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Factors affecting green economic development in Vietnamese textile and garment enterprises

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Abstract
The manufacturing sector in general and the textile sector in particular will see economic development in the period 2021–2030 leaning toward green development for sustainability, according to the 10-year socio-economic development strategy, which is centered around "dynamic, rapid, sustainable and independent economic development" and "harmonious settlement of the relationship between economic development and environmental protection" The study uses quantitative research methodologies on 210 survey questionnaires to examine the factors influencing the growth of green economy in Vietnamese textile and apparel enterprises. The findings of the study indicate that the growth of green economy in Vietnamese textile and apparel companies is influenced by three elements. The author offers suggestions for improving green economic growth in Vietnamese textile and apparel companies based on the findings of the research.

Keywords: Green economy, and green economic development, Vietnamese textile and apparel businesses

1. Introduction

In which a number of industries are internationally competitive and deeply involved in the global value chain, increasing pressure on the environment and natural resources is increasing. Compared to many other industries and fields, standards applied to the textile and garment industry are considered more complex, challenging and significant, covering all textile and garment products and are legalized under form of minimum, mandatory legal requirements, not just recommendations. In addition, the standards, measures and regulations of the EU Green Deal affect many stages in the production chain, from design to raw materials, from production, farming to transportation, from use. Used to repair, from disposal to recycling... but not just applied to the final product. Therefore, green economic development is an inevitable trend, both ensuring the goal of economic modernization, sustainable environmental development and enhancing the ability to respond to climate change. The textile industry is also one of the industries that need to strengthen green economic development.

2. Theoretical background and literature review

2.1 Literature review

Pearce D, Markandya A, Barbier EB introduced the concept of Green Economy for the first time in their research on the meaning of sustainable development and identifying the impact from the environment. The study also proposes framework programs for the sustainable progress of humanity in dormitory development. Burzyńska D, Jabłońska M, Dziuba R. (2018) [1] Research on conditions and opportunities for green economic development in the textile industry in Poland. The article conducts a survey of 56 Polish textile and garment enterprises. The results show that the Polish textile industry is interested in all types of eco-innovation, focusing on environmental management systems, and solutions to enhance green economic development. Gordana Kokeza, Sonja Josipović1, examines the application of green economy ideas, especially in the field of textile industry. The article argues that to successfully implement a green economy, there needs to be state coordination in promulgating green development policies and targets. On the other hand, businesses also need to identify goals and develop plans to mobilize resources to develop a green economy.

Researching conditions and factors to promote green economic development, some researchers such as Cainelli, G.; Mazzanti, M.; Zoboli, R. (2011) [2], Han, J.; Lan, Q. (2012) [4], Chen, Chaofan, Jing Han, and Peilei Fan. (2016) [3] have introduced the factors (1) Technological innovation, (2) State policy, (3) Business administrators' perceptions, as factors affecting green economic development. These are also the factors that the author uses to research in this article.

2.2 Theoretical background

Green economic concept

The United Nations Environment Program (UNEP) introduces the concept of KTX as an economy that improves the quality of human life and social assets as well as focuses on preventing environmental dangers and resource scarcity. The dormitory has low emissions, natural resources are exploited effectively, and there is no longer social injustice. In the green economy, increased income and jobs are generated from investments by the state and businesses that help reduce CO2 as well as other sources of environmental harm, optimize energy use and resources while preventing species from gradually decreasing in terms of individuals, species and ecological services (UNEP, 2011) [6].

During the June 2012 United Nations Summit on Sustainable Development in Rio de Janeiro, Brazil (Rio +20), the term "KTX" is used in relation to production and consumption activities. Every action linked to the term "green" conveys the idea of being "environmentally friendly," from creating a way of life (UNEP, 2012) [7].

A green economy is associated with low carbon emissions, resource efficiency, and social fairness. The green economy is propelled by greater investment in sectors that contribute to the preservation and development of Earth's natural capital, reduce ecological degradation, and mitigate environmental risks. These sectors include clean technologies, advanced waste management systems, advanced clean water supply systems, low-carbon transportation, renewable energy, energy-efficient home construction, and sustainable agriculture, forestry, and fisheries industries (UNEP, 2010). In particular, this investment needs to be supported by domestic policy reforms, international policies and efforts to build market infrastructure.

The ideas of a green economy, an economy that both satisfies the need for economic growth and solves environmental challenges, have been mentioned by many researchers quite early. In particular, most studies agree that the trend of green economic development will focus on three main pillars: Industry, agriculture and services. Researchers also affirm that the concept of "green economy" does not replace the concept of sustainability, but it is increasingly recognized as a suitable model, as a foundation for sustainable development. Sustainability is an important long-term goal, but greening the economy is the means to bring each country to the goal of sustainable development.

Theories related to green economic development

Theory of sustainable resource use

Theoretical content focuses on reducing waste from production through applying technical waste treatment measures, using high-performance technical machinery and promoting renewable energy production. Optimizing the production of goods to minimize negative impacts on the environment is necessary. Therefore, the awareness of managers in using sustainable resources affects the sustainable development of businesses.

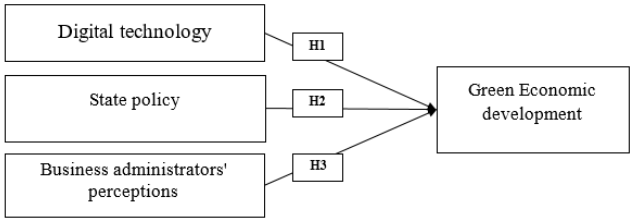
The circular economy theory

In order to maintain sustainability and optimize value from existing resources, the circular economy theory of production focuses on applying the ideas and practices of the circular economy to production operations. To maintain system sustainability and efficiency, it is critical that the concepts of the Theory of Circular Economy in manufacturing be used across the whole production supply chain, from product consumption to transportation and manufacture.

