



Received: 15-03-2024  
Accepted: 25-04-2024

ISSN: 2583-049X

## **Factors of Financial Decisions Affecting the Application of Green Accounting in Textile and Garment Enterprises Listed on Vietnam Stock Market**

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### **Abstract**

In the current environment, firms must innovate their manufacturing and business methods in a sustainable and green manner. Vietnam's textile and apparel sector is crucial to the country's economic and social advancement. On the other hand, the environmental effects of the industry's corporate practices are detrimental. Green accounting solutions are a useful way to get around this restriction and support the sustainable development aims of the apparel industry. The factors influencing the implementation of green accounting are measured in the study using a combination of quantitative and qualitative research approaches. The author uses SPSS26 software to handle data gathered from 52 textile and apparel companies that are

listed on the Vietnam stock market through random sampling.

The findings show that businesses that rely heavily on loan capital tend to have a negative relationship with the level of green accounting adoption. However, businesses that rely mainly on equity capital tend to have a higher level of green accounting adoption. In addition, the results of the estimated analysis show a positive relationship between focusing on green accounting applications. These findings suggest that policymakers should consider encouraging businesses to prioritize equity financing over debt financing to promote higher levels of green accounting adoption.

**Keywords:** Green Accounting, Factors Affecting the Application of Green Accounting, Textile and Garment Enterprises

### **1. Introduction**

In fact, most ecological harm is related to human behavior such as: resource depletion, pollution and severe climate change. Nowadays, most economies recognize the importance of the environment and environmental awareness is increasingly increasing. Therefore, stakeholders are very interested in preserving the ecological environment for future generations. Economies, countries and especially businesses have focused on adopting greener practices. In that context, green accounting is seen as the responsibility of businesses to stakeholders. Disclosure of green accounting information is essential to demonstrate ecological conservation and inform stakeholders about the environmental performance of businesses. Green accounting helps businesses anticipate environmental impacts or some factors that can cause negative impacts on the environment, thereby helping policymakers and business administrators have ways to prevent them. and deal with those impacts. Businesses that successfully use green accounting will see a decrease in the amount of fuel, energy, and raw materials used in their operations and manufacturing. Reducing the usage of these inputs also helps companies reduce pollution to the environment, maximize the use of resources, and gain a competitive edge by cutting manufacturing costs. As a result, as sustainable practices are among the most crucial components of sustainable development, corporations must increasingly accept responsibility for their effects on the environment.

The goal of the research was to comprehend and analyze how financial choices affect the adoption of green accounting at textile and apparel companies that are listed on the Vietnamese stock exchange.

### **2. Overview of research and theoretical foundation**

#### ***Theoretical foundation***

#### ***Agency theory***

Agency theory states that conflicts of interest arise between the principal and the agent as a result of knowledge asymmetry. By

drafting agreements and installing oversight mechanisms that serve both the principal's and the agent's interests, these conflicts may be avoided. Agency theory states that as an organization's environmental performance may impact its long-term financial sustainability, reputation, and social responsibility stance, stakeholders may be interested in learning more about it. However, management could not give environmental concerns priority and instead be more focused on short-term financial performance. By drawing attention to the potentially conflicting interests of management and stakeholders, agency theory can have an impact on green accounting disclosure by encouraging public businesses to report their environmental performance in a way that serves their interests as well as that of the public. Effective monitoring and control mechanisms can also promote green accounting disclosure and minimize potential conflicts of interest.

Agency theory further posits that ownership concentration can impact the amount of green accounting disclosure because it can reduce agency conflicts between stakeholders. When ownership is concentrated, stakeholders have more influence over the management of the business, which can lead to greater accountability and transparency. Additionally, agency theory posits that financial decisions may signal a firm's commitment to sustainability, which may increase pressure to disclose environmental information. Therefore, when a business chooses financing methods that align with its sustainability goals, such as issuing green bonds or securing investments from socially responsible investors, the business sends Strong signal to stakeholders about its dedication to social and environmental responsibility.

#### *Stakeholder theory*

According to stakeholder theory, businesses must operate in a way that benefits all stakeholders, including workers, customers, suppliers, communities, and the environment. Therefore, businesses must balance the interests of all parties, including stakeholders, employees, consumers and communities. Because they are more receptive to broader stakeholder needs, organizations with more inclusive ownership structures (including more stakeholders) may be more inclined to engage in sustainability activities, sustainability and publish information about their environmental impact. Stakeholder theory is linked to the ability of a business to engage in sustainable business practices because it can also be affected by financial decisions, such as equity and debt financing.

