

Researching the Factors Influencing the Digital Transformation of Businesses in Quang Binh Province, Vietnam

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Abstract

The study on factors influencing digital transformation of businesses in Quang Binh province was conducted through a research model consisting of 6 factors: 1) Technology, 2) Resources of the business, 3) Business culture, 4) Business policies, 5) Digital infrastructure, 6) Government policies. The collected data from 500 businesses in Quang Binh province were analyzed using descriptive statistical techniques, reliability testing of measurement scales, exploratory factor analysis, correlation analysis, and regression analysis. The results of the research show that all 6 factors in the model have a positive influence on the digital transformation of businesses in Quang Binh province. Among them, the resource factor of businesses has the largest impact (0.393), followed by the technology factor (0.344), the business culture factor (0.18), the digital infrastructure factor (0.153), the government policies factor (0.117), and finally the business policies factor (0.060). This is an important basis for businesses and local authorities in Quang Binh province to propose solutions for developing resources, investing in technology, changing business culture, developing digital infrastructure, etc., in order to accelerate the digital transformation in businesses in Quang Binh province.

Keywords

Digital Transformation, Digital Transformation of Businesses, Model of Factors Influencing Digital Transformation of Businesses, Digital Transformation of Businesses in Quang Binh Province, Model of Factors Influencing Digital Transformation of Businesses in Quang Binh Province

1. Introduction

Quang Binh is a province located in the North Central Coast region of Vietnam,

with a natural area of 8065 km² and a population of 895,430 people in 2019. Starting from a locality with an agricultural-based economy, the economic structure of Quang Binh province has shifted strongly towards industrialization and modernization, with agriculture, forestry, and fisheries accounting for only 20.09%. One of the key policies that the local government focuses on is the development of businesses to stimulate the local economy. As a result, the number and scale of businesses in Quang Binh province have been continuously increasing. From 2938 businesses in 2011, there are expected to be 7531 businesses by 2022, an increase of 2.56 times. Currently, digital transformation is one of the goals that the local government and businesses in Quang Binh province are interested in.

Currently, digital transformation is one of the goals of interest to local governments and businesses in Quang Binh province. However, there has been no research to assess the current situation of digital transformation in businesses, what factors affect the digital transformation of businesses, so both businesses and local governments have not had any basis for implementing solutions to improve digital transformation readiness and accelerate digital transformation in enterprises.

Therefore, the author identifies the research problem as: ***Researching the factors influencing the digital transformation of businesses in Quang Binh province, Vietnam.***

The objective of the research is to systematize the theoretical and practical basis related to digital transformation in businesses as a basis for building a model of factors affecting digital transformation in businesses, identifying variables observations of factors and scales. On that basis, the objects of investigation were determined to be businesses in Quang Binh province; Methods include: Survey method, Descriptive statistical method, Scale reliability test, Exploratory factor analysis (EFA) and Research model. These contents are presented in part 2: Literature review and methodology. Regarding the proposed content of solutions to accelerate digital transformation in businesses, it is mentioned in section 4: Conclusion and Management Implications.

In addition to the abstract, keywords and references, the main content of the research is presented in 4 parts: the introduction discusses the research background, research meaning, research importance, main objectives, main contributions; the Literature review and methodology presents an overview of relevant research results, research models and survey methods, descriptive statistical method, Test the reliability of the scale, Explore factor analysis; The results and discussion presents 5 contents including: Descriptive statistics of the study sample, Testing the reliability of the scale, Exploring factors analysis, Correlation analysis and Regression analysis; The conclusion and management implications concluded the research results and proposed solutions for businesses and local authorities in Quang Binh province to implement to improve digital transformation readiness and accelerate digital transformation in businesses.

