

The Impact of Dynamic Capabilities on Performance of Small and Medium Tourism Businesses: A Study for the South-Central Coast Region, Vietnam

Vo Tan Phong¹, Vo Thi Tam²

¹The Postgraduate Faculty, Lac Hong University, Bien Hoa, Vietnam

²The Administration Department, Phu Yen University, Hanoi, Vietnam

Email: phongvt8294@gmail.com

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Abstract

The competitiveness of businesses depends on the resources and capabilities that businesses are possessing, developing, and exploiting, including dynamic capabilities. In turn, competitiveness positively affects the business performance. However, whether there is an impact of dynamic capabilities on business performance is still unclear. Moreover, research on the mediating role of entrepreneurial orientation and innovation in the relationship of dynamic capabilities and business performance is rare. The research objective of this study is to check the impact of dynamic capabilities on business performance and the mediating role of entrepreneurial orientation as well as innovation in the relationship of dynamic capabilities and business performance. The PLS-SEM method is used. The research sample with 405 observations was collected using non-probability method. The respondents were managers of tourism small and medium businesses. Research results show that dynamic capabilities directly and indirectly impact the performance of small and medium-sized tourism businesses in the South Central Coast region of Vietnam through entrepreneurial orientation and innovation.

Keywords

Dynamic Capability, Innovation, Entrepreneurial Orientation, Business Performance, Tourism Business

1. Introduction

Over the past decade, a number of researchers have examined the concept of dynamic capabilities (DYC) as central to the strategies and methodologies of

business competitive advantage and value creation (Eisenhardt & Martin, 2000; Teece et al., 1997; Helfat & Peteraf, 2009; Teece, 2007). Many studies suggest that DYC has a direct impact on business performance (BPF) (Helfat & Peteraf, 2003). However, some studies show that there is no direct impact of business capabilities on BPF (Wang & Ahmed, 2007; Prange & Verdier, 2011; Kamboj & Rahman, 2015; Susanti & Arief, 2015). Many researchers remain skeptical about this matter and the evolving concepts of DYC (Winter, 2003; Zahra et al., 2006). Therefore, the objective of this paper is to try to examine the relationship between businesses' DYC and their performance. In addition, entrepreneurial orientation (ENO) is a strategic approach that significantly promotes various innovations in businesses. It is considered an important driver to facilitate innovation-related information and superior BPF (McGrath, 2013). However, the examination of the mediating role of business entrepreneurial orientation and innovation in relationship between DYC and BPF is still exceedingly rare in research. To fill in this gap is also an objective of this study. Finally, small and medium-sized enterprises (SMEs) are mostly dynamic businesses, occupying an important position in the Vietnamese economy and the tourism industry is considered one of the key economic sectors in the trend of sustainable development, and marine tourism is a source of competitive advantage for Vietnam. This study, therefore, determines scope and space for the research are small and medium-sized tourism businesses in the provinces of the South-Central Coast of Vietnam (VSCC).

2. Literature Review

2.1. Resource-Based Theory

According to Pearce and Robinson (2013), the basic premise of resource-based theory (RBV) is that an organization is different from the rest, because it possesses a "unique" set of resources that it have the capacity to exploit. The RBV model suggests that the resources a business possesses are the main determinants of its productivity and success. These resources are the source of sustainable competitive advantage for businesses. Leadership, organizational structure, management systems, management practices, organizational culture... are resources that create value, and are competitive competencies.

2.2. Business Performance

Medalla (2005) defines BPF as reflecting the ability and efficiency of businesses in using resources such as human resources, finance and facilities to achieve business goals. Lam & Lee (2008) define performance as the outcome of a business and measured according to financial or non-financial indicators. Murphy et al. (1996) believe that BPF is a multidimensional concept. Gavrea et al. (2011) said that achievement is the expression of completing the goals and results of work; accordingly, performance is defined as the ability of a business to exploit

its environment to access and use limited resources.

Currently, there are many definitions and systems for measuring BPF. BPF is a system that helps businesses plan, measure and control the results of their activities to achieve goals and create value for stakeholders (Maisel, 2001). It is the basis for converting business strategy content into implementation conditions (Kaplan & Norton, 1993). BPF is a set of criteria to quantify the effectiveness and efficiency of operational aspects in a business (Neely et al., 1995).

Up to now, there have been many approaches to measuring business performance. In this study, subjective measurement approach is used to measure the performance of businesses. Subjective measures are perceptions collected from organizational members and stakeholders. Furthermore, many studies have shown that subjective measures reliably reflect objective performance outcomes (Bae & Lawler, 2000; Luo & Park, 2001; Peng & Luo, 2000).

2.3. Dynamic Capabilities

Dynamic capabilities are the ability of a business to integrate, build and reconfigure its internal and external capabilities to cope with rapidly changing business environments (Teece et al., 1997). Easterby-Smith & Prieto (2008) argue that DYC are the capabilities that an organization uses, especially to cope with changes in the external environment. DYC are considered the ultimate and they provide the basis for companies to create sustainable competitive advantages (Eisenhardt & Martin, 2000). DYC represents a type of higher-order capability that influences the speed with which a firm can respond to environmental changes (Easterby-Smith et al., 2009; Winter, 2003). These are repetitive, patterned choices and habits that provide the ability for a business to purposefully create, expand, or modify its resource base (Helfat & Peteraf, 2009). They include the ability to sense (Sensing), the ability to grasp (Seizing) and the ability to reconfigure (Reconfiguring) (Teece, 2007). Sensing refers to a business's ability to recognize opportunities in the market before its competitors. This skill can be developed by using data, analytics, and technology to scan emerging trends, uncover customer needs and identify threats from competitors. Sensing requires businesses to invest in their resources. Seizing is a business's learning process, reflected by the ability to create internal knowledge, collect external knowledge, and assimilate internal and external knowledge through knowledge sharing to create capacity (Cepeda & Vera, 2007; Easterby-Smith et al., 2009). Reconfiguring refers to the creation and integration of capabilities acquired internally or externally. It is the transformation of existing capabilities, that is, changing the form or appearance of existing capabilities in the enterprise (Teece, 2007) and redeploying or recombining existing capabilities (Ahuja & Katila, 2001).