3. Research methods

Research model and hypothesis

From the research overview, the research team proposed the following research model:



Research model with 3 research hypotheses

H1: Factors belonging to the Digital technology have a positive impact on the Green Economic development at Vietnamese textile and garment enterprises.

H2: Factors belonging to the State policy have a positive impact on the Green Economic development at Vietnamese textile and garment enterprises.

H3: Factors belonging to the Business administrators' perceptions have a positive impact on the Green Economic development at Vietnamese textile and garment enterprises.

Qualitative research methods

The researcher employs a blend of qualitative and quantitative research techniques. The indicators used to assess the impact of various factors on the growth of the green economy are discussed using qualitative methodologies. The author responds to the statements in the questionnaire using a 5-point Likert scale in order to assess the degree of effect.

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 225 survey questionnaires to Vietnamese textile and garment enterprises. The results were 210 valid survey forms.

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 210 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. Finally, there is the

paper presentation and the presentation of study findings.

4. Results

Descriptive statistical results

After conducting 225 surveys, the author received 210 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	115	54.76%
	Female	95	45.24%
Age	under 40 years old	47	22.38%
	From 41 to 59 years old	98	46.67%
	Up 60 years old	65	30.95%
degree of academia	Graduated from high school	0	0.00%
	Master's degree/PhD	75	35.71%
	University	135	64.29%

***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

The Scale	Observed variables	Cronbach's Alpha
Digital technology	DT1, DT2, DT3, DT4, DT5	.768
State policy	SP1, SP2, SP3, SP4	.715
Business administrators' perceptions	BP1, BP2, BP3, BP4, BP5, BP6	.782
Green Economic development	GE1, GE 2, GE3	.761

***Source*:** Author's calculations

EFA exploratory factor analysis

The results of testing the data with KMO = 0.775 (> 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. Factor loading factor of the observed variables are all > 0.5, the total variance extracted is 78.52% (> 50%) and the Eigenvalue coefficient = 1.284 (> 1). These tests were warranted for exploratory factor analysis.

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

Table 3: Rotated Component Matrix

KMO	0.775
Sig.	0
Eigenvalue	1.284
Cumulative %	78.52

***Source*:** Author's calculations

Results of regression analysis

The results of the regression analysis of the model of factors affecting the intention to use T with 3 independent variables are as follows: Model fit test value sig. = 0.000 (< 0.05 shows that the variables in the model can explain the change in the dependent variable. From the above analysis, all 3 factors are significant (sig < 0.05) and the model is as follows:

Table 4: Coefficients[a]

Model		Beta coefficient is not standardized		Standardized Beta Coefficient	t	Sig.
		B	Std. Error	Beta		
	Blocking coefficient	3.146	.672		7.015	.000
	DT	.524	.163	.282	5.078	.000
	SP	.627	.140	.213	4.952	.000
	BP	.762	.235	.162	5.072	.001
a. Dependent Variable: GE						

***Source*:** Author's calculations

The linear regression model shows the impact of factors affecting the application of green accounting in businesses:

$$GE = 3.146 + 0.516 *DT + 0.627 *SP + 0.762*BP$$

Regression analysis and the standardized regression equation show that three factors are positively correlated with green economic development component BP has the biggest B = 0.762 among them, whereas component DT has the lowest coefficient B = 0.524.

5. Conclusion

To comprehensively develop a green economy, both achieving the goals of economic growth and sustainable business development, while ensuring social security and protecting the environment and ecosystem for the future, it is necessary to focus on to some of the following solutions:

The group makes recommendations on State policies

Consolidate and strengthen organizational capacity, mechanisms and policies to manage the animal husbandry and veterinary industry in a streamlined, professional and effective manner appropriate to the market economy, international integration and regulations. Violate the law.

Improve the State's policies and legal environment in green economic development. Environmental policies need to be adjusted to suit the new situation; The system of natural resources tax and environmental tax needs to be continuously researched to adjust and improve... It is necessary to properly assess the risks and impacts of environmental pollution and overexploitation of natural resources through mechanisms such as taxes, raising awareness of responsibility in reducing environmental pollution, restoring resources and ecosystems.

Strengthen the organization of scientific seminars and forums to exchange knowledge and experience on green economic development.

The group recommends applying digital technology in management and business activities

- Increase investment in science and technology, at the same time receive and transfer advanced technology suitable to Vietnamese conditions, promote research in green economic development fields such as reducing emissions carbon, developing renewable energy, environmentally friendly energy...
- The Government needs to invest more resources in the development and application of high technology and

energy development, especially in the fields of production and export to meet the requirements of the international market; ensure that Vietnam's export products do not violate regulations on environmental and climate pollution.
- Businesses increase investment in using digital machinery and equipment.

The group recommends to raise awareness
- Innovate thinking in awareness of environmental protection with methods, behavior, and sense of responsibility towards nature and the environment.
- Propagating and educating about the environment is an important job, from which to take practical actions in restoring ecosystems, preserving biodiversity, preventing climate change... in every country. people, contributing to improving the effectiveness of strategies, programs and action plans that the Government has proposed, moving towards a green economy, green and sustainable development.

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