2. Literature Review and Methodology

2.1. Literature Review and Research Model

- **Digital transformation in businesses:** There have been numerous studies providing definitions of digital transformation in businesses. According to [Stolterman and Fors \(2004\)](#), digital transformation is defined as the use of technology to significantly improve the efficiency or reach of a business. [McDonald and Rowsell-Jones \(2012\)](#) argue that digital transformation goes beyond simply digitizing resources, but rather the value created by businesses must be based on digital assets. [Fitzgerald \(2013\)](#) defines digital transformation in businesses as the use of new digital technologies, such as social media, smart mobile devices, advanced analytics, or automated linking systems to bring about significant changes in business operations, such as enhancing customer experience, optimizing activities, and creating new business models. [Hess et al. \(2016\)](#) suggest that digital transformation involves changes that digital technology can bring to business models, resulting in changes to products, organizational structure, or automation of business processes. In this study, we define digital transformation in businesses as the integration of technology and digital techniques into business operations with the main goal of increasing operational efficiency, improving customer experience, and generating competitive advantage and profit for businesses in the market.
- **Factors affecting digital transformation in enterprises:** There have been many studies mentioning the factors affecting digital transformation in enterprises. In which, technology is considered an important factor to promote successful digital transformation of enterprises ([Lanzolla & Anderson, 2008](#); [Chatterjee et al., 2002](#)); Corporate culture is also an important factor affecting digital transformation of enterprises ([Dremel et al., 2017](#); [Kohli & Johnson, 2011](#)). Synthesized results of [Swen & Nadkarni \(2020\)](#), internal factors affecting the digital transformation ability of technology-focused businesses and organizations. In particular, focusing on the organization, there are 4 factors mentioned: Leadership, business digital business strategy, employee and business capacity. Research by [Anh & Nuong \(2022\)](#), proposes a model of 6 internal factors affecting the digital transformation of enterprises, including: Leadership, digital business strategy, staff capacity, corporate culture, technology platform, pressure on businesses. In addition to the internal factors affecting the ability of enterprises to transform digitally as mentioned above, from the practice of researching enterprises in Quang Binh province, it is shown that the ability of enterprises to successfully transform and transform digitally is also influenced by external factors such as: State policies, digital infrastructure, the development of the economy, etc.: 1) Technology (CN), 2) Resources of the business (NL), 3) Business culture (VH), 4) Business policies (CS), 5) Digital infrastructure (HTS), 6) Government policies (CSN).
- **Research model:** On the basis of building research hypothesis about factors affecting digital transformation of enterprises in Quang Binh province, we

build a research model according to **Figure 1**.

The results of the literature review show that the researches focus on studying the internal factors affecting the digital transformation, there are no researches that combine both internal and external factors of the businesses. The author's research builds a research model with 4 internal factors and 2 external factors affecting the digital transformation of businesses.

2.2. Methodology

- **Survey methods:** Before conducting formal research, the author conducts preliminary research by reviewing the conducted studies and relevant documents; build observed variables, scale and conduct direct interviews with 10 businesses. Based on the recorded interview content, adjust the observed variables and scales accordingly and complete the questionnaire to carry out the official research. According, the research identifies the survey subjects, the survey locations, the sample size and creates the questionnaire. The questionnaire is designed according to 6 independent variables with 33 observed variables (CN—3 observed variables; NL—5 observed variables; VH—5 observed variables; CS—8 observed variables; HTS—7 observation; CSN—5 observed variables) and 1 dependent variable has 5 observed variables (KNCDS). Specific sets of observations measured on a 5-point Likert (1—strongly disagree; 2—disagree; 3—Neutral; 4—agree; 5—strongly agree).

The sample size is determined by the formula of Yamane Taro (1967):

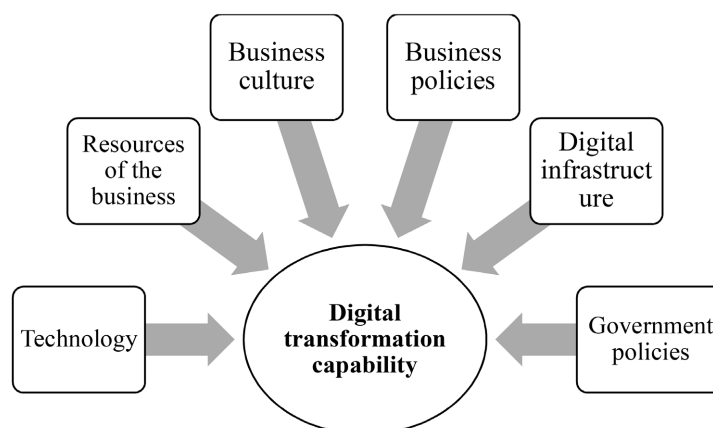
Trong đó: x : Number of businesses identified in the survey

N : Total number of businesses in Quang Binh province in 2021

e : Permissible error

With $N = 7105$, the confidence of 95% and $P = 0.5$, the sample size with permissible error $\pm 5\%$, the study identified the sample to be investigated = 379 and the author determined the number of businesses surveyed was 500.

The number of surveyed businesses is allocated in percentage according to the



Source: Research by the author in 2022.