2.4. Innovation

To date, there is still no unified concept of innovation. Damanpour (1996) argues that innovation is the successful implementation of unique ideas to develop

an organization's products, processes, and management systems; while [Mero-no-Cerdan & López-Nicolas \(2013\)](#) argue that innovation is the implementation of new processes in industry organizational practices, in business at work or in external relations. At the same time, [Jiménez-Jiménez & Sanz-Valle \(2011\)](#) said that innovation is the adaptation and application of new ideas and behaviors. Improving organizational structure and design has an impact on organizational innovation and improves internal organizational coordination and cooperation ([Azar & Ciabuschi, 2017](#); [Kraśnicka et al., 2016](#)). On the other hand, [Alpkan et al. \(2010\)](#) argue that innovation is considered an indispensable component of competitiveness that is included in the organizational structure, production process, product introduction, as well as marketing strategy in a business.

The purpose of innovation is to take advantage of the latest conditions and opportunities formed in the environment and be used to create new values and gain competitive advantage ([Porter, 1985](#); [Nonaka & Kenney, 1991](#); [Damanpour & Schneider, 2006](#); [Dobni, 2008](#); [Thakur et al., 2012](#)). Organizations engage in innovation activities that enhance organizational value, increase profits, enhance BPF, and reduce organizational costs. In addition, innovation also aims to improve workplace satisfaction as well as labor productivity and access to knowledge resources ([Vega-Jurado et al., 2009](#)).

Thus, innovation is a multidimensional concept with a wide scope such as strategy, organizational structure, processes and behaviors. In this study, the concept of innovation is inherited from the research of [Azar & Ciabuschi \(2017\)](#). Innovation is the improvement of products/services, finding new ways of doing business, trying new ideas to improve BPF.

2.5. Entrepreneurial Orientation

The original concept of ENO was proposed by [Miller \(1983\)](#) and [Covin & Slevin \(1989\)](#), including three aspects of innovation, risk taking and initiative. This concept was later developed by [Lumpkin & Dess \(1996\)](#) by adding two other dimensions such as competitive aggressiveness and autonomy. Innovation is an attitude that reflects the tendency to provide support and participate in the generation of new ideas, creative processes, and changes in existing practices and technologies ([Lumpkin & Dess, 1996](#)). Proactivity is the tendency of a person or a business to actively seek opportunities, show initiative, take action and try to create changes. Courageous risk-taking reflects the tendency to devote resources to activities or projects that have a significant likelihood of failure, but that will yield large returns if successful ([Lumpkin & Dess, 1996](#)). Competitive aggressiveness reflects how to communicate with competitors, dare to enter the market and realize strategy faster than competitors. This is a form of business response to avoid losing competition and making marketing efforts to attract customer attention and maintain the business's market segment. Finally, the autonomy dimension shows a significant and positive influence on business performance. This means that the role of the owner or manager is quite autonom-

ous and essential in leading the organization to improve business performance. Additionally, autonomy causes owners or administrators to leave their comfortable positions and encourages them to look for other ideas to generate new ideas.

3. Research Model

3.1. Hypothesis

1) Dynamic capabilities and firm performance

There is a relationship between DYC and BPF (Teece et al., 1997; Makadok, 2001; Najib et al., 2017). Furthermore, Mauludin et al. (2013) argue that DYC are necessary in formulating strategies in complex and rapidly changing environments, high demands for innovation, and efforts to improve organizational capabilities to overcome dynamism. DYC are organizational habits that must be acquired through very high-style learning, repetitive mastery, or repetition (Gao et al., 2014). Based on the above background and theoretical research, the goal of this study is to examine the relationship between innovation and DYC as well as the relationship between innovation and BPF. From there, the research hypothesis is stated as:

Hypothesis H1: Dynamic capabilities have a positive impact on business performance.

Hypothesis H1a: Sensing has a positive impact on business performance.

Hypothesis H1b: Seizing has a positive impact on business performance.

Hypothesis H1c: Reconfiguration has a positive impact on business performance.

2) Dynamic capabilities and entrepreneurial orientation

Zahra et al. (2006) believe that the development of DYC is strongly associated with the ENO. The results of the study by Abdelkareem et al. (2022) shows that ENO has a meaningful impact on DYC of SMEs in Egypt. Jantunen et al. (2005) also found that ENO combined with DYC enhances the international performance of businesses in Finland. From the above foundations, the research hypothesis developed is:

Hypothesis H2: Dynamic capabilities have positive impact to entrepreneurial orientation.

3) Dynamic capabilities and innovation

One study found that innovation has a positive relationship with business performance, including profits, market share, and sales growth (Deshpande et al., 1993). Furthermore, Craig and Dibrell (2006) demonstrated that innovation is an important requirement for business performance as well as competitiveness. Similarly, Baldwin & Johnson (1996) show that innovation has a significant effect on various measures of firm performance. From there, the research hypothesis developed is:

Hypothesis H3: Dynamic capabilities have positive impact to innovation.

4) Entrepreneurial orientation and business performance

Research results by Wahyuni and Sara (2019) and Utami & Wilopo (2018) show that ENO has a meaningful impact on the performance of SMEs. In addition, studies by (Kraus et al., 2012; Stam & Elfring, 2008; Wiklund & Shepherd, 2005) also show that ENO has a positive impact on the performance of businesses. From there, the research hypothesis was built as:

Hypothesis H4: Entrepreneurial orientation has a positive impact on business performance.

5) Innovation and business performance

Studies have found that innovation has a positive relationship with performance (Omri, 2015; Rosenbusch et al., 2011; Koellinger, 2008). Furthermore, Craig and Dibrell (2006) demonstrated that innovation is an important requirement for the performance and competitiveness of businesses. Similarly, research by Baldwin & Johnson (1996) shows that innovation has a significant influence on various measures of BPF. Furthermore, Salavou (2002), based on asset returns, shows that product innovation is an important determinant of BPF. Innovation helps businesses economically, creates competitive advantages and can positively affect BPF (Fallah & Lechler, 2008; Talke et al., 2011). The positive role of innovation on performance has been supported by many empirical studies (Calantone et al., 2002; Keskin, 2006). Therefore, the research hypothesis developed is:

Hypothesis H5: Innovation has a positive impact on business performance.

6) The mediating role of innovation and entrepreneurial orientation

Hypothesis H6: Entrepreneurial orientation plays a mediating role in the relationship between dynamic capabilities and business performance.

Hypothesis H7: Innovation plays a mediating role in the relationship between dynamic capabilities and business performance.

7) The effect of business size, type, and field on path coefficients of the structural model

Hypothesis H8a: Size of businesses moderates the path coefficients of the structural model.

Hypothesis H8b: Types of businesses moderates the path coefficients of the structural model.

Hypothesis H8c: Fields of businesses moderates the path coefficients of the structural model.

3.2. Proposed Research Model

The proposed research model is presented in **Figure 1** below.

