities have a positive significant relationship with a HPO.

Dynamic Capabilities and Competitive Performance

Breznik & Lahovnik (2016) indicated that an organization with dynamic capabilities is capable of building competitive competencies that accordingly affect its operations, which is in line with Li & Liu (2014), who posited that dynamic capabilities have a positive significant effect on competitive advantages. Similarly, Teece (2012) stated that a firm with dynamic capabilities, which include abilities to perceive, grasp opportunities, reconfigure resources and transform knowledge consistent with the unstable opportunities and its environment, could create and maintain its competitive advantages. This occurs since the main sources of these competitive advantages are the capabilities related to a firm, such as its human resource (Barney & Clark, 2007; Newbert, 2007) and marketing competencies (Kor & Mahoney, 2005), the latter of which are the abilities to identify customers' needs, especially the process of creating knowledge on marketing (Barrales-Molina, Martínez-López, & Gázquez-Abad, 2014). In addition, other capabilities such as management, research and development, and innovation are also imperative for an organization (Birchall & Tovstiga, 2005). This is supported by Breznik & Lahovnik's (2016) paper stating that organizations focusing on dynamic capabilities tend to have good practices

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or high performance regarding organizational competency, such as strong management emphasizing a reward system, clear communication, fairness in all levels, open policies, trustfulness between employees and management, etc. Moreover, Breznik & Lahovnik (2016) also revealed that a certain level of utilizing dynamic capabilities enables them to distinguish high performing and low performing organizations through evaluating the performances, which include consideration of financial and non-financial data. It is obvious that a firm with high dynamic capabilities has higher overall performance than one with low dynamic capabilities. Thus, the next hypothesis is given as follows:

Hypothesis 2: Dynamic capabilities have a positive significant relationship with competitive performance.

Dynamic Capabilities and Dynamic Performance Measurement

A performance measurement system plays an important role in managing a firm to become efficient and effective (Kennerley & Neely, 2002), and being dynamic in unstable environments is an essential factor in selecting the format of a control system or performance measurement system. Bastian & Muchilish's (2012) paper on the relationship between the perception of environmental instability and performance measurement shows that perceiving environmental instability has a positive relationship at a significant level with a performance measurement system, both financial and nonfinancial aspects, whereas Hoque (2004) claimed that environmental instability has an indirect effect on a firm's operations through the use of a nonfinancial performance measurement system. Aujirapongpan & Hareebin (2020) additionally disclosed that dynamic capabilities have a positive relationship with dynamic performances. If a firm has dynamic capabilities and is able to perceive environment instability, subsequently, it contains the dynamic performance to be able to respond to the environmental instability. This is stated in the following hypothesis:

Hypothesis 3: Dynamic capabilities have a positive significant relationship with competitive performance.

Dynamic Performance Measurement, HPOs and Competitive Performance

The measurement control and operational management system is a key factor in practical improvement. Kennerley & Neely (2002) claimed that a performance measurement system plays an important role in managing a firm to be efficient and effective, whereas Wisner, Epstein & Bagozzi (2003) indicated that practices conducted according to the mechanisms of a management control system can lead to superior performance. Epstein & Roy (2003) also demonstrated that a performance measurement system comprised of different operating, societal, environmental and economic indices enables a firm to progress towards sustainable superior performance. De Waal et al.'s (2015) paper further reveals a strong significant relationship between the components of a performance management system and the components of a HPO.

Ittner, Larcker & Randall (2003), Henri (2006), and Pavlov & Bourne, (2011) pointed out that a performance measurement system has a positive effect on a firm's operations, and Bastian & Muchilish's (2012) paper used a nonfinancial performance measurement system to find that the measurement system has a positive relationship with a firm's performance results. Moreover, Teeratansirikool, Siengthai, Badir & Charoenngam (2013) unveiled that a financial performance measurement system has a positive relationship with a firm's operational outcomes while a nonfinancial performance measurement is not related to these outcomes. Thus, practices according to the mechanisms of a performance measurement system enable an organization to achieve higher status; however,

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since the present environment is becoming more dynamic, Kennerley & Neely (2003) proposed that performance measurement must be managed dynamically, and Bititci et al. (2000) explained the necessity of having dynamic performance measurement as “being dynamic is essential for inspection and response to environmental transformations, both internal and external of an organization.” Therefore, the next hypotheses are stated as follows:

***Hypothesis 4:** Dynamic performance measurement has a positive significant relationship with a HPO.*

***Hypothesis 5:** Dynamic performance measurement has a positive significant relationship with competitive performance.*

HPO and Competitive Performance

The focus of this paper is on a performance measurement of HPOs. The HPO is defined as “an organization that achieves financial and non-financial results that are exceedingly better than those of its peer group over a period of five years or more.” How the organization practice of a HPO compares to that of its peers can be done by considering the results of their competitive performance (De Waal et al, 2014).

Since the HPO framework was developed, there have been many studies uncovering a positive relationship between HPO scores and competitive performance (De Waal & Gordgeburre, 2017). For instance, De Waal’s (2012) studies on gigantic European international companies in the retail industry discloses that there is a clear direct link between HPO scores and financial results since companies with the highest HPO scores have the highest financial results, and, in contrast, the companies with the lowest HPO scores have the lowest financial results. In addition, Pett, Sie, & Wolff’s (2016) study on the hotel business in France explained that the characteristics based on an HPO framework have direct positive relationships with competitive performance. Moreover, De Waal & Gordgeburre (2017) revealed that the firm performances of many organizations were improved after applying the HPO framework for 2 years or more such as Irina University College in Tanzania, Nabil Bank Limited in Nepal, a British consortium of IT companies, a banana grower and exporter in the Philippines and a Dutch cable company. Hence, the following hypothesis is proposed:

***Hypothesis 6:** Being a HPO has a positive significant relationship with competitive performance.*

Therefore, the conceptual model with the developed hypotheses of this research is shown in Figure 1.

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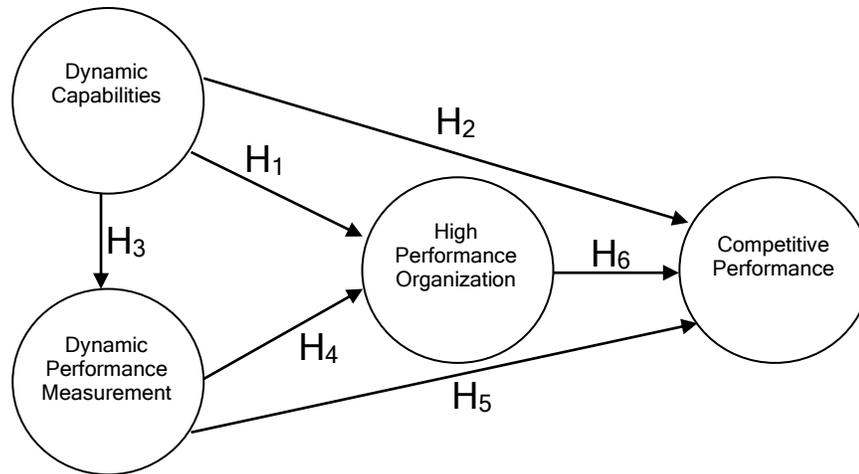


Figure 1: The conceptual model

3. Methodology

Population and Sampling Technique

The population in this research is the four and five star hotel businesses, the hotels have been awarded a star rating from the Thai Hotels Association. The standard criteria for determining the stars rating are physical environment, amenities, security and quality services (Thai Hotels Association, 2019). And the hotels also are located at the world class tourism destinations of Thailand in 7 provinces, namely, Bangkok, Phuket, Chon Buri, Krabi, Surat Thani, Phang Nga and Chiang Mai, which resulted in a total of 1,015 hotels (SiamFreestyle, 2019). This research has used the stratified random sampling technique in which the population was divided into 7 strata based on the tourism destination. Random samples are then selected from each stratum in a proportionate manner.

Data Collection

This research collected data using questionnaires that were distributed to the high-level administrators of the four and five star hotel businesses in Bangkok, Phuket, Chon Buri, Krabi, Surat Thani, Phang Nga and Chiang Mai, which are the world class tourism destinations of Thailand.

