The Effect of Green Development Models on Business Sustainability in Property Companies in the Digital Age

Suwandi[1]* ID

[1]Pancasakti Tegal University, Indonesia

A B S T R A K

Baru-baru ini, skenario global telah berubah secara radikal karena pandemi penyakit virus corona yang sedang berlangsung dan dampak ekonomi yang disebabkan oleh lockdown di berbagai negara. Tampaknya merangkul digitalisasi dan transformasi organisasi bisnis yang mengintegrasikan teknologi digital telah menjadi hal terpenting bagi kelangsungan hidup perusahaan. Penelitian ini bertujuan untuk menganalisis pengaruh Model Green Development terhadap Keberlanjutan Bisnis pada Perusahaan Properti di Era Digital. Penelitian ini termasuk dalam penelitian deskriptif kuantitatif. Penelitian ini dilakukan pada Perusahaan Property, and Real Estate yang terdaftar di BEI. Teknik pengambilan sampel dalam penelitian ini adalah purposive sampling, sehingga diperoleh sampel dalam penelitian ini sebanyak 42 perusahaan Property and Real Estate. Uji validitas dan reliabilitas dilakukan untuk memastikan bahwa pengukuran yang digunakan akurat dan dapat diandalkan. Konstruk dependen R-square digunakan untuk menganalisis pengaruh variabel independen spesifik terhadap variabel laten dependen, yang menampilkan besarnya pengaruh. Keberlanjutan Bisnis dipengaruhi oleh Model Pembangunan Hijau. Hasil penelitian ini menunjukkan pengaruh Model Pembangunan Hijau terhadap Keberlanjutan Bisnis. Nilai t-statistik lebih besar dari skor beta. Sehingga penjelasan di atas akan menunjukkan bahwa Model Pembangunan Hijau berpengaruh signifikan terhadap Keberlanjutan Bisnis. Perusahaan real estate yang juga menerapkan Model Pembangunan Hijau merupakan salah satu bentuk Keberlanjutan Usaha yang sedang dilaksanakan, sehingga sangat berpengaruh antara Model Pembangunan Hijau terhadap Keberlanjutan Usaha..

A B S T R A C T

Recently, the global scenario has changed radically due to the ongoing coronavirus disease pandemic and the economic impact caused by lockdowns in various countries. It seems that embracing digitalization and the transformation of business organizations that integrate digital technology has become paramount to the survival of enterprises. This study aims to analyze the effect of the Green Development Model on Business Sustainability in Property Companies in the Digital Era. This research is included in descriptive quantitative research. This research was conducted on Property, and Real Estate Companies registered on the IDX. The sampling technique in this study is purposive sampling, so the sample obtained in this study was 42 Property and Real Estate companies. Validity and reliability tests are carried out to ensure that the measurements used are accurate and reliable . The dependent construct R-square is used to analyze the effect of the specific independent variable on the dependent latent variable, which displays the magnitude of the effect. Business Sustainability is affected by the Green Development Model. This study's results show the effect of the Green Development Model on Business Sustainability. The t-statistic value is greater than the beta score. So the explanation above will show that the Green Development Model significantly affects Business Sustainability. A real estate company that also implements the Green Development Model is a form of Business Sustainability that is currently implemented, so it is very influential between the Green Development Model on Business Sustainability.

*Corresponding author.
E-mail: suwandi@upstegal.ac.id (Suwandi)

1. INTRODUCTION

Recently, the global scenario has changed radically due to the ongoing coronavirus disease pandemic and the economic impact caused by lockdowns in various countries. It seems that embracing digitalization and the transformation of business organizations that integrate digital technology has become paramount to the survival of enterprises (Peter et al., 2020; Ukko et al., 2019). In this study, digital maturity refers to a company's competitive advantage in converting its fundamental business processes into digital ones. The transformation is led by change management that is integrated into the organizational culture. Digitization is an efficient tool for supporting sustainable environmental, social and economic development (Carayannis & Morawska-Jancelewicz, 2022; Ivashova et al., 2019; Seele, 2017). Information and communication technologies can improve emission reductions, waste management and production hygiene, and can improve the implementation of green development strategies to benefit the ecosystems in which companies operate. To achieve sustainability goals, green development needs to be supported by organizational change within the company (Phongchiewboon, 2018; Sohn et al., 2018). However, as has been acknowledged, organizational change is difficult to implement, and companies are struggling to rise with the digitalization associated with products, services, and business operations in general.

Companies' capabilities are limited, and companies' digital transformation is driven by the ecosystems in which they operate. In their case, the founders, owners, or top managers are responsible for leading the digital transformation and analyzing the position that company holds in comparison to their competitors. Therefore, a better understanding of their views on digital transformation and sustainability is essential to capture the ongoing processes in a fairly competitive region (Phongchiewboon, 2018; Ukko et al., 2019). The business model perspective is particularly interesting in the context of sustainability because it spotlight the value creation logic of an organization and its effects and potentially allows new forms of governance such as cooperatives, public-private partnerships, or social businesses, thereby helping to go beyond narrow models for profit and loss maximize profit (Almaududi, 2018; Shalihin et al., 2020). The company realizes that sustainability is very important both for the company itself and the environment around the company. Currently, the company is starting to develop its business that touches the community, which is not only limited to the cognitive aspect but also touches the affective domain that focuses on the environment and society. Sustainability has become an interesting topic for both academics and practitioners, especially for companies or businesses themselves. Business Sustainability is a company effort to minimize negative environmental and social impacts for the present and the future (Sullivan et al., 2018; Yusoff et al., 2019).

