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## **The Impact of the Digital Economy on Sustainable Development: Case Studies in Small and Medium Enterprises in Hanoi**

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### **Abstract**

Vietnam has been continuously looking for fresh inspiration to thrive in recent years. Proactively pursuing digital and e-commerce potential for economic growth is one of the guiding principles. Businesses and the government now have a greater interest in digital due to the Covid-19 pandemic. Particularly for small and medium-sized businesses, which are constrained by internal capacity, low product and service competitiveness, trouble obtaining funding, and insufficient managerial expertise. In this

context, the problem is that small and medium-sized enterprises, with their inherent flexibility, need to develop sustainably. The article uses secondary and primary data with 65 small and medium-sized enterprises in Hanoi to study the impact of the digital economy on sustainable development. The research results are the basis for the author to propose solutions to promote digital economic development to promote sustainable development in small and medium-sized enterprises in Hanoi.

**Keywords:** Digital Economic, Sustainable Development, Small and Medium-Sized Enterprises

### **1. Introduction**

The world is entering an unprecedented revolution in history - the Fourth Industrial Revolution with the strong development of digital technology. Therefore, the digital economy is becoming the most important feature and trend of economic and technological development today. Currently, small and medium-sized businesses are facing big challenges from the process of integration and digital transformation, along with difficulties from the complicated situation of the global Covid-19 pandemic. The digital economy has a significant impact on production and business activities of enterprises. The expansion and transformation of the Vietnamese economy in recent years has been facilitated by the small and medium-sized firm sector, which is a significant player in the private economic sector. The ability of small and medium-sized businesses to connect, collaborate, and join associations of other small and medium-sized businesses is still restricted. Small and medium-sized businesses also face cash issues and have a poor capacity for self-financing. As a result, small and medium-sized enterprises must implement digital transformation and advance digital economic development in order to progress towards sustainable development.

### **2. Theoretical**

#### ***Digital economy***

The program "G20 Digital Economy Cooperation and Development Initiative" of the 2016 G20 Hangzhou Summit defines: "Digital economy refers to economic activities that effectively use technology information and communication (ICT) as the main driving force to improve efficiency and optimize economic structure. Digital knowledge and digital information are the main means of bringing efficiency to the economy".

Digital economy is a concept that appears after agricultural economics and industrial economics. This concept is simply understood as an economy that operates mainly based on digital technology, especially electronic transactions on the internet. According to Oxford's digital economy collaborative group, digital economy is "an economy that operates primarily on digital technology, especially electronic transactions conducted via the internet".

In Vietnam, at the Vietnam Private Economic Forum in 2019, digital economy is understood as all economic activities based on digital platforms, and digital economic development is the use of digital technology and data to create new business models. Thus, it can be understood that the digital economy is an economy that uses digitized knowledge and information to guide and

improve resource allocation and productivity, bringing high-quality economic growth.

As per the Prime Minister's Decision No. 411/QĐ-TTg dated March 31, 2022, the National Strategy for developing the digital economy and digital society to 2025, with a vision to 2030, defines the digital economy as an economic activity that primarily uses digital technology and data as input, utilizes the digital environment as its primary operating space, leverages information and telecommunications technology to boost labor productivity, innovates business models, and optimizes economic structure. Three parts make up the digital economy: (1) ICT digital economy is the information technology industry and telecommunications services; (2) Platform digital economy is the economic activity of digital platforms, online systems connecting supply and demand and online services; (3) Sectoral digital economy is digital economic activities in industries and fields.

**Sustainable development**

The World Commission on the Environment (WCED), now the Brundtland Commission, defines: "Sustainable development is development that meets the needs of the present generation without compromising the ability to meet their own needs." of future generations" (WCED, 1987). According to Article 3, Vietnam's 2014 Law on Environmental Protection: "Sustainable development is development that meets the needs of the present generation without harming the ability of future generations to meet those needs on the basis of a close and harmonious combination of growth economy, ensuring social progress and environmental protectio". In the context of many new challenges such as the decline of natural resources, environmental degradation and especially climate change, achieving sustainable development is becoming more and more difficult.

According to Rojek Nowosielska's (2015) theory of the triple core sustainability, a business can develop sustainably if it simultaneously ensures the 3Ps (profit, people, and planet) when evaluating its performance. This includes developing the business's revenue and profit as well as its society and environment. As a result, evaluating a company's success requires more than just looking at its bottom line; instead, companies must consider how its long-term success and expansion will benefit society, the environment, and the community in general. Therefore, in order to implement the 3P theory of sustainable development for small and medium-sized businesses, the following must be ensured: (i) Economic efficiency is measured using indicators such sales revenue and service provision, ROA, and ROE; (ii) The following metrics are used to assess social efficiency: worker wages, submit a budget, guarantee worker benefits, etc. (iii) The following standards are used to evaluate environmental efficiency: Clean components; clean exhaust gas; energy consumption...

**3. Research methods**

From the research overview, the author proposes a research model with the dependent variable being "sustainable development" - SD. And the dependent variable is "sustainable development" measured by the variables: Economic efficiency - SD1, Social efficiency - SD2, Environmental efficiency - SD3, and the independent

variable is "economic digital" – DE with scales: Contribution of digital economy to local GRDP – DE1, Investment of the Central Government in general, local government in accordance with the requirements and goals of local digital economic development Locality – DE2, Digital capacity of businesses – DE3, Production and business activities consistent with local digital economic development goals – DE4.

