

Working Paper 2021.2.3.02 - Vol 2, No 3

# MÔ HÌNH KẾ TOÁN XANH TẠI CÁC DOANH NGHIỆP SẢN XUẤT TRÊN ĐỊA BÀN TỈNH THÁI NGUYÊN

Nguyễn Gia Khiêm<sup>1</sup>

Sinh viên K56 Kế toán kiểm toán - Khoa Kế toán kiểm toán Trường Đại học Ngoại thương, Hà Nội, Việt Nam

Lê Thành Công Giảng viên Khoa Kế toán kiểm toán Trường Đại học Ngoại thương, Hà Nội, Việt Nam

### Tóm tắt

Các Doanh nghiệp sản xuất trên thế giới đang hoạt động với xu hướng phát triển bền vững và Việt Nam cũng dần nắm bắt được xu thế chung. Hệ thống Kế toán xanh là một công cụ quan trọng để hiểu về vai trò của DNSX đối với nền kinh tế khi mà vấn đề môi trường được quan tâm mạnh mẽ. Ở một số địa phương, cụ thể là tại tỉnh Thái Nguyên, KTX vẫn chưa nhận được sự quan tâm trong cộng đồng doanh nghiệp và kế toán. Các DNSX, trên thực tế, đều phải tuân thủ những quy định về môi trường do Nhà nước ban hành. Tuy vậy, rất ít doanh nghiệp thực sự đưa kế toán vào một phần của chiến lược phát triển bền vững. Tác giả tiến hành nghiên cứu với mục đích tìm hiểu các nhân tố ảnh hưởng đến mức độ áp dụng KTX trong các DNSX trên địa bàn tỉnh Thái Nguyên bằng phương pháp nghiên cứu định lượng. Nghiên cứu sử dụng mô hình hồi quy tuyến tính đa biến để phân tích dữ liệu sơ cấp và đưa ra kết luận rằng Tiềm năng gia tăng quy mô doanh nghiệp, Nhận thức con người trong doanh nghiệp và Ưu đãi từ các bên liên quan có tác động thuận chiều đến mức độ áp dụng KTX trong các DNSX. Dựa vào kết quả nghiên cứu, tác giả đề xuất một số kiến nghị và giải pháp cho các DNSX, Nhà nước và các bên liên quan để nâng cao mức độ áp dụng KTX.

Từ khóa: Kế toán xanh, Doanh nghiệp sản xuất, Mức độ áp dụng.

## GREEN ACCOUNTING MODEL AT MANUFACTURING ENTERPRISES IN THAI NGUYEN PROVINCE

### Abstract

Manufacturing enterprises in the world are operating with the trend of sustainable development and Vietnam is also gradually grasping the general trend. The Green Accounting System is an important tool to understand the role of Manufacturing Enterprises in the economy when environmental issues are strongly concerned. In some localities, especially in Thai Nguyen province, Green Accounting has not yet received attention in the business and accounting communities. Manufacturing

<sup>&</sup>lt;sup>1</sup> Tác giả liên hệ, Email: nguyengiakhiem1999@gmail.com

enterprises, in fact, must comply with environmental regulations promulgated by the State. However, very few businesses actually include accounting as part of their sustainability strategy. The author conducts research with the aim of finding out the factors affecting the level of application of Green Accounting in manufacturing enterprises in Thai Nguyen province by quantitative research method. The study uses a multivariable linear regression model to analyze the primary data and concludes that the Potential to increase business size, People perception in the business and Incentives from stakeholders have positive impact on the level of application of Green Accounting in manufacturing enterprises. Based on the research results, the author proposes some recommendations and solutions for manufacturing enterprises, the State and other stakeholders to improve the level of application of Green Accounting.

Key words: Green Accounting, Manufacturing Enterprise, Level of application.

#### **1. Introduction**

Up to now, the environment and society have always been a concerning topic. The issue of social responsibility, including environmental protection, is an issue that should be put on top. Recognizing that problem, new branches of accounting have appeared such as Environmental Accounting, Social Accounting. When those factors are considered as part of accounting, this leads to a new accounting model that is broad and covers all relevant elements: **Green accounting**.

In Vietnam, environmental and social issues have long been concerned by the State and included in legal documents, regulations and circulars related to the impact of businesses on the environment, in many aspects, on the basis of encouraging economic development. Although there are many advantages over Traditional accounting, which has appeared in the world for a few years, in many localities in Vietnam, Green accounting has not received much attention in the business and accounting community.