The contents of the questionnaires were validated by five academic experts to ensure that the designed measurement scale was easy to evaluate and did not cause any confusion. After that, the questionnaires were pretested by 30 hotel businesses and then the reliability was analysed by using Cronbach's alpha coefficient. An acceptable reliability score is one that is greater than 0.7 (Cortina, 1993). The results of the reliability of each construct measures vary from 0.830 to 0.967, showing that the questionnaire has a high level of reliability. Then, 600 complete questionnaires were sent by mail to the high level administrators of the hotels in the seven tourism destinations mentioned above. The data were gathered for four months from September 2019 to December 2019. After eliminating four incomplete questionnaires, 115 questionnaires were usable. A minimum sample size for conducting structural equation modelling analysis is 100 to 500 samples, as recommended by Schumacker & Lomax (2015). Therefore, 115 samples are still sufficient.

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The total sample of 115 individuals consists of 73.9% females and 26.1% males. The majority of the respondents are aged from 31-40 years old, which represents 36.5% of the total; 78.3% of the respondents hold a bachelor's degree; 44.3% hold the position of department head 3% and 37.4% have less than 5 years of work experience. With regards to hotel characteristics, the largest proportion are independent hotels at 62.6%, 36.5% of the hotels have more than 15 years of service, 57.4% of the hotel are five star hotels, 43.5% of the hotels have more than 200 employees and Europeans and Americans are the major customers for 55.7% of the hotels.

Measurement

Four constructs were measured in this study, namely, dynamic capabilities, dynamic performance measurement, high performance organization (HPO) and competitive performance. First, twelve items that originate in part from MacInerney-May (2011) and Jantunen, Ellonen & Johansson (2012) were adopted to measure three factors of the dynamic capabilities construct. Second, eighteen items from Bititci et al. (2000), DeNisi & Murphy (2017) and Aujirapongpan & Hareebin (2020) were used to measure four factors of the dynamic performance measurement construct. Third, twenty-four items developed by De Waal et al. (2014) and De Waal & Gordgeburre (2017) were used to measure five factors of the HPO construct. Finally, eleven items were adapted from Matear, Gray & Garrett (2004) and the American Management Association (2007) to assess the two factors of the competitive performance construct. The respondents were asked to score each item by using a five-point Likert scale ranging from 1 (extremely low agreement) to 5 (extremely high agreement). Only the construct of competitive performance was measured by using a different range from 1 (much lower than important competitors) to 5 (much higher than important competitors).

4. Results

Assessment of the Measurement Model

The confirmatory factor analysis (CFA) was conducted to evaluate the validity of a measurement model. Cronbach's alpha (α) and the composite reliability (CR) were used to assess the reliability while the factor loading and average variance extracted (AVE) were used to assess the validity of measurement (Homsud, 2017). Additionally, the acceptable level for Cronbach's alpha and the composite reliability is greater than 0.7, and that for the factor loading and average variance extracted is higher than 0.5 (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). Table 1 shows the findings of the CFA. The reliability and validity of the measurement model satisfy the minimum criteria.

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Table 1: Reliability and validity of the measurement model.

Constructs	Observable variables	Factor loading	α	CR	AVE
Dynamic capability (DYC)	Sensing capability (SENS)	0.80	0.89	0.90	0.75
	Learning capability (LERN)	0.89	0.83		
	Innovation and reconfiguring capability (INNO)	0.92	0.95		
Dynamic performance measurement (DYP)	External monitoring system (EXTE)	0.76	0.92	0.93	0.76
	Internal monitoring system (INTE)	0.89	0.92		
	Review system (REVI)	0.95	0.94		
	Deployment system (DEPL)	0.88	0.94		
High performance organization (HPO)	Management quality (MANA)	0.77	0.97	0.94	0.75
	Openness and action orientation (OPEN)	0.89	0.84		
	Long-term orientation (LONG)	0.83	0.89		
	Continuous improvement and renewal (CONT)	0.92	0.96		
	Workforce quality (WORK)	0.88	0.92		
Competitive performance (COP)	Financial performance (FINA)	0.80	0.93	0.87	0.76
	Nonfinancial performance (NONF)	0.95	0.95		

Furthermore, the results regarding the goodness of fit indices of the measurement model from the CFA were provided. The acceptable fit levels include that the normed chi-square (χ^2/df) is lower than 3.00; the goodness-of-fit index (GFI), normed fit index (NFI), and comparative fit index (CFI) are at least 0.90; the root mean square error of approximation (RMSEA) is lower than 0.08; and the standardized root mean square residual (SRMR) should be less than 0.10 (Hair et al., 2010).