4. Research Method

4.1. Sample

The study used direct interviews using questionnaires with a 5-level Likert scale sent to leaders of tourism SMEs, including travel companies, hotels, restaurants

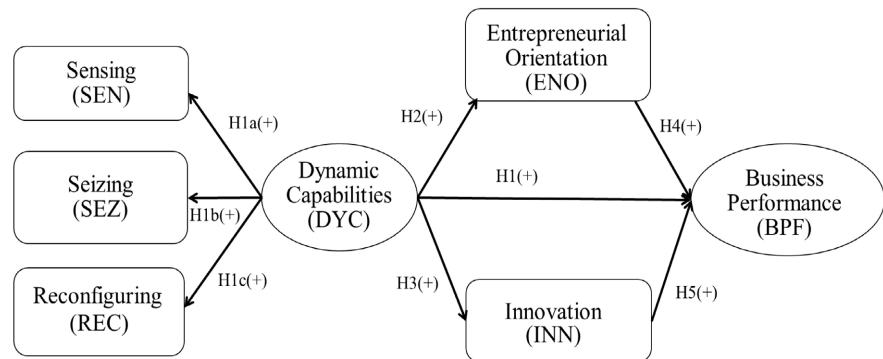


Figure 1. Proposed research model. Source: The authors.

and tourism transportation companies in (VSCC). There were 430 surveys distributed. The results were 413 surveys, of which 8 were invalid surveys and 405 questionnaires were used. Data were processed using SmartPLS 4 software. The research sample was classified by business types, business fields, and business sizes.

4.2. Scales

The initial scale inherited the original scales including 30 observed variables, inherited from previous studies (see [Table 1](#)).

The initial scale was supplemented and completed by discussion with a group of experts including 9 people who are leaders of tourism businesses, state management officials and university lecturers.

4.3. Data Processing Method

The PLS-SEM method was performed. Assessing lower order reflective (LOC) measurement models is performed for testing: 1) reliability of indicators by outer loadings and cross loadings; 2) reliability and validity of constructs by composite reliability (CR) and average variance extracted (AVE); 3) discriminant validity by the HTMT and Fornell-Larcker indices. For the formative measurement model, the evaluation is performed for testing: a) the degree of convergence by redundancy analysis; b) the reliability of indicators by outer weights; c) the level of multicollinearity by outer multicollinearity statistics (Outer VIF); d) discriminant validity by the HTMT and Fornell-Larcker indices. Evaluation of the structural model was performed by multicollinearity testing, evaluating R^2 , f^2 , q^2 , model fit, determining path coefficients, assessing direct and indirect effects, and performing multigroup analysis (MGA).

5. Results

5.1. Frequency

The research sample with 405 observations was collected using a convenient method combined with snow ball. In particular, the types of businesses include

Table 1. Scales of constructs.

No	Construct	Codified Construct	Number of indicators	Reference
1	Sensing	SEN	5	Hang et al. (2022)
2	Seizing	SEZ	5	Hang et al. (2022); Shafia et al. (2016)
3	Reconfiguration	REC	5	Hang et al. (2022); Chen & Zheng (2022); Takahashi et al. (2016)
3	Entrepreneurial Orientation	ENO	6	Gonzalez-Benito et al. (2007)
4	Innovation	INN	4	Ali & Wambua (2021)
5	Business Performance	BPF	5	Yildiz & Karakas (2012)

Source: The authors.

sole proprietorships (Typ1) account for 30.1%, limited liability companies (Typ2) account for 45.2%, joint stock companies (Typ3) account for 11.4% and Others (Typ4) account for 13.3%. Business size with under 50 people (Siz1) accounts for 46.9%, from 50 to 100 people (Siz2) accounts for 53.1%. Regarding business fields, hotels (FLD1) account for 25.5%, restaurants (FLD2) account for 47.9%, travel businesses (FLD3) account for 10.4% and transportation businesses (FLD4) account for 16.5% (see **Table 2**).

5.2. Descriptive

The mean of the scales is high and varies from 3.868 to 4.014. The standard deviation of the scales ranges from 0.552 to 0.669. That means the scales have moderate standard deviation. This shows that there are no substantial differences between the opinions of the respondents. The mean of indicators ranges from 3.35 to 4.05 (see **Tables 3(a)-(c)**). The results show that the coefficient of variations (CV) of over 65% of observations is smaller than 0.15. This means the extent of variability in relation to the mean of the sample is low.

5.3. Evaluation of the Measurement Models for Lower Order Constructs (LOC)

1) Assessment of reflective indicators

The results of validity assessment of the scales show that the outer loadings of all indicators are greater than 0.7, except REC1, the outer loading of which is 0.607; CEN3, the outer loading of which is 0.682; and SEZ1, the outer loading of which is 0.661. However, because the outer loading is greater than 0.4 and the AVE coefficient of the latent construct $REC = 0.590 > 0.5$, that of $SEZ = 0.584$, and that of $SEN = 0.597 > 0.5$ (see **Table 4**), the variables CEN3, SEZ1 and

Table 2. Frequency of observation.

Characteristics		Frequency	Rate (%)
Business type	Sole proprietorships	122	30.1
	Limited liability companies	183	45.2
	Joint stock companies	46	11.4
	Others	54	13.3
	Total	405	100
Business size	Under 50 people	190	46.9
	From 50 to 100 people	215	53.1
	Total	405	100
Business field	Hotel businesses	102	25.5
	Restaurants	194	47.9
	Travel businesses	42	10.4
	Transportation businesses	67	16.5
	Total	405	100

Source: The results of data processing.

REC1 are accepted (Hair et al., 2013). This means the observed variables all converge to the basic concepts in the scales, and the scales achieve the reliability of each index (see Figure 2).

The result of collinearity statistics (VIF) shows all indicators of measurement models are smaller than 5. Thus, the models of each component have met the requirements of multicollinearity (see Table 4).

2) Construct reliability and validity

The analysis results show that the HTMT index of the all variables is equal to or less than 0.9 (see Table 5). In addition, the results of evaluating the discriminant value according to the Fornell-Larcker criteria show that the square roots of AVE are larger than the coefficients in the same column (see Table 5). Thus, the scales achieve the discriminant validity. Cross loading test results also show that the criteria are acceptable. Bootstrapping to evaluate the HTMT index was performed with a sample size of 5000. The results show that the confidence intervals of the HTMT do not contain the value 1. Thus, indicators measuring one latent construct do not measure other latent constructs.

3) Cross loadings

Cross loading test results also show that the indicators are accepted because the loadings are larger than cross loadings (see Table 6).