Thai Nguyen province is a locality with an early industrial development compared to the northern provinces. Because of the industrial strength, production activities in Thai Nguyen greatly affect the quality of the local ecosystem. Like many other localities, the current Green accounting model has not been really interested in the production facilities in Thai Nguyen. Green accounting is a more developed model of Traditional accounting when more environmental and social factors are included and confirmed by studies around the world. So, maybe in Vietnam there are some reasons that make the manufacturing enterprises are hesitant to apply the Green accounting model.

Stemming from the above reasons, the author has studied the factors affecting the level of application of the Green Accounting model for manufacturing enterprises in Thai Nguyen province. The motivation for this study comes from the fact that in Vietnam there are not many studies directly related to the Green Accounting model. This study, therefore, adds to the literature on Green Accounting from the Vietnamese economic context.

#### 2. Literature review

#### 2.1. Theories of Green accounting

#### 2.1.1. Definition of Green accounting

There have been quite a few studies in the world to answer the question "What is Green accounting?". According to Moorthy *el al.* (2013), Green accounting is the identification, monitoring, analysis and reporting of cost information related to the environmental aspects of an

organization. Farouk *el al.*. (2012) argue that Green Accounting is an important tool for understanding aspects of the impact of the natural environment on the economy. According to research by Sudhamathi *el al.*. (2014), Green accounting is a form of accounting that tries to include environmental costs in the financial results of operations. Lako (2018) argues that green accounting is the process of recording, measuring value, summarizing, reporting and disclosing information about objects, transactions, events or impacts of business to society, the environment and the business itself in a set of consolidated accounting information reports useful to users in economic and non-economic decision making.

Opinions on the definition of Green Accounting are very diverse and there is not yet a precise and unified definition of this new accounting model. However, through studies, we can see that the definition of Lako (2018) is quite general and complete. In short, *Green Accounting is an accounting system for organizations in general and businesses in particular, in which the process of accounting practice integrates information related to the impact of businesses on the environment. environment and society, in order to serve the interests of both businesses and the community.* 

#### 2.1.2. Chareacteristics of Green accounting

The biggest difference of Green Accounting from traditional Business Accounting is the information used in accounting. According to Clause 8, Article 3 of the 2015 Accounting Law, "Accounting is the collection, processing, examination, analysis and provision of economic and financial information in the form of value, in kind and labor time". Thus, the information used in Traditional Accounting is only economic and financial information. Meanwhile, Green Accounting provides information and influences the decision of the board of management in both directions: benefits for the business and benefits for the community.

Besides, there is a view that Green Accounting is another name for Environmental Accounting, or a part of Environmental Accounting. In essence, Green Accounting is a new branch of science in accounting. Its true meaning and nature is also broader than Social and Environmental Accounting. According to Lako (2018), the concept of Green Accounting was born from the understanding of Environmental Accounting and Social Accounting. Green accounting is the integration of Financial Accounting, Environmental Accounting and Social Accounting in the accounting process to create complete, relevant and reliable accounting information, helping stakeholders beneficial in making decisions and assessing the sustainability of a business organization.

The author develops from the background theories in the book Green Accounting by Baltermus *el al.*. (2003), combined with the principles of Green Accounting by Lako (2018), Vietnamese and international accounting standards, relevant legal documents. The work of the Green Accountant includes the Recording, Processing, Analysis and Presentation of information. Information in Green Accounting, in addition to normal accounting information, also includes information such as: Capitalized environmental assets, Environmental and social investments, Potential environmental and social liabilities, Environmental fund environmental and social costs, environmental and social costs.





Source: Green accounting by Lako (2018)

#### 2.2. Previous studies

In the world, the Green Accounting model has been studied by many authors in many aspects for businesses. These studies were originally intended for developed economies, then the content was gradually introduced into the context of emerging and developing economies. The content of the research is mainly towards the effect of Green Accounting; application of Green Accounting in practice and awareness of Green Accounting in enterprises in each industry.

Through survey and analysis results of 120 people who are experts and students, Rahman *el al.*. (2020) affirmed that most people are aware of the great value that Green Accounting brings to sustainable development in Bangladesh and agree that applying Green Accounting is necessary essential for businesses. Thereby affirming the role of Green Accounting in using resources and ensuring sustainable environment.