Figure 1. Proposed research model.

district level, specifically: Quang Binh province has 8 administrative units at the district level, and the percentage allocation based on the number of businesses in each district and the total number of businesses in Quang Binh province. Based on that, the number of businesses allocated for investigation and survey is as follows: Dong Hoi City investigates 150 businesses; Ba Don town, Le Thuy district, and Bo Trach district each investigate 70 businesses; Quang Ninh district, Quang Trach district, Minh Hoa district, and Tuyen Hoa district each investigate 35 businesses. At each district, the study uses a random sampling method until the required number of businesses for investigation is reached.

- **Descriptive statistical method:** Using frequency tables to classify the sample according to classification variables.
- **Test the reliability of the scale:** To test the reliability of the assumptions scale research, common methods used Cronbach's alpha coefficient. The Cronbach's Alpha coefficient shows the intrinsic consistency of the observed variables in the factor. The formula for Cronbach's alpha coefficient is: $\alpha = Np/[1 + p(N - 1)]$. The selection criteria in this study are the Cronbach's Alpha coefficient greater than or equal to 0.6 is acceptable. Cronbach's alpha calculations help analysts eliminate inappropriate variables and limit spam variables during research.
- **Explore factor analysis (EFA):** Use discovery factor analysis (EFA) to test the convergence of conceptual component variables. Variables with a single correlation coefficient between variables and factor loading less than 0.5 will be excluded; Use discovery factor analysis (CFA) to shrink and summarize data. Standards when analyzing factors discover coefficient Myer-Kaiser-Olkin (KMO) measure the adequacy of the sample and the significant meaning of accreditation Bartlett. KMO has an appropriate value within [0.5, 1].

3. Results and Discussion

3.1. Descriptive Statistics of the Study Sample

Descriptive statistics of the businesses survey results are shown in **Table 1**.

According to **Table 1**, the survey data is allocated to businesses across 8 administrative units in Quang Binh province, with the city of Dong Hoi having the highest number of surveyed businesses, 150 in total. The lowest number of surveyed businesses is in Minh Hoa district and Tuyen Hoa district, with each locality surveyed 35 businesses. In terms of the length of business operation, 131 businesses with a duration of 3 - <5 years were surveyed; 187 According to **Table 1**, the number of survey questionnaires allocated to businesses in the 8 administrative units of Quang Binh province is shown. Among them, Dong Hoi city has the highest number of surveyed businesses with 150, while Minh Hoa district and Tuyen Hoa district have the lowest, with each locality surveying 35 businesses. In terms of business operation time, there were 131 surveyed businesses operating from 3 to less than 5 years, 187 surveyed businesses operating from 5 to 7 years, and 182 surveyed businesses operating for over 7 years. Distribution by type of business shows that 94% of businesses are limited liability companies

Table 1. Characteristics of surveyed businesses.

Target/Location	Dong Hoi	Le Thuy	Quang Ninh	Quang Trach	Bo Trach	Ba Don	Tuyen Hoa	Minh Hoa
Business hours of operation								
From 3 to nearly 5 years	30	20	8	10	18	22	12	11
From 5 to 7 years	65	20	15	14	25	23	13	12
More than 7 years	55	30	12	11	27	25	10	12
Type of business								
Private enterprise	0	0	0	0	0	1	0	1
Company Limited	141	70	35	34	68	68	28	33
Single share-holder limited company	1	0	0	1	2	1	3	1
Joint Stock Company	8	0	0	0	0	0	4	0
Partnership company	0	0	0	0	0	0	0	0
Foreign Invested Enterprise	0	0	0	0	0	0	0	0
Employee size of the enterprise								
≤10 employees	40	20	20	16	30	24	18	16
11 - 50 employees	80	20	15	19	25	35	17	19
From 51 to 100 employees	27	30	0	0	14	11	0	0
>100 employees	3	0	0	0	1	0	0	0
Capital size of the enterprise								
≤3 billion	120	52	25	28	30	45	30	28
From 3 billion to 50 billion	30	18	10	7	40	25	5	7
From 50 billion to 100 billion	0	0	0	0	0	0	0	0
More than 100 billion	0	0	0	0	0	0	0	0

Source: Survey data and author's calculations in 2022.