4) Discriminant validity

Discriminant validity was assessed using the HTMT and Fornell-Larcker criteria. The analysis results show that the HTMT index of the variables is less than 0.85 (see Table 7). In addition, the results of the evaluation of the discriminant validity according to Fornell-Larcker criteria show that the square roots of AVE

Table 3. (a) Mean and standard deviation of indicators. (b) Mean and standard deviation of indicators. (c) Mean and standard deviation of indicators.

(a)					
Scale BPF			Scale SEN		
Indicators	Mean	Std. Deviation	Indicators	Mean	Std. Deviation
BPF1	3.975	0.583	SEN1	3.995	0.659
BPF2	3.921	0.688	SEN2	3.400	0.678
BPF3	3.879	0.578	SEN3	3.936	0.721
BPF4	3.857	0.659	SEN4	3.968	0.541
BPF5	3.928	0.634	SEN5	4.042	0.527
BPF	3.912	0.628	SEN	3.868	0.625

Source: The results of data processing.

(b)					
Scale SEZ			Scale REC		
Indicators	Mean	Std. Deviation	Indicators	Mean	Std. Deviation
SEZ1	3.835	0.740	REC1	4.000	0.535
SEZ2	3.899	0.642	REC2	3.988	0.742
SEZ3	3.862	0.703	REC3	4.025	0.716
SEZ4	3.869	0.521	REC4	4.005	0.621
SEZ5	3.917	0.540	REC5	4.052	0.730
SEZ	3.903	0.629	REC	4.014	0.669

Source: The results of data processing.

(c)					
Scale ENO			Scale INN		
Indicators	Mean	Std. Deviation	Indicators	Mean	Std. Deviation
ENO1	3.946	0.537	INN1	3.941	0.641
ENO2	3.938	0.561	INN2	3.911	0.708
ENO3	3.926	0.491	INN3	3.909	0.587
ENO4	3.948	0.549	INN4	3.901	0.685
ENO5	3.951	0.602	INN	3.916	0.655
ENO6	4.002	0.569			
ENO	3.952	0.552			

Source: The results of data processing.

Table 4. Collinearity statistics.

Indicators	VIF	Indicators	VIF	Indicators	VIF	Indicators	VIF
BPF1	3.112	SEN1	1.875	SEZ1	1.262	REC1	1.230
BPF2	2.276	SEN2	1.609	SEZ2	1.382	REC2	2.143
BPF3	4.593	SEN2	1.665	SEZ3	2.315	REC3	1.809
BPF4	3.351	SEN3	1.421	SEZ4	2.307	REC4	1.901
BPF5	3.270	SEN4	1.922	SEZ5	3.841	REC5	1.509
INN1	3.146	SEN5	2.387	ENO2	2.978	ENO5	2.256
INN2	1.917	INN4	2.954	ENO3	3.907	ENO6	2.513
INN3	3.274	ENO1	3.049	ENO4	1.660		

Source: The results of data processing.

Table 5. Construct reliability and validity.

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
BPF	0.899	0.912	0.925	0.711
INN	0.904	0.928	0.932	0.775
ENO	0.903	0.904	0.926	0.675
REC	0.821	0.832	0.877	0.590
SEN	0.829	0.836	0.880	0.597
SEZ	0.821	0.838	0.874	0.584

Source: The results of data processing.

are all larger than the coefficients in the same column (see **Table 7**). Thus, the scales achieve discriminant validity from HTMT and Fornell-Larcker criteria. Complete Bootstrapping to evaluate the HTMT index are performed with a sample size of 5000. The results show that the confidence intervals of HTMT do not contain the value 1. Thus, the scales have a high degree of discriminant validity. That is, indicators that measure one latent construct do not measure other latent constructs.

5.4. Evaluation of the Measurement Models for the Higher Order Constructs (HOC)

The evaluation of the construct measurement model of the latent construct *DYC* was performed using a two-stage embedding method. The results of redundancy analysis for the latent variable *DYC* show that the beta coefficient is 0.816, the R^2 coefficient is 0.665 and the adjusted R^2 is 0.665 (see **Figure 3**). The results of testing multicollinearity statistics (VIF) between the indicators of the formative model show that the VIF values of the indicators are all less than 5 (see **Table 4**).

Table 6. Cross loadings of indicators.

	BPF	ENO	INN	REC	SEN	SEZ
BPF1	0.876	0.291	0.691	0.183	0.455	0.315
BPF2	0.798	0.314	0.702	0.318	0.532	0.312
BPF3	0.864	0.315	0.633	0.223	0.415	0.295
BPF4	0.787	0.301	0.523	0.248	0.347	0.263
BPF5	0.885	0.358	0.834	0.323	0.614	0.386
ENO1	0.289	0.852	0.187	0.468	0.397	0.378
ENO2	0.289	0.831	0.207	0.421	0.376	0.359
ENO3	0.314	0.862	0.237	0.378	0.368	0.398
ENO4	0.352	0.731	0.206	0.478	0.411	0.409
ENO5	0.328	0.811	0.233	0.356	0.322	0.324
ENO6	0.271	0.835	0.286	0.365	0.321	0.351
INN1	0.758	0.230	0.911	0.276	0.555	0.314
INN2	0.562	0.054	0.792	0.036	0.348	0.091
INN3	0.824	0.366	0.919	0.288	0.575	0.331
INN4	0.694	0.252	0.895	0.243	0.445	0.293
REC1	0.382	0.607	0.360	0.607	0.461	0.445
REC2	0.189	0.369	0.101	0.826	0.364	0.447
REC3	0.137	0.280	0.114	0.776	0.408	0.318
REC4	0.283	0.403	0.245	0.876	0.470	0.422
REC4	0.283	0.403	0.245	0.876	0.470	0.422
REC5	0.202	0.287	0.156	0.729	0.314	0.331
SEN1	0.515	0.363	0.507	0.291	0.785	0.267
SEN2	0.580	0.296	0.567	0.243	0.711	0.421
SEN3	0.259	0.373	0.210	0.622	0.682	0.349
SEN4	0.382	0.288	0.391	0.370	0.803	0.282
SEN5	0.497	0.408	0.493	0.487	0.868	0.353
SEZ1	0.252	0.295	0.181	0.367	0.257	0.661
SEZ2	0.294	0.413	0.247	0.434	0.408	0.750
SEZ3	0.288	0.316	0.207	0.378	0.317	0.771
SEZ4	0.264	0.213	0.240	0.251	0.246	0.706
SEZ5	0.336	0.425	0.290	0.465	0.365	0.911

Source: The results of data processing.