Using a qualitative approach to the previous literature on ecotourism and sustainable development, author Farouk *el al.* (2012) stated that the sustainability literature lacks quantitative ways to make decisions of capital budgeting. From there, the study proposes that the Green Accounting model of Michael John Jones is a suitable model for the economies of developing countries.

Maama *el al.* (2019) surveyed the status of voluntary Green Accounting in some listed companies in Ghana. Through the combination of qualitative and quantitative methods, the study concludes that the level of application of Green Accounting is directly proportional to the company's level of impact on the environment. However, the information is still quite vague and mostly qualitative in nature. From there, the study recommends to organizations to consider and encourage businesses to apply the dormitory with awards.

In Vietnam, author Duong (2016) believes that Green Accounting is a comprehensive accounting system, a direction of transformation towards the development of a green economy. Applying green accounting is a long-term process that requires serious research and investment to create sustainable growth. Green accounting is a part of Green Growth, by people, for people, contributing to the stability of environmental and social resources for development.

Research by author Pham (2014) suggests that recording environmental losses is an essential need of accounting today. Thereby, the study provides the basic contents related to the revenues and expenditures related to the environment such as: environmental protection costs, environmental monitoring costs, waste collection costs, operating costs, waste treatment; proceeds from the sale of recycled products, allowances or bonuses for meeting environmental requirements.

#### 3. Hypotheses and Research methodology

#### 3.1. Hypotheses

On the basis of foreign studies, the author decided to use multivariable linear regression model as a research model. The dependent variable in the model is the level of application of Green Accounting with GRE coding including 3 observed variables. The independent variables include Scaling Potential with coding as SCAL (2 observed variables), Human perception in Manufacturing Enterprises with coding as PERC (4 observed variables) and Incentives from other variables. stakeholder with coding is INC (2 observed variables).

According to Tanc *el al.* (2015), businesses applying Environmental Accounting gain competitive advantages and the added value of the company also increases due to the concept of social responsibility. Author Mahdi (2019) asserts that the inclusion of internal environmental costs in the accounting system will help companies improve their environmental performance, enhance their image, and increase shareholder wealth. Riduwan *el al.* (2019) suggest that companies' concerns regarding economic sustainability have a positive influence on investor response.

# Hypothesis 1 (H1): The potential for business expansion has an effect on the level of Green accounting application of Manufacturing enterprises in Thai Nguyen province.

Research by Lee *el al.* (2018) confirms that the first way to strengthen Green Accounting practice is through employees' understanding and awareness of environmental and social issues. Yulianthi *et al.* (2019) assert that the implementation of Green Accounting depends greatly on the awareness of enterprises about environmental issues. Research by Nguyen (2021) shows that having the management board with accounting expertise will help maximize the ability to monitor the business and limit the errors arising, ensuring the quality of accounting.

# Hypothesis 2 (H2): Human perception has an influence on the level of application of Green Accounting in Manufacturing enterprises in Thai Nguyen province.

Research by ICAEW (2016) has confirmed that policies and institutions such as corporate income tax, education, affect the information and quality of information in financial statements, especially for companies. private company. Research by Md. Mominur Rahman *el al.* (2020) have shown that the majority of people support the application of Green Accounting as well as support the Government to change policies and orientations towards Green Accounting in enterprises.

Hypothesis 3 (H3): Incentives from stakeholders have an impact on the level of application of Green Accounting in Manufacturing enterprises in Thai Nguyen province.

#### 3.2. Research methodology

#### 3.2.1. Research design

The research design is presented in 4 steps: Research to clarify the general theory of the Green Accounting model; Research overview, thereby identifying research gaps and research directions; Quantitative research has built a research model based on collected research data; Evaluate results, identify problems, discuss and propose some solutions and recommendations to improve the level of application of Green Accounting.

#### 3.2.2. Data collection

The research sample was collected through a questionnaire. The survey is sent to individuals working in manufacturing enterprises in Thai Nguyen through channels such as sending directly via email, posting publicly on social networks, sending indirectly with help from relatives and friends. The scope of the study is the production enterprises in Thai Nguyen province, so the author will choose the votes marked as manufacturing enterprises in Thai Nguyen. For survey subjects, because the topic is related to accounting major and part of management, the author will survey subjects who are managers or accountants in enterprises.