Table 2 summarizes the goodness of fit indices and their acceptable levels. All the fit indices values confirm that the proposed measurement model has a good fit with the data.

Table 2: A summary of the goodness of fit indices and their acceptable levels.

Goodness of fit indices	Acceptable levels	Index values
χ^2		74.39
P-value	>0.05	0.15
χ^2/df	<3.00	1.18
CFI	≥ 0.90	0.99
GFI	≥ 0.90	0.92
NFI	≥ 0.90	0.96
RMSEA	<0.08	0.04
SRMR	<0.10	0.03

Hypothesis testing

The hypothesis testing was undertaken using structural equation modelling (SEM) with LISREL 9.3. Table 3 shows the direct, indirect, and total effect of each construct relationship, and it illustrates that the standardized coefficients of the six hypothesized relationships are statistically significant as expected. In addition, Hair et al. (2014) stated that R^2 values of 0.75, 0.50 and 0.25 indicated that a model's predictive power was substantial, moderate and weak, respectively. The results showed the R^2 value was between 0.51 and 0.66; thus, all independent variables in this study were able to moderately explain the variance in the dependent variables.

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Table 3: Direct and indirect effects for the structural model

Dependent variables	Independent variable									R ²
	DYC			DYP			HPO			
	TE	IE	DE	TE	IE	DE	TE	IE	DE	
DYP	0.74**	-	0.74**	-	-	-	-	-	-	0.58
HPO	0.80**	0.40**	0.40**	0.55**	-	0.55**	-	-	-	0.66
COP	0.70**	0.70**	0.00	0.54**	0.41**	0.13	0.76**	-	0.76**	0.51

Note: DYC = Dynamic capability, DYP = Dynamic performance measurement, HPO = High performance organization, COP = Competitive performance, DE = Direct effect, IE = Indirect effect, and TE = Total effect
 **Significant at the 0.01 level

Table 3 shows the testing results of the six hypotheses. The results show that dynamic capabilities have both a significant direct and indirect effect on the HPO with a total effect coefficient of 0.80 and a p-value of 0.01. Additionally, dynamic capabilities have a significant direct effect on dynamic performance measurement with a *coefficient* of 0.74 and a p-value of 0.01. Therefore, H1 and H3 were supported. The dynamic performance measurement was found to have a significant direct effect on a HPO with a *coefficient* of 0.55 and a p-value of 0.01, supporting H4. The results also indicated that the dynamic capabilities and dynamic performance measurement have significant indirect effects on competitive performance via the HPO. The total effect coefficient between dynamic capabilities and dynamic performance measurement and competitive performance were 0.70 and 0.41, respectively, and they were significant with p-values of 0.01. Hence, the two hypotheses H2 and H5 were supported. Last, the finding also supported H6, confirming that the HPO was found to have a significant direct effect on competitive performance with a *coefficient* of 0.76 and a p-value of 0.01.

Mediation Analysis

To test the mediating role of the HPO, this study adopted the three-step approach outlined by Nguyen, Le, Trinh & Do (2019). In addition, N explained three step approach as follows: In step 1, examine the measurement model to assess whether the direct path coefficient from the independent variable to the dependent variable (IV-->DV) is significant. In step 2, examine the completely mediated model to assess whether the direct path coefficients from the independent variable to the mediator (IV-->M) and the mediator to dependent variable (M-->DV) are significant. In step 3, examine the partially mediated model, including the path coefficient from the independent variable to the dependent variable that included the mediator (IV+M-->DV). Complete mediation is present when the direct path coefficient from the independent variable to the dependent variable is no longer significant after the mediator has been controlled, and partial mediation is present when the direct path coefficient from the independent variable to the dependent variable is reduced after the mediator has been controlled. The results of testing the mediating effects are presented in Table 4 and Table 5.