Table 7. HTMT and fornell-larcker criteria.

	HTMT						Fornell-Larcker					
	BPF	INN	ENO	REC	SEN	SEZ	BPF	INN	ENO	REC	SEN	SEZ
BPF							0.843					
INN	0.877						0.817	0.881				
ENO	0.413	0.292					0.377	0.274	0.822			
REC	0.358	0.295	0.586				0.312	0.256	0.505	0.768		
SEN	0.654	0.636	0.514	0.635			0.575	0.559	0.450	0.528	0.773	
SEZ	0.431	0.338	0.502	0.606	0.511		0.378	0.307	0.454	0.512	0.430	0.764

Source: The results of data processing.

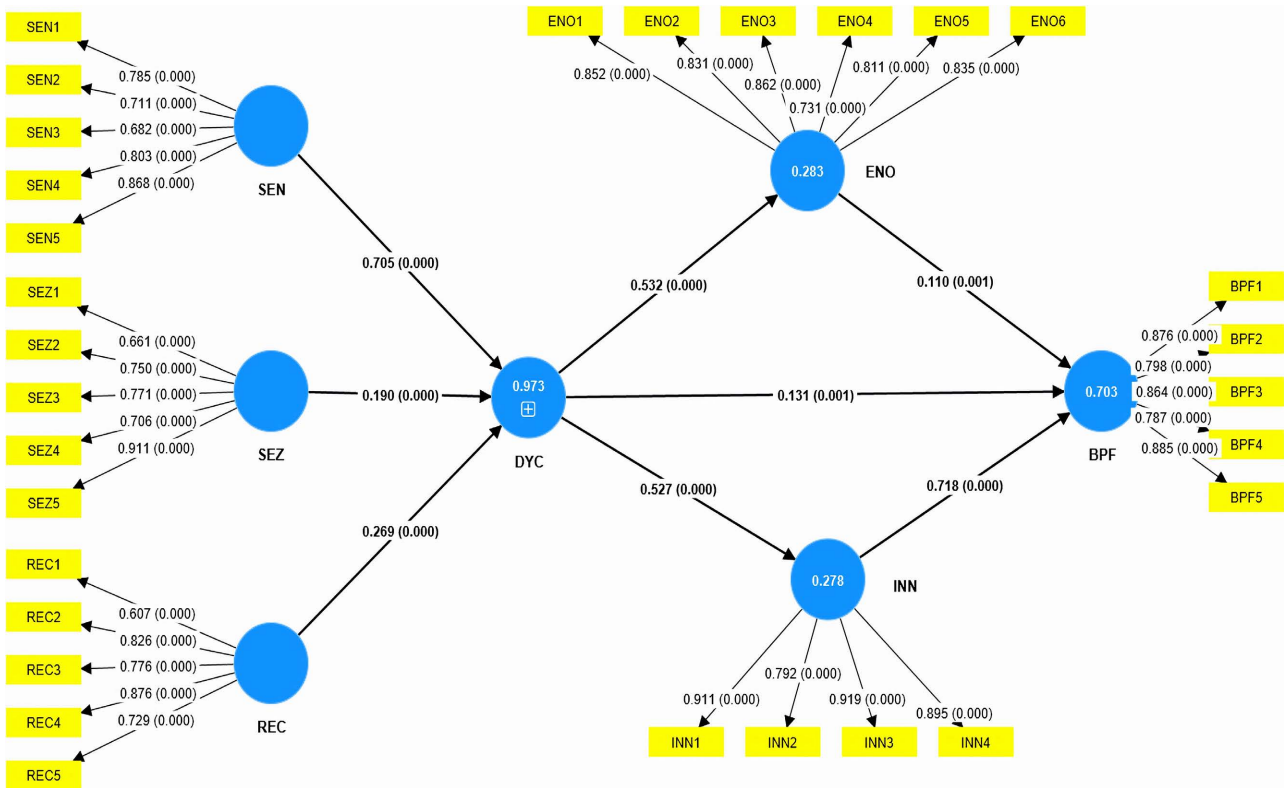


Figure 2. Path coefficients of LOC model. Source: The results of data processing.

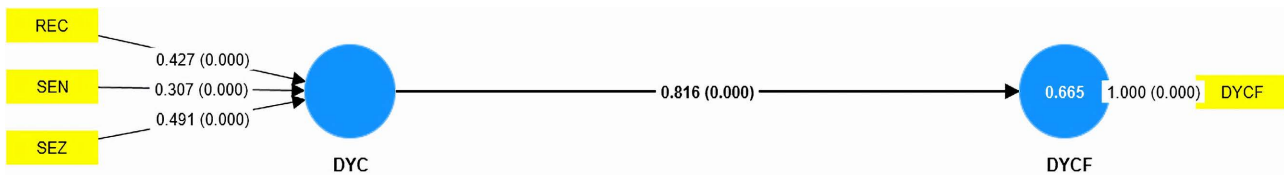


Figure 3. Formative model of the latent construct "Dynamic capabilities". Source: The results of data processing.

The results of evaluating the statistical significance of the weights by bootstrapping with a sample size of 5000 show that all indicators for the formative model have a significance level of p value < 0.05 .

The results of testing the reliability of the constructs in HOC show that the outer weights of the constructs in the formative model are greater than zero with p value < 0.05 , except REC with p value = 0.401. However, outer loading of REC is $0.681 > 0.5$, REC could be accepted (Hair et al., 2011). At the same time, the outer loadings of the constructs in the reflective model are all greater than 0.7 with p value < 0.05 . Thus, the scales in the HOC model meet reliability (see Table 8).

5.5. Assessment of the Structural Model

1) Collinearity statistics (VIF)

Analysis for the outer model shows that the VIF coefficients of the latent constructs and other variables in the higher-order model are all less than 5. With the

Table 8. Results of evaluation of HOC.