#### 3.2.3. Data analysis

After collecting data, the author coded the variables, entered the data into SPSS 20 software and screened the data. Then, the quantitative research data will be analyzed through the following methods: descriptive statistics analysis, scale reliability testing, factor analysis, correlation coefficient analysis and regression analysis regulation.

#### 4. Results of data analysis

#### 4.1. Descriptive statistics

Through analyzing survey data from 240 valid responses, the author found that in the sample, there were 36.3% building material manufacturing enterprises, 31.2% furniture manufacturing enterprises, 12, 5% of garment enterprises, the remaining 20% belong to metallurgical enterprises. Regarding the size of enterprises, enterprises with 100 to 200 employees account for 50%, enterprises with less than 100 employees account for 33.8%, and enterprises with more than 200 employees account for 16.2%. For the surveyed people, statistics show that 13.3% are members of the management board, 34.6% are chief accountants and 52.1% are employees of the accounting department. According to work experience statistics, 12.1% of the participants have experience of more than 10 years, accounting for the lowest percentage. 46.6% of participants have less than 5 years of experience, accounting for the highest percentage, and the rest are people with 5 to 10 years of experience with 41.3%.

#### 4.2. Reliability statistics

The author uses Cronbach's Alpha analysis to test the reliability of the scale on Green Accounting and the factors affecting Green Accounting. The test results show that the scales meet the requirements of reliability.

Variables	Corrected Item-Total Correlation	Cronbach's Alpha if Item deleted	Cronbach's Alpha
GRE1	0,592	0,733	
GRE2	0,663	0,653	0,779
GRE3	0,599	0,719	
SCAL1	0,481	0,000	0.650
SCAL2	0,481	0,000	0,650
PERC1	0,574	0,600	
PERC2	0,534	0,627	0.712
PERC3	0,485	0,657	0,712
PERC4	0,404	0,704	
INC1	0,459	0,000	0.620
INC2	0,459	0,000	0,630

Table 1. Reliability statistics

Source: Calculation extracted from the SPSS software

The Cronbach's alpha if items deleted coefficients in the data are less than the overall Cronbach's Alpha coefficient. Therefore, all observed variables are accepted and will be used in the next factor analysis. The test results show that the Green Accounting scale has Cronbach's Alpha coefficient of 0.782 (greater than 0.6) and the total correlation coefficient of the observed variables in the scale is greater than 0.3. Thus, the green accounting scale is satisfactory. Therefore, we have 3 scales and 8 variables used for factor analysis.

#### 4.3. Factor analysis

Analysis of KMO coefficient for the Green Accounting scale and 3 scales of influencing factors gave the following results: KMO coefficient =  $0.616 (0.5 \le \text{KMO} \le 1)$ , meaning factor analysis is appropriate. fit; The Barlett test has Sig = 0.000 (Sig. < 0.05) which means that the observed variables are correlated with each other in the population.

Factor Loading factor > 0.5 that means the observed variable has good statistical significance and practical significance. Eigenvalue = 1.394 is greater than 1, so all observed

variables are kept in the analytical model. Total variance extracted =  $64.203\% \ge 50\%$  shows that the EFA model is suitable.

Variables	Factor 1	Factor 2	Factor 3
SCAL1		0,860	
SCAL2		0,852	
PERC1	0,806		
PERC2	0,776		
PERC3	0,715		
PERC4	0,620		
INC1			0,843
INC2			0,854

Source: Calculation extracted from the SPSS software

From the results of EFA analysis, the author identified a research model with the dependent variable GRE and 3 independent variables SCAL, PERC and INC. The regression model used in this study is:

#### GRE = $\beta$ 1 SCAL + $\beta$ 2 PERC + $\beta$ 3 INC + $\epsilon$

#### 4.4. Regression statistics

The test results show that the Sig value of the F test is 0.000 < 0.05, proving that the model is consistent with the actual data. With the change of significance level F (p-value < 1%), it is confirmed that the EFA model after transformation is suitable. The Durbin-Watson index has a value of d=1,413, which means that the variable factor groups have no autocorrelation (1 < d < 3) and ensure independence. The adjusted R2 coefficient is 0.493, the independent variables explaining 49.3% of the variation of the dependent variable is Green Accounting.