#### *Overview of research*

Lloyd John Pereira (2017) in a study said that green accounting is a modern and comprehensive accounting system that fully reflects the contents of assets, liabilities, investment capital, revenue sources and other benefits. national green environment spending. Vandna (2018) believes that green accounting includes estimating environmental costs, identifying liabilities and payable costs related to handling environmental issues. Implementing green accounting is considered an important factor in business (Betianu, 2008). In the future, businesses will face challenges and requirements from authorities on establishing and implementing business strategies that must comply with

requirements on accounting for environmental costs. related to the business activities of the enterprise. Accounting for environmental costs in the production and business cost system can bring certain benefits to organizations and businesses.

According to Duong Thi Thanh Hien (2016), implementing green accounting in Vietnam is a long-term process that calls for investment study and execution in order to provide sustainable growth. A component of "green growth," green accounting works to maintain social and environmental resources for development "for people, by people." Nguyen Thi Hai Van (2018) asserts that green accounting is viewed as a path for development transformation and as a significant instrument pertaining to elements of the natural environment's impact on the economy. sustainable development, in the direction of creating Vietnam's desired green economy.

It is evident that a large number of researchers, both local and international, are interested in the subject of green accounting. Nonetheless, research on the contribution of green accounting to the growth of enterprises in particular and the economy as a whole is done from a variety of perspectives. Research on green accounting in Vietnam ends with publications that include the writers' personal thoughts and observations. The effect of financial decisions on adoption promotion has not been thoroughly studied. Applications of green accounting by Vietnamese firms.

### **3. Research methods**

Research sample of 52 textile and garment enterprises listed on the Vietnam stock market.

Based on the research of Ref. (2021) the econometric model selected to test the impact of financial decisions on the application of green accounting by Vietnamese construction enterprises is:

Overall regression model:

$$GAD_i = \beta_0 + \beta_1 OC_i + \beta_2 EF_i + \beta_3 DF_i + \beta_4 SIZE_i + \beta_5 TIME_i + \beta_6 PR_i + \varepsilon_i$$

In the model, the dependent variables disclosing green accounting information are coded as GAD, the independent variables include: OC represents the equity coefficient (Equity concentration level), EF represents equity capital, DF represents liability capital, OC represents equity ratio, SIZE represents company size, PR represents profitability, TIME represents business time.

The article runs the model using SPSS 26 software and uses the least squares (OLS) method to determine the regression coefficient  $\beta_i$ . Based on the results obtained when running the program, we will write an equation for the impact of financial decisions on promoting the application of green accounting in businesses. Then test the model's suitability, which means testing  $\beta_i$  to know whether the independent variable can explain the dependent variable or not. Evaluate the model's suitability through the adjusted coefficient of determination  $R^2$  (Adjusted R Square) to determine the model's ability to explain in practice.

The independent variables are coded and determined as follows:

**Table 1:** Independent variables in the model

Variable	Symbol	Research used	Hypotheses
1. Equity ratio	OC	Tsalis & etc (2020);H. Shalhoob& etc (2020); D. Sun & etc (2019)	H1: Favorable (+)
2. Equity	EF	Z. Feng &etc (2021); M. Du & etc (2022)	H2: Favorable (+)
3. Capital source of debt payable	DF	H. Al Amosh & etc (2022); K. Wen & etc (2023); A.M. Gerged, (2021); S.Chen & etc (2021)	H3: Opposite direction (- )
4. Size	SIZE	Majumdar (1997); Hall & Weiss (1967); Gleason & etc (2000); Wu & Chua (2009); Uadiale (2010); Chen, Hou & Lee (2012); Pouraghajan &Malekian (2012); Nguyen & etc (2019); Yang & Chen (2009); Prasetyantoko & Parmono (2008); Hardwick (1997)	H4: Favorable (+)
5. Time	TIME	Easterbrook & Fischel, (1999); Kipesha (2013)	H5: Favorable (+)
6. Profitability	PR	Zeitun và Tian (2007); Pouraghajan & Malekian (2012)	H6: Favorable (+)