HOC	LOC	Outer weights	P value	T statistics	Outer loading	VIF
DYC	SEN	0.798	0.000	32.957	0.637	1.456
	SEZ	0.310	0.000	12.704	0.953	1.424
	REC	0.063	0.401	16.667	0.681	1.608
INN	INN1	0.310	0.000	59.721	0.911	3.146
	INN2	0.210	0.000	30.962	0.793	1.917
	INN3	0.332	0.000	87.568	0.918	3.274
	INN4	0.275	0.000	62.813	0.894	2.954
ENO	ENO1	0.209	0.000	46.246	0.853	3.049
	ENO2	0.201	0.000	39.871	0.831	2.978
	ENO3	0.208	0.000	48.712	0.863	3.907
	ENO4	0.230	0.000	26.698	0.731	1.660
	ENO5	0.192	0.000	33.862	0.811	2.256
	ENO6	0.182	0.000	33.883	0.834	2.513
BPF	BPF1	0.234	0.000	50.504	0.877	3.112
	BPF2	0.249	0.000	43.347	0.797	2.276
	BPF3	0.220	0.000	48.193	0.864	4.593
	BPF4	0.187	0.000	32.903	0.787	3.351
	BPF5	0.292	0.000	72.378	0.885	3.270

Source: The results of data processing.

inner model, the VIF values are all less than 3 (see **Table 8**). Thus, the models have met the requirement of multicollinearity.

2) Construct reliability and validity

The results of construct reliability assessment show that the Cronbach's alpha of all constructs is greater than 0.7 and the composite reliability (CR) is greater than 0.7. This means that the scales have high reliability and explain ability for the research concepts in the model. Extracted variance (AVE) of all scales satisfy the condition greater than 0.5. This proves that the scales are all convergent (see **Table 9**).

3) Discriminant validity

Discriminant validity is assessed using the HTMT and Fornell-Larcker criteria. The analysis results show that the HTMT index of the latent variables is less than 0.85. In addition, the results of the evaluation of the discriminant validity according to Fornell-Larcker criteria show that the square roots of AVE are all larger than the coefficients in the same column. Thus, the structural model achieves discriminant validity from HTMT and Fornell-Larcker criteria (see **Table 10**).

Table 9. Construct reliability and validity.

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
BPF	0.899	0.912	0.925	0.711
ENO	0.903	0.904	0.925	0.675
INN	0.904	0.927	0.932	0.776

Source: The results of data processing.

Table 10. Discriminant validity by HTMT and Fornell-Larcker criteria.

Construct	HTMT			Construct	Fornell-Larcker		
	BPF	ENO	INN		BPF	ENO	INN
BPF				BPF	0.843		
ENO	0.413			ENO	0.377	0.822	
INN	0.877	0.292		INN	0.817	0.273	0.881

Source: The results of data processing.

4) Coefficient of determination (R^2)

The results of data processing show that the structural model with the dependent variable BPF has an R^2 of 0.704 which is considered to be moderately deterministic (<0.75) and the independent variables only explain 70.4% of variability of the dependent variable. The structural model with the dependent variable ENO has an R^2 of 0.277. Thus, the independent variables explain 27.7% of the variation in the dependent variable, which is considered to be also moderately deterministic (>0.25 and <0.75). Model The structural model with the dependent variable INN has an R^2 of 0.303. Thus, the independent variables explain 30.3% of the variation in the dependent variable, which is considered to be also deterministic in the average (see **Table 11**).

5) Effect size of independent variables on dependent variables

Assessing the importance of the independent variables f^2 shows that the impact of INN on BPF, DYC on ENO as well as INN on BPF is strong ($f^2 > 0.35$). The effects of ENO on BPF and DYC on BPF are not statistically significant (see **Table 12**).

6) Evaluation of the predictive relevance (Q^2)

The results of Bindfolding analysis show that, among the component models, the model related to DYC has no predictive relevance, with Q^2 equal to 0; the predictive relevance of BPF was moderate with Q^2 of 0.481 (<0.5) and the predictive relevance of ENO and INN was low with $Q^2 < 0.25$ (see **Table 13**).

7) Bootstrapping

To evaluate the significance and statistical impact of the regression coefficients, bootstrapping technique with sample number $N = 5000$ is used. The results of direct impact assessment, indirect impact and overall impact estimate are

Table 11. R² statistics.

Construct	R-square			Adjusted R-square			Description by Hair et al. (2013)
	Original sample	P value	T value	Original sample	P value	T value	
BPF	0.704	0.000	27.701	0.702	0.000	27.409	Moderate
ENO	0.277	0.000	6.250	0.275	0.000	6.194	Moderate
INN	0.303	0.000	6.819	0.301	0.000	6.763	Moderate

Source: The results of data processing.

Table 12. f² statistics.

Path	Original sample	Sample mean	P value	T value	Impact
DYC -> BPF	0.036	0.040	0.118	1.563	No impact
DYC -> ENO	0.383	0.393	0.000	4.421	Strong
DYC -> INN	0.434	0.449	0.000	4,631	Strong
ENO -> BPF	0.029	0.032	0.104	1.625	No impact
INN -> BPF	1.187	1.204	0.000	6.107	Strong

Source: The results of data processing.

Table 13. Q² statistics.

Construct	SSO	SSE	Q ² (Q ² = 1-SSE/SSO)	Predictive relevance
BPF	2025.000	1050.790	0.481	Moderate
DYC	1215.000	1215.000	0.000	No predictive relevance
ENO	2430.000	1994.338	0.179	Low
INN	1620.000	1255.160	0.225	Low

Source: The results of data processing.

presented in **Table 14**.

According to the results of the structural model assessment, DYC, ENO and INN directly influence the dependent variable BPF (see **Figure 4**). The path coefficient of DYC -> BPF is 0.141, with p value < 0.05. DYC -> ENO has a coefficient of 0.526, with a p-value < 0.05. DYC -> INN has a coefficient of 0.550, with a p-value of 0. ENO -> BPF has a coefficient of 0.109 with a p-value < 0.05. INN -> BPF has a coefficient of 0.710, with a p-value < 0.05.

5.6. Assessing the Mediating Role of Variables in the Model

The results of the study of specific indirect effects show that DYC directly and indirectly affects BPF through both ENO and INN. The total indirect impact of

Table 14. Path coefficients of structural model.

Paths	Original sample	T value	P value	Paths	Original sample	T value	P value
DYC -> BPF	0.141	3.180	0.001	ENO -> BPF	0.109	3.388	0.001
DYC -> ENO	0.526	12.417	0.000	INN -> BPF	0.710	19.013	0.000
DYC -> INN	0.550	13.601	0.000				

Source: The results of data processing.