Model	R	R <sup>2</sup>	Adjuste d R <sup>2</sup>	F	Sig	Std. Error of the Estimate	Durbin - Watson
1	0,706 <sup>a</sup>	0,499	0,493	78,359	0,000 <sup>b</sup>	0,45583	1,413

 Table 3. Model Summary

a. Predictors: (Constant), SCAL, PERC, INC

b. Dependent Variable: GRE

Source: Calculation extracted from the SPSS software

The variance exaggeration factor VIF of both independent observed variables is less than 2, so multicollinearity does not occur. Therefore, all the factors of the potential to increase the size of the business, the factor of people's perception in the business and the factor of incentives for businesses of the stakeholders have an impact in the business model. Figure. The detailed regression model for this study is written as follow:

#### GRE = 0,458+ 0,234 SCAL + 0,335 PERC + 0,272 INC

Model	Unstandardized Coefficients	Standardized Coefficients	Sig.	VIF
(Constant)	0,458		0,032	
SCAL	0,234	0,270	0,000	1,009
PERC	0,335	0,396	0,000	1,008
INC	0,272	0,539	0,000	1,005

#### Table 4. Coefficients

Source: Calculation extracted from the SPSS software

#### 4.5. Discussion

From the results of SPSS analysis on the level of application of Green Accounting and the factors affecting the level of application of Green Accounting in manufacturing enterprises in Thai Nguyen province, the author draws three important meanings that the study has shown.

Manufacturing enterprises have not fully applied Green Accounting. Among the average values in the Scale of Green Accounting Applicability, none is less than 3. It proves that all manufacturing enterprises have applied at least one aspect of Green Accounting. It shows that businesses have not really cared about environmental impacts and included them as part of their development strategy. Managers have not integrated aspects related to the environment and society into a sustainable factor that businesses need to consider.

The survey results also show that there are influences from inside and outside the enterprise, on the level of application of Green Accounting. The research hypotheses are all tested, showing that accounting is affected by many factors. Specifically, if businesses feel that they are benefiting financially, they will increase the level of adoption of Green Accounting; when people's awareness such as knowledge, qualifications, community consciousness and skills are higher, enterprises will have enough confidence to apply a relatively new accounting model in Vietnam; if an enterprise takes actions that are of the nature for the environment and society, that business will be recognized and enjoy long-term benefits, thereby creating a motivation to develop accounting methods.

Finally, there exists a difference in the influence of factors on the level of application of Green Accounting. While potential factors for increasing scale and incentives from stakeholders have moderate influence, human perception has the greatest influence on the level of application of Green Accounting in manufacturing enterprises in Thai Nguyen. For the most important factor, human perception, research shows the importance of perception for a specific problem like accounting. That awareness includes many aspects such as knowledge, level, awareness of environmental protection and technology skills. All of these things, if businesses focus on improving and enhancing, the application of Green Accounting will become much more favorable.

#### 5. Recommendations and Conclusion

#### 5.1. Recommendations

#### 5.1.1. Recommendations for Manufacturing Enterprises

Based on the current situation of the application of Green Accounting in manufacturing enterprises in Thai Nguyen province, the author proposes some solutions to improve the efficiency of the application of Green Accounting.

*Firstly*, Raise awareness of all members of the enterprise about the urgency and benefits of the Green Accounting model. Impact on members of the enterprise, depending on the department and task, have awareness of the importance of accounting and the benefits of the Green Accounting model in business operations. Awareness firstly must be formed from the management board, then the accounting department staff. Because this is a new model in Vietnam, manufacturing enterprises also need popular propaganda from the State to make businesses more aware of Green Accounting in particular and community responsibility in general.

*Secondly*, Develop a process and plan for the application of Green Accounting in association with the Sustainable Development strategy. To apply Green Accounting in a synchronous and effective manner, enterprises need to build for themselves a suitable, specific, clear plan, associated with the business purpose of the enterprise. In addition, the direction of operation should also be widely disclosed to all employees. The implementation needs the consensus and coordination of all employees of the enterprise, not only the management board or the accounting department to make the work go smoothly, according to a certain process.

*Thirdly*, Training on knowledge and skills for the Management Board and the Accounting Department in the enterprise. This is not a simple job. Enterprises need to work with Vietnamese and foreign training organizations to organize really quality training sessions. Small and medium production enterprises can combine together in the training of accounting staff to save training costs. Businesses should share their experiences and lessons with other businesses to learn and develop together. For the Board of Directors, members also need to learn about the training content for the accounting department.