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Table 4: Results of testing the mediating effect (DYC + HPO-->COP)

Model	df	χ^2	CFI	GFI	SRMR	RMSEA	$\Delta \chi^2$	Δdf
Measurement model	4	3.421	1.000	0.989	0.024	0.000	-	-
Completely mediated model	28	35.896	0.992	0.940	0.033	0.049	-	-
Partially mediated model	27	35.877	0.992	0.940	0.033	0.054	0.019	1

Table 5: Results of testing the mediating effect (DYP + HPO-->COP)

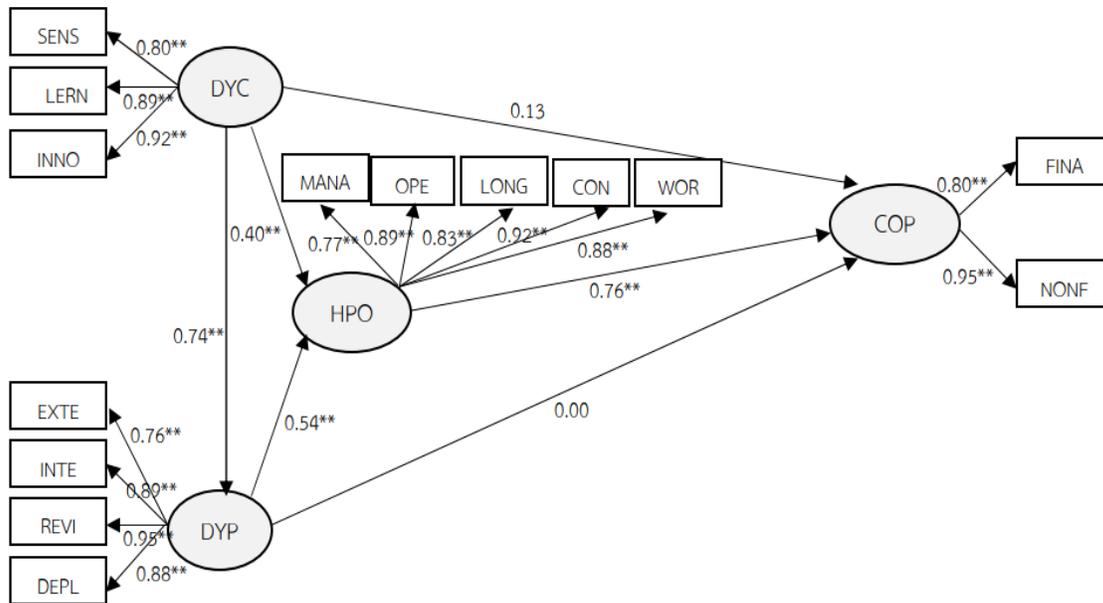
Model	df	χ^2	CFI	GFI	SRMR	RMSEA	$\Delta \chi^2$	Δdf
Measurement model	5	2.445	1.000	0.993	0.011	0.000	-	-
Completely mediated model	34	55.670	0.983	0.925	0.030	0.074	-	-
Partially mediated model	33	54.966	0.983	0.927	0.028	0.076	0.674	1

Table 4 shows the fit indices of the proposed relationship model between DYC and COP when HPO is a mediator. In step 1, the direct effect of the independent variable (DYC) on the dependent variable (COP) in the absence of the mediator (HPO) was significant ($\beta = 0.66$, $p < 0.01$). In step 2, a completely mediated model with the mediator showed a good fit to the data ($\chi^2/df = 1.128$, CFI=0.992, GFI= 0.940, SRMR= 0.033, RMSEA =0.049) and the direct path coefficients from DYC-->HPO and HPO-->COP were significant. In step 3, the partially mediated model that included the mediator (HPO) and the direct path from DYC to COP indicated a good fit to the data ($\chi^2/df = 1.118$, CFI=0.992, GFI= 0.940, SRMR= 0.033, RMSEA =0.054), but the results showed that there was no longer a significant direct effect of DYC on COP (β decreased to 0.00 and was not significant, as shown in Table 3). Therefore, the researcher reports that the mediator (HPO) completely mediates the effect of DYC on COP.