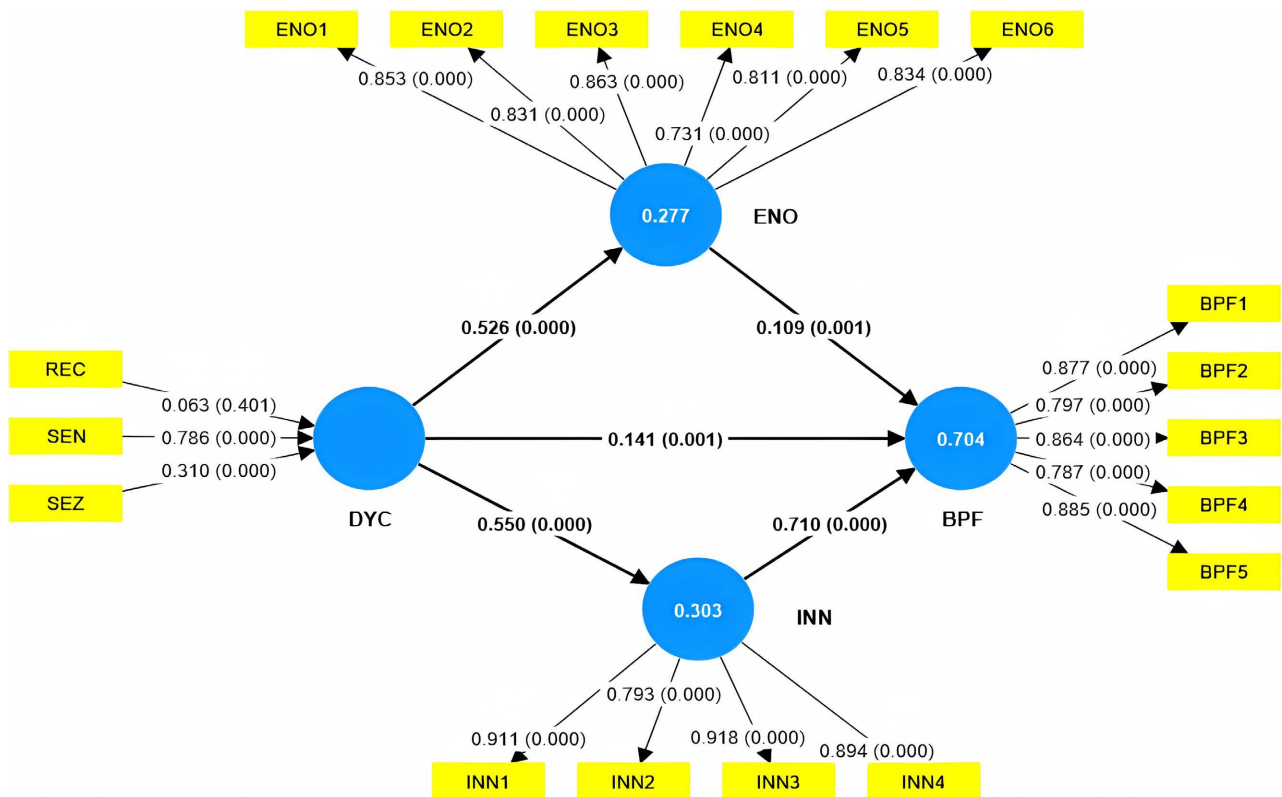


Figure 4. Path coefficients of the structural model.

DYC on BPF is 0.448. In particular, the direct transmission through ENO is 0.057 and through INN is 0.391 (see **Table 15**).

5.7. Model Fit

Results of data processing show that the SRMR coefficient of the saturated model and the estimated model are equal to 0.081 and 0.082 respectively (approximately 0.80) (Henseler et al., 2014) (see **Table 16**) and criteria GoF = (Average of AVE)*(Average of R²)^{0.5} = 0.47 > 0.36 (Akter et al., 2011) (see **Table 17**). Thus, the estimated model meets the requirements of compatibility of survey data with market data.

5.8. Multigroup Analysis (MGA)

The multigroup analysis allows us to evaluate if pre-defined data groups have

Table 15. Direct, indirect and total effect.

Independent variable \ Dependent Variable	Effect	Entrepreneurial Orientation (ENO)	Innovativeness (INN)	Business Performance (BPF)
Dynamis capabilities (DYC)	Direct	0.526	0.550	0.141
	Indirect	0.000	0.000	0.448
	Total	0.526	0.550	0.589
Entrepreneurial Orientation (ENO)	Direct	0.000	0.000	0.109
	Indirect	0.000	0.000	0.000
	Total	0.000	0.000	0.109
Innovativeness (INN)	Direct	0.000	0.000	0.710
	Indirect	0.000	0.000	0.000
	Total	0.000	0.000	0.710

Source: The results of data processing.

Table 16. Fitness of the research model.

	Saturated model	Estimated model
SRMR	0.081	0.082
d_ULS	1.132	1.147
d_G	0.560	0.559
Chi-square	1195.379	1197.653
NFI	0.792	0.791

Source: Results of data processing.

Table 17. GoF criteria.

Construct	R ²	AVE
BPF	0.704	0.711
ENO	0.277	0.675
INN	0.303	0.776
Average	0.426	0.721
GoF		0.470

Source: Results of data processing.

significant differences in their group-specific parameter estimates. The results of the multigroup analysis (MGA) performed with the MICOM technique show that the path coefficient of DYC -> ENO has a difference under the impact of business with under 50 people and business with people from 50 to 100 (see **Table 18**).

The results of assessing the impact of business fields show that the path coefficient of $DYC \rightarrow BPF$, $DYC \rightarrow INN$, $DYC \rightarrow BPF$ and $ENO \rightarrow BPF$ has differences under the impact of business fields (see **Tables 19-21**).

The results of assessing the impact of business types show that the path coefficient of $DYC \rightarrow INN$ has a difference under the impact of business types (see **Table 22**).

Table 18. Effect of business size.

Paths	Under 50 people—From 50 to 100 people			
	Under 50 people	From 50 to 100 people	Difference	P value
$DYC \rightarrow ENO$	0.615	0.445	0.17	0.034

Source: Results of data processing.

Table 19. Effect of business fields.

Paths	Hotel businesses—Restaurants			
	Hotel businesses	Restaurants	Difference	P value
$DYC \rightarrow BPF$	0.200	0.006	0.194	0.042

Source: Results of data processing.

Table 20. Effect of business fields.

Paths	Hotel businesses—Travel businesses			
	Hotel businesses	Travel businesses	Difference	P value
$DYC \rightarrow INN$	0.411	0.723	-0.312	0.031

Source: Results of data processing.

Table 21. Effect of business fields.

Paths	Restaurants—Transportation businesses			
	Restaurants	Transportation businesses	Difference	P value
$DYC \rightarrow BPF$	0.006	0.257	-0.251	0.034
$INN \rightarrow BPF$	0.812	0.592	0.220	0.020

Source: Results of data processing.

Table 22. Effect of business types.