(LLC), 0.67% are single-member LLCs, and 5.3% are joint stock companies (JSC). In terms of labor scale, the majority of businesses have less than 10 employees, followed by 11-50 employees. There were 184 businesses with fewer than 10 employees, accounting for 36.8%. There were 230 businesses with 11 - 50 employees, accounting for 46%. There were 82 businesses with 51 - 100 employees, accounting for 16.4%. There were 4 businesses with over 100 employees, accounting for 0.8%. In terms of capital scale, among the studied businesses, none had capital exceeding 50 billion. The businesses in Quang Binh province are mainly small and medium-sized enterprises, so the main source of capital is below 3 billion or from 3 to 50 billion. Among them, the majority of businesses have capital less than 3 billion, with a total of 358 businesses, accounting for 71.6%. There were 142 businesses with capital from 3 to 50 billion, accounting for 28.4%.

3.2. Testing the Reliability of the Scale

The research model of factors affecting argument transfer of enterprises in Quang Binh province is determined to have 6 influencing factors with 33 observed variables; 1 dependent variable with 5 observed variables. The results of running the model with Cronbach's Alpha test of the scales on the independent variables show that out of 33 observed variables, there are 5 variables NL1, NL5, VH3, HTS2, MT8 with total correlation coefficient (Corrected Item - Total Correlation) is less than 0.3 (<0.3), so these variables are excluded. The scales all meet the requirements of reliability ($0.6 < \text{Cronbach's alpha} < 0.95$) and the total correlation coefficient (Corrected Item - Total Correlation) of the remaining observed variables is greater than 0.3 met the requirements and included in factor analysis. Thus, the results of Cronbach's alpha analysis of the scale of factors affecting the digital transformation ability of enterprises with 33 independent observed variables, after testing the reliability of Cronbach's Alpha, 5 variables were eliminated; the remaining 5 variables were removed.

Results of Cronbach's alpha reliability analysis of the scales are shown in **Table 2**: The CN factor scale has Cronbach's alpha coefficient = 0.689 and the corrected item—the total correlation coefficient of the 3 observed variables is greater than 0.3; the CS factor scale has Cronbach's alpha coefficient = 0.659 and the corrected item—The total correlation coefficient of the 7 observed variables is greater than 0.3; the NL factor scale has Cronbach's alpha coefficient = 0.646 and the corrected item—The total correlation coefficient of the 3 observed variables is greater than 0.3; the VH factor scale has Cronbach's alpha coefficient = 0.639 and the corrected item—The total correlation coefficient of the 4 observed variables is greater than 0.3; the HTS factor scale has Cronbach's alpha coefficient = 0.693 and the corrected item—The total correlation coefficient of the 6 observed variables is greater than 0.3; the CSN factor scale has Cronbach's alpha coefficient = 0.750 and the corrected item—The total correlation coefficient of the 6 observed variables is greater than 0.3.

Table 2. Results of Cronbach's alpha reliability analysis of the scales.

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Technology—CN (0.689)				
CN1	10.48	3.025	0.431	0.577
CN2	10.53	3.014	0.428	0.578
CN3	11.04	2.853	0.501	0.581
Business policies—CS (0.659)				
CS1	13.88	5.891	0.425	0.647
CS2	13.55	5.716	0.468	0.630

Continued

CS3	13.26	6.002	0.394	0.609
CS4	13.35	5.034	0.509	0.609
CS5	13.76	5.477	0.429	0.647
CS6	13.78	5.162	0.329	0.628
CS7	13.12	5.321	0.418	0.593
Resources of the business—NL (0.646)				
NL2	10.53	3.583	0.374	0.594
NL3	10.21	3.539	0.434	0.554
NL4	9.92	3.532	0.409	0.570
Business culture—VH (0.639)				
VH1	9.59	3.952	0.434	0.563
VH2	9.57	4.056	0.374	0.600
VH4	10.23	3.736	0.432	0.561
VH5	10.05	3.314	0.445	0.555
Digital infrastructure—HTS (0.693)				
HTS1	9.69	5.170	0.348	0.555
HTS3	9.34	5.393	0.356	0.549
HTS4	9.72	4.160	0.498	0.556
HTS5	9.12	4.954	0.486	0.587
HTS6	9.18	4.216	0.523	0.474
HTS7	9.37	4.861	0.448	0.538
Government policies—CSN (0.750)				
CSN1	9.56	4.156	0.374	0.605
CSN2	9.34	5.393	0.356	0.549
CSN3	9.33	5.710	0.403	0.576
CSN4	9.21	4.096	0.412	0.528
CSN5	9.17	4.294	0.418	0.558

Source: Survey data and author's calculations in 2022.

Table 3. Results of Cronbach's alpha test of factors in the research model.