Table 5 presents the fit indices of the proposed relationship model between DYP and COP when HPO is a mediator. In step 1, the direct path coefficient from DYP-->COP in the absence of HPO was significant ($\beta = 0.62$, $p < 0.01$). In step 2, a completely mediated model with the mediator showed a good fit to the data ($\chi^2/df = 1.29$, CFI=0.986, GFI= 0.928, SRMR= 0.063, RMSEA =0.051) and the direct path coefficients from DYP-->HPO and HPO-->COP were significant. In step 3, the partially mediated model that included the mediator (HPO) and the direct path from DYP to COP indicated a good fit to the data ($\chi^2/df = 1.32$, CFI=0.985, GFI= 0.927, SRMR= 0.063, RMSEA =0.054), but the results showed that there is no longer a significant direct effect of DYP on COP (β decreased to 0.13 and was not significant, as shown in Table 3). Therefore, the results indicate that the mediator (HPO) completely mediates the effect of DYP on COP.

All of the structural paths for the final model are presented in Figure 2.

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**significant at the 0.01 level

Figure 2: Research results

5. Discussion

Theoretical Contributions

The study points out that dynamic capabilities have a positive relationship with HPO and with competitive performance for hotel businesses because dynamic capabilities are the firm’s abilities to create, reconfigure and transform its entire existing resources to respond to environmental transformation, inside and outside the firm; therefore, having dynamic capabilities can upgrade their performance towards achieving outstanding performances (Pattanasing, Aujirapongpan & Srimai, 2019). Ngo, Pavelkovam, Thi Phan & Nguyen) 2018(additionally stated that dynamic capabilities lead to an adjustment of business processes to meet the customers’ needs, which are very important to the firm’s goals. Therefore, when being compared with their competitors, organizations with high dynamic capabilities obviously have high performance results, which is consistent with Zhan & Chen (2013) who posited that a firm having dynamic capabilities in applying existing resources has better performance results. Moreover, Chien & Tsai (2012), Aujirapongpan & Hareebin (2020) and Pattanasing, et al. (2019) revealed that dynamic capabilities have a positive relationship with a firm’s performance.

The study indicated that dynamic capabilities have a positive relationship with dynamic performance measurement, which occurs because the measurement system plays an important role in organizing a firm to be more efficient and effective. Being dynamic in an unstable environment is a key factor in selecting the format of a control system or operational evaluation. Therefore, if a firm possesses dynamic capabilities and is able to perceive the uncertainty, it can conduct dynamic performance measurement to respond to the environmental uncertainty. Regarding the relationship between the perception of environmental uncertainty and a performance

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measurement system, this is consistent with Bastian & Muchilish (2012) who stated that perceiving environmental uncertainty has a significantly positive relationship with a performance measurement system.

Dynamic performance measurement has a positive relationship with HPO, and this occurs because the practices following the mechanisms of a management control system can lead to higher performance (Wisner et al., 2003), which agrees with Epstein & Roy (2003), who stated that a performance measurement system enables a firm to achieve higher and more sustainable performance. This is consistent with De Waal et al. (2015), who disclosed strong significant relationships between the components of a system and both managing performance results and HPO. This study additionally finds that dynamic performance measurement has a positive relationship with competitive performances for hotel businesses, which is due to having measurement control and performance results management systems as key factors in their operational enhancement. Kennerley & Neely (2002) stated that a performance measurement system plays an important role in making a firm more efficient and effective, which is compatible with Ittner et al. (2003) and Henri (2006), who found that a performance measurement system has a positive effect on the performance results of an organization.

This study shows that HPO has a positive relationship with competitive performance, and this occurs because a HPO is an organization that has illustrated its excellent achievements in various management aspects (American Management Association, 2007). Moreover, a HPO is an organization with a strong management pattern that focuses on achieving its goals. Furthermore, it is a place of learning that pays attention to its stakeholders and emphasizes human resource management to ensure that its employees possess skills and perform the tasks to the best of their abilities while the organization continuously improves its products, processes and services. These components lead a HPO to become the best and be ahead of its competitors; subsequently, its performance results are also at a higher level. All statements are in line with De Waal's (2012) work on gigantic European international companies in the retail business, which exemplifies that there is a clear direct link between means, HPO scores and financial results since companies with the highest HPO scores achieve the best financial results whereas the ones with the lowest HPO scores are those with the lowest financial results. This work is correlated with the studies on Peruvian mining companies (De Waal & Escalante, 2011), manufacturing firms in Tanzania (Godfrey, 2010) and hotel businesses in France (Pett, et al., 2016) in which they all claim that characteristics based on a HPO framework have positive direct relationships with competitive performance results.