Source: Author's survey

**4. Research results**

*Descriptive statistical analysis*

**Table 2:** Descriptive statistics of variables in the model

	N	Min value	Max value	Medium	Standard deviation
GAD	104	-.3269	.4742	.0296	.1418
OC	104	.0680	1.879	4.057	5.529
EF	104	.0183	6.473	.7203	.8430
DF	104	-1.294	.9135	.6007	.365
SIZE	104	23.6150	32.20036	26.487	1.59037
TIME	104	0	54	12.68	9.277
PR	104	.00581	.96983	.4760	.269

Source: A compilation of SPSS 26 data

The authors used SPSS26 to perform descriptive statistics on the data set they had gathered from 52 listed clothing companies, total 104 observations. The findings are shown in Table 2.

- The standard deviation of return on business capital (GAD) is 0.1418, and its average value is 0.0296. The aforementioned findings demonstrate that the amount of green accounting information disclosure by textile and apparel companies is low, with the lowest value being - 0.3269 and the highest being 0.4742.
- The equity coefficient (OC) has a standard deviation of 5.529 and an average value of 4.057. Large textile businesses must pay off their loan capital, as shown by the index's larger than one.
- Equity (EF) has an average value of 0.7203 with a standard deviation of 0.8430; where the smallest value is 0.183 and the highest is 6.473. This result shows that the equity capital of textile and garment enterprises is low.
- Liability capital (DF) of textile enterprises is at 0.6001 (60.01%) with a standard deviation of 0.365. This coefficient shows that of the total assets of the enterprise, 60.01% is loan capital. This is a relatively high coefficient in the capital structure.
- Enterprise size (SIZE) is measured by the logarithm of total assets, with an average value of 26,487, equivalent to about 6,200 billion VND. Because the business characteristic of the textile industry is to invest heavily

in facilities, most textile enterprises have quite large-scale business capital.

- The average business duration (TIME) of textile and garment enterprises is 12.68 years, of which the longest business duration is 54 years. Thus, in the research sample, the selected textile and garment enterprises are mostly enterprises that have been established for many years, have been in business for a long time, and have experience in textile and garment activities.
- Profitability (PR) has an average value of 0.4760 (47.60%), standard deviation is 0.269, this is a suitable result for businesses with textile and garment activities.

**Regression analysis**

To test the suitability of the regression model, we hypothesize H0: R2 = 0. The F test is used to test this hypothesis.

*Inspection results:*

According to Table ANOVA gives us the F-test results to evaluate the appropriateness hypothesis of the regression model. The F test sig value is 0.000 < 0.05, rejecting the hypothesis H0, meaning R2 ≠ 0 in a statistically significant way, the regression model is appropriate.

*- Evaluate the suitability of the model*

**Table 3:** ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.536	6	.612	43.659	.000 <sup>b</sup>
a. Dependent Variable: GAD					
b. Predictors: (Constant): OC, EF, DF, SIZE, TIME, PR					

Source: A compilation of SPSS 26 data

With an R2 value of 0.431, the regression analysis's independent variables account for 43.1% of the dependent variable's variance, with random errors and factors outside the model accounting for the remaining portion. The statistical value DurbinWatson = 0.799, which falls between 0 and 4, indicates that the first-order serial autocorrelation phenomenon is absent.

**Table 4:** Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.638 <sup>a</sup>	.431	.436	.1218	.799
a. Predictors: (Constant): OC, EF, DF, SIZE, TIME, PR					
b. Dependent Variable: GAD					

Source: A compilation of SPSS 26 data

**Table 5:** Coefficients<sup>a</sup>

Mode;	Beta coefficient is not standardized		Standardized regression coefficient	t	Sig.	Multicollinearity	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-2.164	.424		-6.112	.000		
OC	.054	.008	.281	4.282	.000	.377	2.652
EF	.751	.006	.472	10.845	.000	.855	1.170
DF	.768	.012	.486	7.508	.000	.387	2.585
SIZE	.745	.128	.296	6.298	.000	.732	1.367
TIME	.016	.011	.099	2.366	.004	.922	1.084
PR	-.006	.006	-.017	-3.13	.065	.547	1.830

Source: A compilation of SPSS 26 data

The results in Table 5 show that the PR variable has a sig value of 0.755, greater than 0.05, so this variable is not meaningful in the regression model, or in other words, has no impact on the dependent variable GAD. The remaining variables OC; EF; DF; SIZE; TIME all have t-test sig less than 0.05, so these variables are all statistically significant, affecting the GAD variable. The regression coefficients of these variables all have positive signs, so they have a positive impact on the GAD variable. Also, according to the results in Table 5, the variance magnification coefficient VIF of the independent variables is almost lower than 2, only the VIF coefficient of the variable DF; OC higher than 2 is not significant. The results show no violation of the multicollinearity assumption.