No.	Factor/dependent variable	Cronbach's alpha coefficient	Number of variables
1	Technology (CN)	0.689	3
2	Resources of the business (NL)	0.646	3
3	Business culture (VH)	0.639	4

Continued

4	Business policies (CS)	0.659	7
5	Digital infrastructure (HTS)	0.693	6
6	Government policies (CSN)	0.750	5
8	Digital transformation capability (KCDS)	0.761	5

Source: Survey data and author's calculations in 2022.

The 28 variables included in the EFA factor analysis are shown in **Table 3**.

3.3. Exploring Factors Analysis (EFA)

After removing 5 observed variables, 28 observed variables were included in the EFA analysis. EFA analysis results in extracted variance of 61.557%, % (>50%); sig 0.000 and KMO of 0.762 (>50%) should be satisfactory. Thus, with all the results obtained from Cronbach's alpha reliability and the above EFA exploratory factor analysis, the scale of research concepts is satisfactory in terms of value and reliability; 28 observed variables included in the analysis met the EFA analysis criteria (satisfactory), no variables were excluded at this stage. The detailed analysis results are presented in **Table 4**.

Table 4. The analysis results of the components affecting Digital transformation capability.

Variable	Factor loading of the component factors					
	CN	CS	NL	VH	HTS	CSN
CN1	0.938					
CN3	0.934					
CN2	0.906					
CS4		0.851				
CS3		0.825				
CS1		0.808				
CS2		0.801				
CS5		0.799				
CS6		0.793				
CS7		0.791				
NL4			0.917			
NL3			0.907			
NL2			0.901			
VH2				0.809		
VH1				0.861		
VH4				0.795		

Continued

VH5	0.797	
HTS1		0.756
HTS3		0.743
HTS4		0.754
HTS5		0.705
HTS6		0.705
HTS7		0.703
CSN1		0.883
CSN2		0.853
CSN4		0.807
CSN3		0.806
CSN5		0.801

Source: Survey data and author's calculations in 2022.

3.4. Correlation Analysis

The results of the correlation analysis shown in **Table 5** show that the sig of Pearson's t-test between the six independent variables CN, CS, NL, VH, HTS, and CSN with the dependent variable KCDS is less than 0.05. Thus, there is a linear relationship between these independent variables and the dependent variable. Considering the correlation between the independent variables, we can see that the absolute value of the correlation coefficient is less than 0.7, so the possibility of multicollinearity between the independent variables is low (Dormann et al., 2013).

Table 5. Pearson correlation analysis results.

		KCDS	CN	CS	NL	VH	HTS	CSN
KCDS	Pearson correlation	1	0.314**	0.008	0.345**	0.341**	0.315**	0.316**
	Sig.		0.000	0.016	0.000	0.000	0.000	0.000
	N	500	500	500	500	500	500	500
CN	Pearson correlation	0.314**	1	0.144*	0.336**	0.378**	0.346**	0.124*
	Sig.	0.000		0.042	0.000	0.000	0.000	0.000
	N	500	500	500	500	500	500	500
CS	Pearson correlation	-0.008	0.144*	1	0.317**	0.164*	0.125	0.333*
	Sig.	0.916	0.042		0.000	0.020	0.078	0.000
	N	500	500	500	500	500	500	500
NL	Pearson correlation	0.345**	0.336**	0.317**	1	0.539**	0.433**	0.402*
	Sig.	0.000	0.000	0.000		0.000	0.000	0.000

Continued

	N	500	500	500	500	500	500	500
VH	Pearson correlation	0.341**	0.378**	0.164*	0.539**	1	0.603**	0.547**
	Sig.	0.000	0.000	0.000	0.000		0.000	0.000
	N	500	500	500	500	500	500	500
HTS	Pearson correlation	0.315**	0.346**	0.125	0.433**	0.603**	1	0.357*
	Sig.	0.000	0.000	0.008	0.000	0.000		0.000
	N	500	500	500	500	500	500	500
CSN	Pearson correlation	0.316**	0.124*	0.333*	0.402*	0.547**	0.357*	1
	Sig.	0.000	0.000	0.000	0.000	0.000	0.000	
	N	500	500	500	500	500	500	500

Significance level: $P \leq 0.05$ (**); $0.05 < P \leq 0.10$ (*); Sig > 0.1 (ns): There is no statistically significant. Source: Survey data and author's calculations in 2022.