The study further finds that HPO is a complete mediator between the dynamic capabilities and competitive performance of hotel business. Additionally, HPO is a complete mediator between the dynamic performance measurement and competitive performance of the firm. This shows that dynamic capabilities and dynamic performance measurement are essential to a firm's competitive performance. In other words, dynamic capabilities and dynamic performance measurement help to enhance a HPO and accordingly lead to improved performance results, which is in line with Bagorogoza & de Waal (2010) who indicated that HPO is a mediator between knowledge management and organizational performance. This study additionally reveals that learning capability or knowledge management is beneficial to an organization and it becomes one of the indicators of dynamic capabilities. Moreover, Pattanasing, et al. (2019) discovered that HPO completely mediates dynamic capabilities and organizational performance.

Managerial Implications

The findings of this paper can be used as a guideline for hotel management; that is, the management's awareness of the creation of dynamic capabilities becomes mandatory in order to upgrade its firm into a HPO and further

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achieve better performance than its firm's competitors. Dynamic capabilities are related to an ability to perceive opportunities or obstacles that may impact the firm; thus, management needs to focus on observing and predicting various transformation trends, which include customers' behaviours, competitors' strategies, technologies, or even regulations and controls. The sooner this happens, the better it will be for immediate adjustments or corrections. Moreover, for the benefit of an organization, additional attention should be given to learning capability or learning management, innovative capability and resource reconfiguration related to the ability to create new capabilities within the firm. Hence, management is obliged to focus on seeking and bringing in new knowledge into its firm, integrating that new knowledge with the existing knowledge, and, at the same time, enhancing the atmosphere of knowledge exchange that subsequently leads to practical improvement and service development towards excellence. External experts or outsourcing might be used for the less significant activities of the firm, such as obtaining customers through online and offline agencies, etc., in which the experts or outsourcing can do better than the personnel of the hotel business.

Furthermore, hotel management needs to strongly pay attention to dynamic performance measurement, since it is the integrated operating system that is connected to the strategies of all the activities within an organization. Meanwhile, being dynamic initiates a circle of repetition, development and creation of new information technology that accordingly helps the firm systematically learn more while continuously creating and conducting self-improvement to be consistent with the new required status. The findings of this paper also uncover that dynamic performance measurement helps upgrade a firm to become a HPO and further leads to the firm's best practices. In developing dynamic performance measurement, the management is compelled to focus on the following: (1) setting up an external control system, including determining indicators for the performance results in order to assess significant parameters and represent external environmental transformation as the firm's input; (2) determining an internal control system, including setting up indicators of performance results so that considerable parameters are examined to represent internal environmental transformation; (3) creating an inspection system to review the efficiency of the performances, which include reporting performance outcomes to those concerned, focusing on promoting strong points and correcting weak points so that immediate actions for improvement can occur; and (4) creating a deployment system for effective performance, which includes giving attention to employees' participation in setting up goals and indicators, and more importantly, the performance measurement system must be consistent with a reward system.

Limitations and Future Research

The data of this study were analysed by an analytical structural equation modelling method and the accuracy is based on the sampling size. As Kline (2011) stated, this modelling method is a statistical tool that requires a large size of a sampling group, that is, the number of samples should be 20 for every 1 observable variable. This paper consists of 4 hidden variables subdivided into 14 observable variables, making the total of 280 samples. However, since the number of returned questionnaires did not meet expectations, the final number of samples was only 115, which is lower than the set standard. Hence, there might be some limitations in the accuracy of the statistics in the findings. Moreover, this study develops a structural model among dynamic capabilities, dynamic performance measurement, HPO, and the competitive performance results of hotels in the global tourist attractions of Thailand; therefore, there might be some limitations to the broad application of these findings. Thus, in order to come up with more universal conclusions that can be broadly utilized, the structural model can be applied for future studies of other businesses, e.g., producer groups, service groups of financial institutes, healthcare services, educational services or even hotel businesses in other global tourist attractions.

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