#### 5.1.2. Recommendations to State agencies and related parties

The research results show that the potential for scale increase and the incentives from stakeholders have a positive and negative influence on the level of application of Green Accounting in manufacturing enterprises in Thai Nguyen province.

*Firstly*, the Government needs to issue uniform guidelines for implementing environmental and social responsibility. Social responsibility is still considered a voluntary work on the part of businesses. Therefore, the Government needs to promulgate in a synchronous manner, clear regulations and guiding documents on the simultaneous implementation of the above responsibilities. At the same time, there are clear and public policies to encourage such as tax and fee incentives for manufacturing enterprises that perform well on environmental responsibilities and actively participate in social work.

*Secondly*, Supplement standards and regulations related to green accounting practice. In addition to activities to improve knowledge and skills, in order for Green Accounting to develop in the future, accountants need to be well-trained, fully qualified, ethical, environmentally and socially aware of Sustainable Development. Green accounting should be included in curricula for accounting and auditing majors at undergraduate and master's levels in order to build human resources to meet society's needs for sustainable development. closer to international practices.

#### FTU Working Paper Series, Vol. 2 No. 3 (09/2021) | 22

*Thirdly*, Raise public awareness about the responsibility of production enterprises to environmental and social issues. Agencies and departments in each locality need to regularly include environmental and social information in people's meetings. The State may periodically organize meetings between businesses and citizens. Through those exchanges, people can express their satisfaction and dissatisfaction with the enterprise, thereby reminding the production enterprise to self-regulate their behavior. In addition, by means of propaganda, agencies should encourage consumers to choose products from manufacturing enterprises with advanced production technology, actively participating in environmental protection and working as workers. social work.

#### 5.2. Conclusion

Green accounting is an accounting model that has been studied for many years by developed countries and then spread to emerging economies. However, this model is still quite new in Vietnam. Therefore, this study will contribute to the theoretical and actual research on Green Accounting in Vietnam and similar economies.

In theory, the author has pointed out the theoretical basis of Green Accounting in terms of definition, objectives and scope, the role of Green Accounting in manufacturing enterprises, the basic content of Green Accounting to the factors affecting the application of Green accounting.

Research results show that manufacturing enterprises in Thai Nguyen have consciously applied accounting measures in environmental and social work. However, the level of application is still low, lack of focus and depth. Then, the author tested the main factors affecting the level of application of Green Accounting built from theoretical research and previous studies on Green Accounting. The test results show that the independent variables have positive and negative impacts on the dependent variable, including: Potential to increase business scale, Perception of people in the business and Incentives from related parties.

From the research results, the author has proposed a number of measures and recommendations to the Government and manufacturing enterprises themselves so that all parties can try to perfect the application of the Green accounting model. Green accounting in Thai Nguyen in particular and the whole country in general, catching up with the trend of Sustainable Development and gradually integrating with international accounting.

#### REFERENCES

Anh, N.T.M. (2021), "The correlation between the Board of Directors' expertise on Finance and the Accounting information quality", *Industry and Trade Magazine*, Vol. 2 No. 3.

Bartelmus, P. & Seifert, E.K. (2003), Green Accounting. London: Routledge.

Hien, D.T.T. (2016), "Green accounting and Environmental accounting - Some modern perspectives", *Journal of Accounting and Auditing*, Vol. 4.

Farouk, S., Cherian, J. & Jacob, J. (2012), "Green Accoounting and Management for Sustainable Manufacturing in Developing countries", *International Journal of Business and Management*, Vol. 7 No. 20, pp. 36 - 43.

Government. (2015), Accounting Law, Hanoi.

Huy, P.Q. (2014), "Exploring the Vietnamese Environment Accounting with an Introduction about the Green Accounting Information System", *Journal of Modern Accounting and Auditing*, Vol. 10 No. 6, pp. 675 - 682.

Institute of Chartered Accountants in England and W. (2016), *Incentives and institutions in accounting: Thinking beyond standards*.

Lako, A. (2018), Conceptual Framework of Green Accounting, Majalah: AKUNTAN.

Lee, H.Y., Hu, M.C., Yain, Y.S. & Lin, Y.T. (2018), "Influence of human resources development on green accounting performance", *Journal of Economic and Social Thought*, Vol. 5 No. 4, pp. 330 - 334.