**Qualitative research methods**

The author uses a combination of qualitative research methods and quantitative research methods. Qualitative methods are used to discuss the indicators used to measure the impact of the digital economy on sustainable development. To evaluate the level of influence, the author uses 5-level Likert scale to answer the statements in the questionnaire.

**Quantitative research methods**

*Collect data*

According to Hair *et al.*, (1998), the smallest sample size must be 50, preferably 100 and the ratio of observations/measured variables is 5/1, so the author distributed 70 survey questionnaires to small and medium-sized enterprises in the world. Hanoi area. The results were 65 valid surveys.

*Data manipulation*

The following step involves analyzing survey data in order to weed out survey forms that aren't acceptable since the responses are inconsistent or leave blanks. There were 65 survey questionnaires that were included in the data analysis. The primary analytical approaches for the questionnaires used in the study include regression analysis, EFA testing, scale testing, and descriptive statistics. The surveys are input and processed using SPSS26 software. Lastly, there is the paper presentation and the presenting of study findings.

**4. Research results**

After conducting 70 surveys, the author received 65 valid votes. The author conducted data processing and data analysis. The initial descriptive results are obtained:

**Table 1:** Describe general information of the research sample

		Frequency	Rate (%)
Gender	Male	37	56.92
	Female	28	43.08
Age	under 40 years old	28	43.08
	From 41 to 59 years old	21	32.31
	Up 60 years old	16	24.62
Degree of academia	Graduated from high school	0	0.00
	University	25	38.46
	Master's degree/PhD	40	61.54

Source: Author's calculations

*Cronbach's Alpha test*

All Cronbach's alpha coefficients of the variables were ≥ 0.6, thus meeting the requirements to be included in factor analysis. At the same time, the total correlation coefficients of the observed variables all meet the requirement of ≥ 0.3, ensuring that the given scales can be trusted in a statistically significant way.

**Table 2: Reliability Statistics**

	Scale Mean if Item deleted	Scale Variance if Item deleted	Corrected Item – Tota Correlation	Cronbach's Alpha if Item deleted
Cronbach's Alpha = 0.842				
DE1	11.206	7.318	.742	.737
DE2	11.014	8.462	.624	.828
DE3	11.407	8.015	.768	.821
DE4	11.726	7.859	.721	.802
Cronbach's Alpha=0.828				
SD1	9.093	3.450	.763	.813
SD2	9.536	2.968	.817	.825
SD3	9.362	3.821	.805	.798

Source: Author's calculations

The results of regression analysis show that the variables measuring the independent variable "digital economy" all have a positive impact on sustainable development. This is the basis for small and medium-sized enterprises in Hanoi to propose solutions to promote sustainable development.

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*EFA exploratory factor analysis*

The results of testing the data with KMO = 0.802 (> 0.5), Sig of Bartlett's Test is 0.000, smaller than 0.05, showing that these observations are correlated with each other and completely consistent with factor analysis. The factor loadings of the observed variables are all > 0.5, the total variance extracted is 74.52% (> 50%) and the Eigenvalue coefficient = 1.462 (> 1). These tests were warranted for exploratory factor analysis.

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**Table 3: Rotated Component Matrixa**

KMO	0.802
Sig.	0
Eigenvalue	1.462
Cumulative %	74.52

Source: Results compiled

Thus, all the scales selected for the variables in the model meet the requirements and can be used in subsequent analyses.

*Results of regression analysis*

Results of regression analysis of the model measuring the influence of accountant quality on the quality of information on financial reports: Value of testing the appropriateness of the sig. model = 0.000 < 0.05 shows that the variables in the model can explain the change in the dependent variable.

**Table 4. Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistic		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	1.942	.319	10.381	.000			
	DE1	.461	.047	.374	9.809	.000	.893	1.120
	DE2	.352	.028	.271	7.139	.001	.831	1.180
	DE3	.401	.041	.210	6.561	.000	.793	1.056
	DE4	.325	.036	.283	7.037	.000	.785	1.142

a. Dependent Variable: SD

Source: Author's calculations

The linear regression model shows the impact of factors affecting the SD

$$SD = 1.942 + 0.461 * DE1 + 0.352 * DE2 + 0.401 * DE3 + 0.325 * DE4$$

**5. Conclusion**

Recognizing the trend and role of the digital economy, most developed economies in the world have launched digital technology development strategies associated with economic growth. Research results also show that the digital economy impacts the sustainable development of small and medium-sized enterprises in Hanoi. To achieve the goal of sustainable development, small and medium-sized enterprises in Hanoi need to strengthen digital economic

development. From the research results, the author proposes some solutions:

1. The state needs to have specific policies to take advantage of opportunities from the Industrial Revolution 4.0 to develop the digital economy.
2. Support small and medium-sized enterprises (SMEs) to access capital through digital financial solutions such as: Applying technology to the financial sector to provide online lending and payment solutions electronics, financial management,... for SMEs
3. Investment in information technology and digital economy, especially digital infrastructure, digital transformation, smart connection, and information portal construction; training and remuneration for information technology staff... Investment from many

sources, including state budget sources, sources from private businesses, and foreign investment sources.

4. Improve economic management level in digital economic conditions. It is necessary to expand propaganda about the role and positive impact of the digital economy.

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