Paths	Sole proprietorships—Limited liability companies			
	Sole proprietorships	Limited liability companies	Difference	P value
$DYC \rightarrow INN$	0.020	0.222	-0.201	0.009

Source: Results of data processing.

6. Discussions

This research is based on relationship of business performance and dynamic capabilities whose components are sensing ability, seizing ability and reconfiguration ability. The research results show that dynamic capabilities have a direct and positive impact on the performance of small and medium-sized tourism business at the South-Central Coast region of Vietnam with a beta coefficient of 0.141. The research results allow us to confirm that businesses that make a model shift from conventional production to models based on appropriate dynamic capabilities will improve their performance. The results of hypothesis testing indicate that the ability to sensing, seizing and reconfigure is a predictor of motivational ability to influence business performance. The results corroborate the findings of Osisioma et al. (2016), Li & Liu (2014), Woldesenbet et al. (2011), Karagouni et al. (2012), Wu (2010), Pandza and Holt (2007), and Lumpkin & Dess (1996). In addition, dynamic capabilities also have a direct and positive impact on innovation and entrepreneurial orientation with beta coefficients of 0.550 and 0.552 respectively. This result is consistent with the findings of Deshpande et al. (1993), Craig and Dibrell (2006), Baldwin and Johnson (1996), Abdelkareem et al. (2022), and Jantunen et al. (2005).

The results the study also confirm the mediating role of innovation and entrepreneurial orientation in the relationship between dynamic capabilities and performance of small and medium-sized tourism businesses in the South-Central Coast region, Vietnam. This result reinforced the findings of Deshpande et al. (1993), Craig and Dibrell (2006), and Baldwin and Johnson (1996). Thus, the dynamic capabilities of a business also have an indirect impact on business performance with a beta coefficient of 0.448; in which through entrepreneurial orientation with a beta coefficient of 0.057 and through innovation with a beta coefficient of 0.391. This shows that the influence of innovation is of greater significance.

The results of MGA with MICOM technique show that there are differences in the path coefficients of the structural model under the moderation of the demographic variables indicating, business sizes, types of businesses, and business fields. In general, for businesses with people under 50, the $DYC \rightarrow TENO$ path coefficient is lower than those with people from 50 to 100. Hotels have a higher $DYC \rightarrow BPF$ path coefficient than those of Restaurants, Hotels have a lower $DYC \rightarrow INN$ path coefficient than those of Travel companies, and Restaurants have a lower $DYC \rightarrow BPF$ path coefficient, but a higher $INN \rightarrow BPF$ path coefficient than those of Transportation companies.

7. Conclusion

Firstly, the research results show that 13 research hypotheses are accepted (see **Table 23**). Thus, the results do not change compared to theory, previous related studies as well as expert opinions and suggestions of the authors. The objectives of the research are achieved.

Table 23. Result of testing the research hypotheses.

No	Hypothesis	Relationship between variables and concepts	Beta	P value	Conclusion
1	H1	Dynamic capabilities -> Business performance	0.131	0.000	Accepted
2	H1a	Sensing -> Dynamic capabilities	0.705	0.000	Accepted
3	H1b	Seizing -> Dynamic capabilities	0.190	0.000	Accepted
4	H1c	Configuration -> Dynamic capabilities	0.269	0.000	Accepted
5	H2	Dynamic capabilities -> Entrepreneurial orientation	0.532	0.000	Accepted
6	H3	Dynamic capabilities -> Innovativeness	0.527	0.000	Accepted
7	H4	Entrepreneurial orientation -> Business performance	0.110	0.000	Accepted
8	H5	Innovativeness -> Business performance	0.718	0.000	Accepted
9	H6	Entrepreneurial orientation plays a mediating role in the relationship between dynamic capabilities and business performance		0.000	Accepted
10	H7	Entrepreneurial orientation plays a mediating role in the relationship between dynamic capabilities and business performance		0.000	Accepted
11	H8a	Size of businesses moderates the path coefficients of the structural model		<0.05	Accepted
12	H8b	Types of businesses moderates the path coefficients of the structural model		<0.05	Partially accepted
13	H8c	Fields of businesses moderates the path coefficients of the structural model		<0.05	Partially accepted

Source: The results of data processing.

Secondly, many studies suggest that DYC have a direct impact on business performance (Helfat & Peteraf, 2003; Zott, 2003). But others are still skeptical about this conclusion (Wang & Ahmed, 2007; Prange & Verdier, 2011; Rehman & Saeed, 2015; Susanti & Arief, 2015; Winter, 2003; Zahra et al., 2006). The results of this study show that DYC has a direct and indirect impact on the business performance of tourism SMEs.

Finally, this study fills in the gaps such as confirming the impact of DYC on business performance, testing the mediating role of Entrepreneurial orientation and innovation on the impact of employees on the performance of small and medium tourism businesses in the South-Central Coast region of Vietnam. Building a formative model to test the relationship between the concept of DYC and the components of DYC is a new point of this study.

8. Implications

Firstly, to improve the performance of small and medium-sized tourism businesses in the South Central Coast region of Vietnam, businesses need to develop DYC with the ability to sensing, seizing and reconfiguring business processes

and systems to respond quickly to changes in today's dynamic, complex and uncertain operating environment.

Secondly, innovation is a factor that greatly affects business performance with a beta coefficient of 0.718. Therefore, businesses need to see this as an aspect of corporate culture and openness to new ideas. It should be noted that innovation comes from accumulated knowledge and experience and can be incremental technical change or an increase in technical opportunities.

Thirdly, regarding the impact of DYC on ENO, small size businesses need to be focused; concerning the impact of DYC on BPF, the hotels need to be focused, related to the impact of DYC on innovation, travel companies need to be focused, related to the impact of DYC on BPF, transportation companies need to be focused, related to the impact of innovation on BPF, travel companies need to be focused, and regarding the impact of ENO on BPF, limited liability companies need to be focused.

Finally, entrepreneurial orientation can be measured at both the organizational and individual levels. Individuals who are less risk-averse, have an innovative mindset and tend to be competitive often have higher entrepreneurial ability and are more successful when starting a business. Therefore, businesses need to have human resource management practices that motivate and encourage the entrepreneurial spirit outside as well as inside the business (Intrapreneurship).

9. Limitations and Future Research

This study only tests and measures the impact of 3 elements of dynamic capabilities in the form of a formative model, instead of 5 elements and other and other subjective internal factors of businesses such as capacity building and innovation. Furthermore, the important objective external factors affecting business' DYC such as business cooperation networks, institutions... have not been studied. Therefore, future studies can expand other concepts in the research model.

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Conflicts of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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