3.5. Regression Analysis

The results of the regression analysis shown in **Table 5** show that the model is consistent with the significance level of 0.05; The adjusted R^2 coefficient = 0.575 means that there is about 57.5% chance of digital conversion explained by 6 independent variables. The F-test of the model's fit shows the sig value is very small (sig. = 0.000), so the regression model is suitable. Sig significance test results. of the independent variables shows the Sig value. very small and <0.05, so these variables are statistically significant. We see that the variance exaggeration coefficient VIF of all variables is less than 2 (the highest is 1.891), so the phenomenon of multicollinearity does not affect the explanatory results of the model.

The results of the OLS regression model (**Table 6**) show that all six components have a positive impact on the businesses' ability to transform digitally, of which Resources of the business is the largest (0.393), Technology (0.344), Business culture (0.180), Digital infrastructure (0.153), Government policies (0.117), and Business policies (0.060).

The overall regression model is rewritten as follows:

$$\text{KCDS} = 0.612 + 0.393\text{NL} + 0.344\text{CN} + 0.180\text{VH} \\ + 0.153\text{HTS} + 0.117\text{CSN} + 0.06\text{CS}$$

Table 6. Results of regression analysis in SPSS.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.577 ^a	0.581	0.575	0.4118

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.401	6	3.066	18.524	0.000a

Continued

	Residual	20.118	493	0.040				
	Residual	38.519	499					
Coefficients^a								
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
	Constant	0.612	0.174		3.52	0.000		
1	CN	0.344	0.023	0.118	14.44	0.000	0.297	1.226
	CS	0.060	0.027	0.129	2.23	0.026	0.007	1.114
	NL	0.393	0.039	0.116	9.93	0.000	0.315	1.590
	VH	0.180	0.034	0.141	5.27	0.000	0.113	1.891
	HTS	0.153	0.024	0.355	6.32	0.000	0.105	1.644
	CSN	0.117	0.017	0.329	6.63	0.000	0.082	1.329

Source: Survey data and author's calculations in 2022.

4. Conclusion and Management Implications

Research results from factors influencing the digital transformation capability of businesses in Quang Binh province with a proposed research model of 6 influencing factors and 33 observed variables. After analysis, the reliability evaluation of the measurement scale resulted in the elimination of 5 observed variables, leaving 28 variables for further analysis, which met the requirements of the exploratory factor analysis (EFA) standard without any variables being eliminated. The results of the multiple regression analysis identified 6 factors influencing the digital transformation capability of businesses in Quang Binh province, including Business Resources, Technology, Business Culture, Digital Infrastructure, Government Policies, and Business Policies. Research results on the factors affecting the digital transformation capability of businesses in Quang Binh province were conducted using a proposed research model. Results of the research on factors influencing the digital transformation capability of businesses in Quang Binh province using a research model proposed 6 factors with 33 observed variables. After analysis, the reliability assessment of the measurement scale resulted in the removal of 5 observed variables, leaving 28 variables that met the requirements for exploratory factor analysis (EFA) without any exclusion. The results of multivariate regression analysis identified 6 factors influencing the digital transformation capability of businesses in Quang Binh province, namely Business Resources, Technology, Business Culture, Digital Infrastructure, Government Policies, and Business Policies. Among these, Business Resources had the greatest impact on the digital transformation capability of businesses, followed by Technology, and Business Strategy had the least impact. The hypothesis testing of the model confirmed that the factors: Business Resources, Technology, Business Culture, Digital Infrastructure, Government Pol-

icies, and Business Policies had a positive impact on the digital transformation capability of businesses in Quang Binh province.

Therefore, the research results provide an important basis for further research and development of theories on factors influencing the digital transformation capability of businesses. Based on the analysis results, to enhance and accelerate the digital transformation capability of businesses in Quang Binh province, it is necessary for businesses to ensure resources such as human resources, finance, information infrastructure, communication, market sensing and opportunity capturing; improve technological capacity through the adoption of new technologies such as AI, virtual reality, 3D printing, Internet of Things (IoT), or develop technologies that are suitable for the business direction and operations; build a digital business culture that connects employees, changes the internal vision and operations of the company to align with the digital age, create associations dedicated to digital transformation and continuously encourage employees to enhance their “digital mindset” and learn new technologies; develop a strategy with a digital transformation vision, improve readiness for digital transformation, and ensure that business policies on digital transformation development are aligned with trends and regulations. Additionally, at the state level, the Quang Binh provincial government and relevant state agencies need to develop information technology infrastructure, expand internet access, improve the quality of public services, digitize and share data and information. At the same time, there should be strategies to create a legal and policy environment that is supportive, consistent, and favorable for digital transformation in businesses, as well as policies for telecommunications infrastructure development; and enhance cybersecurity environment.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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