Maama, H. & Appiah, K.O. (2019), "Green accounting practices: lesson from an emerging economy", *Qualitative Research in Financial Markets*, Vol. 11 No. 4, pp. 456 - 478.

Moorthy, K. & Yacob, P. (2013), Green Accounting: Cost measures, *Open Journal of Accounting*, Vol. 2, pp. 4 - 7.

Rahman, M.M. & Rahman, M.S. (2020), "Green Reporting as a Tool of Environmental Sustainability: Some Observations in the Context of Bangladesh", *International Journal of Management and Accounting*, Vol. 2 No. 2, pp. 31 - 37.

Riduwan, A. & Andajani, A. (2019), "Sustainability Concerns and Investor Responses to Earnings Announcements", *Indonesian Journal of Sustainability Accounting and Management*, Vol. 3 No. 2, pp. 187 - 202.

Rounaghi, M.M. (2019), "Economic analysis of using green accounting and environmental accounting to identify environmental costs and sustainability indicators", *International Journal of Ethics and Systems*, Vol. 35 No. 4, pp. 504 - 512.

Sudhamathi, S. & Kaliyamoorthy, S. (2014), "Green Accounting", *Journal of International Academic Research for Multidisciplinary*, Vol. 2 No. 10, pp. 227 - 235.

Tanc, A. & Gokoglan, K. (2015), "The Impact of Environmental Accounting on Strategic Management Accounting: A research on Manufacturing companies", *International Journal of Economics and Financial*, Vol. 5 No. 2, pp. 566 - 573.

Yulianthi, A.D., Susyarini, P.W. & Sagitarini, L.L. (2019), "Development of Green Accounting Model for Hospitality Industry in Badung District", *Advances in Social Science, Education and Humanities Research*, Vol. 354, pp. 321 - 324.

## APPENDIX

Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted				
Cronbach's	s Alpha = 0,779							
GRE1	6,66	1,731	0,592	0,733				
GRE2	6,58	1,843	0,663	0,653				
GRE3	6,63	1,884	0,599	0,719				
Cronbach's	Cronbach's Alpha = 0,65							
SCAL1	3,71	0,785	0,481	0,000				
SCAL2	3,64	0,725	0,481	0,000				
Cronbach's	s Alpha = 0,712							
PERC1	10,49	5,188	0,574	0,600				
PERC2	10,45	5,479	0,534	0,627				
PERC3	10,50	5,808	0,485	0,657				
PERC4	10,48	6,100	0,404	0,704				
Cronbach'	Cronbach's Alpha = 0,630							
INC1	3,00	2,243	0,459	0,000				
INC2	3,05	2,148	0,459	0,000				

Component	Initial Eigenvalues		Extract	Extraction Sums of Squared Loadings			<b>Rotation Sums of Squared Loadings</b>		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.193	27.413	27.413	2.193	27.413	27.413	2.156	26.948	26.948
2	1.549	19.361	46.774	1.549	19.361	46.774	1.494	18.681	45.628
3	1.394	17.429	64.203	1.394	17.429	64.203	1.486	18.574	64.203
4	.789	9.857	74.060						
5	.627	7.842	81.902						
6	.548	6.854	88.756						
7	.499	6.240	94.996						
8	.400	5.004	100.000						

Extraction Method: Principal Component Analysis.

Model 8	Model Summary								
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	Sig	Std. Error of the Estimate	Durbin - Watson		
1	0,706 <sup>a</sup>	0,499	0,493	78,359	0,000 <sup>b</sup>	0,45583	1,413		
a. Predictors: (Constant), DD, NT, AL									
b. Deper	b. Dependent Variable: KTX								

	UnstandardizedCoefficients		Standardized Coefficients	t	Sig.	Collinea statisti	·	
		В	Std. Error	Beta			Tolerance	VIF
	(Constant)	0,458	0,212		2,156	0,032		
1	SCAL	0,234	0,040	0,270	5,842	0,000	0,991	1,009
	PERC	0,335	0,039	0,396	8,560	0,000	0,992	1,008
	INC	0,272	0,023	0,539	11,660	0,000	0,995	1,005

KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure o	f Sampling Adequacy.	0,616		
Bartlett's Test of Sphericity	Approx. Chi-Square	320,206		
	df	28		
	Sig.	0,000		