From the results of the regression coefficient, a standardized regression equation can be built as follows:

- *Regression analysis*

To evaluate whether the regression coefficient of each independent variable is significant in the model or not, based on the t (student) test with hypothesis H0. The inspection results are as follows:

$$GAD = -2.164 + 0,054*OC + 0,751*EF + 0,768*DF + 0,745*SIZE + 0,016*TIME$$

The strongest to weakest independent variable influences the GAD variable in the following sequence, according to the value of the standardized regression coefficient Beta: DF (0.768) > EF (0.751) > SIZE (0.745) > OC (0.054) > TIME (0.016). All of the aforementioned factors have an equal impact on the GAD variable. This finding contradicts hypothesis H3 in the theoretical research model and is in line with hypotheses H1, H2, H4, and H5.

**Table 6:** Results of experimental analysis

Variable	Symbol	Hypotheses	Result
1. Equity ratio	OC	H1: Favorable (+)	H1: Favorable (+)
2. Equity	EF	H2: Favorable (+)	H2: Favorable (+)
3. Capital source of debt payable	DF	H3: Opposite direction (-)	Opposite direction (-)
4. Size	SIZE	H4: Favorable (+)	Favorable (+)
5. Time	TIME	H5: Favorable (+)	Favorable (+)
6. Profitability	PR	H6: Favorable (+)	No effect

Source: A compilation of SPSS 26 data

**5. Conclusion**

The research results have evaluated the factors affecting the promotion of green accounting application by textile and garment enterprises listed on the Vietnamese stock market, including: Level of equity concentration; Source of equity capital, owner's equity, company size, time in business have

a positive influence and liabilities have a negative influence. In today's new context, stakeholder theory emphasizes the commitment of business to consider the interests of all stakeholders and the potential benefits of balancing financial and social responsibilities. Therefore, a business's debt financing affects its ability to meet its long-term obligations to its stakeholders, including the announcement of environmental initiatives. Financing, high debt indicates that a business is highly leveraged, which can reduce financial flexibility and additionally increase the risk of default, leading to less spending and less disclosure of environmental impact. On the other hand, a business can balance its financial and social responsibilities and create long-term value for all stakeholders.

The results of our analysis confirm that debt financing is negatively associated with green accounting adoption and disclosure. Therefore, the first hypothesis is accepted. Therefore, our findings show that debt financing negatively affects green accounting disclosure. Studies show that businesses with high debt capital are less likely to disclose environmental information to avoid negative financial impacts.

To enhance the application of green accounting in businesses, the author proposes a number of solutions:

*For Businesses*

First of all, it is necessary to increase managers' awareness of the role of green accounting as well as awareness of environmental protection issues. On the other hand, administrators also need to raise awareness of environmental cost factors that are much smaller than the total costs incurred when they have to pay taxes, fees or fines from environmentally harmful acts. school.

Business administrators need to have more information about environmental costs arising in business contracts to make appropriate business investment decisions. Thereby, you can both seek profits from projects and avoid environmental-related fines.

The level of managers shows the difference in awareness of green accounting. Therefore, it is necessary to improve the level of managers. On the other hand, enhance the quality of accounting human resources. Currently, because green accounting is not popular in businesses, the business's accounting department has very few accountants with knowledge of environmental accounting or specialized environmental accountants. Therefore, in the coming time, businesses need to focus on training to improve the quality of accountants, while building an accounting department with capacity and experience in green accounting.

*For state management agencies:*

The state needs to widely propagate the benefits of environmental protection, thereby promoting environmental

protection activities of businesses. Businesses that protect the environment well will have a good image among the public and consumers of that company's products and services.

It is necessary to maintain and further popularize environmental-related awards for businesses such as: "green business award", green technology award, gold cup for environmental cause, Vietnam environmental award.

The state needs to improve the legal system on environmental protection and sanctions.

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