The importance of business sustainability by paying attention to environmental aspects in fact has not been supported by every existing company, even most organizations claim that environmental damage is not caused by their business activities and see it as a problem that can be ignored. There is a lot of environmental damage occur previous study estimated that 60% of ecosystems worldwide have been degraded (Gong et al., 2018). This will continue to increase and worsen if the company does not carry out environmentally friendly business activities. Sustainability is an approach to creating true and real value in the systems and resources on which these values depend. Business Sustainability can be said as a process of analysis and decision making across business functions, obtained through a clear understanding and commitment to the transitions that may occur in the present or in the future (Anekwe et al., 2019; Sullivan et al., 2018). Sustainability is a business approach to creating long-term value by considering how a particular organization operates in its ecological, social and economic environment. Business sustainability is not good for society or the environment in general but also benefits the business itself through reducing business costs, providing a competitive advantage and enhancing business reputation. Business sustainability is a stability of business conditions, where sustainability is a business continuity system that includes additions, continuity and approaches to protect business continuity and business expansion (Tilt et al., 2021; Yusoff et al., 2019). Business sustainability in this study is measured by several indicators. Business Sustainability is a business effort to prevent negative environmental and social effects so that future generations will have adequate resources to meet their needs. Success in the global market that has good quality will make Business Sustainability safe for the environment.

Based on the explanation above, it can be concluded that business sustainability is a business that continues from time to time by generation to generation in long term with the same leadership, so can maintain the results of the products produced. Business sustainability can increase productivity, open investment opportunities, increase profits, quality human resources and improve energy. So that business continuity in the property sector in this digital era requires several innovations, one of which is by applying the Green Development Model. Seeing the importance of sustainability for stakeholders, the factors that can affect business sustainability, one of which is green development. Green Development which is the practice of total construction from the planning, implementation until the operational stages

that prioritizes health and comfort for human activities through the efficient and innovative use of natural resources for the sake of environmental sustainability in a sustainable manner. The implementation of this concept is described by GBCI Indonesia in the form of criterias that include the implementation of appropriate land use, energy efficiency and conservation, water conservation, material sources and cycles, room quality and air comfort as well as building environmental management.

The inaccuracy of the physical development process, led to the issue of global warming due to high CO2 gas emissions in the atmosphere (excess greenhouse effect). Previous study state it caused by 50% of the fossil fuels use by power plants to meet the energy needs of buildings (Ahmadalipour & Moradkhani, 2018). The inaccuracy of physical development also raises the risk of decreasing the number of green open areas and various pollutions on the environment. The highest risk is the decrease in the amount of non-renewable natural resources (coal and crude oil) as a result of excessive consumption of electrical energy so that the world's crude oil reserves increasingly depleting from year to year (Barratt et al., 2018; Karaaslan & Çamkaya, 2022). So that environmental-based development-sustainable development is needed as a must for the government and development planners in Indonesia. Green Development is the best option that includes social, economic and environmental development. Where the development of this model is expected to create sustainability that can be used continuously for an indefinite period of time.

With the quality of the development process that is expected to be profitable in all aspects, the concept of Green Development is in fact not being implemented even in developed countries. Previous research on green development more emphasis on the barier of green development construction (Wang et al., 2021). Previous research who conducts research in companies that manufacture medical equipment and their furnishings and owns factories (Marota, 2017). The results of the study show that the Green Concept and MFCA have a significant effect on the sustainability dimension. In this case, the focus of the green concept is on the application of environmentally friendly production. MFCA will encourage the company strategy towards resource efficiency (Franken et al., 2021; Rieckhof & Guenther, 2018). Green development model is a system consisting of society, economy, and natural environment, but few studies have analyzed its evolutionary mechanisms from a complex systems perspective. In previous studies, the use of information entropy and dissipative structure theory in urban ecosystems (Zhang et al., 2020), utilization and protection of cultivated land resources (Guo et al., 2020), land use structure (Harlan, 2020), and urban landscape patterns (Wu et al., 2020; Yuan & Xiang, 2018). Enables the application of information entropy theory and dissipative structures in green development systems.

Based on the information entropy model and dissipative structure theory, this study establishes an evaluation index system, which includes the continuous input index, forced output index, destructive metabolism index, and regenerative metabolism index, to study the entropy changes of green development systems in this digital era. The green development level of each property company is calculated using an integrated weighting method. This research focuses on temporal and spatial analysis and directly determines the main influencing factors. Next, we propose some valuable suggestions for property companies in this digital era. This study is different from previous research, this study analyzes the effect of the Green Development Model on Business Sustainability. Research by more emphasis on barriers to green development construction (Agyemang et al., 2018). This research is expected to be useful for companies in terms of improving company sustainability by implementing Green development. This study aimed to determine the effect of the Green Development Model on Business Sustainability in Property Companies in the Digital Era.

2. METHODS

This research is included in descriptive quantitative research. Research methods are basically scientific characteristics to obtain data with certain goals and uses. The method used in the quantitative approach. Descriptive research is research that uses observations, interviews or questionnaires about the current state of the subject that we are researching (Sarstedt et al., 2020; Sugiyono, 2017). Through questionnaires and so on we collect data to test for hypotension or answer a question. Through this descriptive research, the researcher will explain what actually happened regarding the current state that is being studied. This research was conducted on Property and Real Estate Companies registered in the IDX. The sampling technique in this study was purposive sampling so that in this study the sample obtained in this study were 42 Property and Real Estate companies. The data analysis technique in this study used Partial Least Square (PLS). PLS is a Structural Equation Modeling (SEM) equation model with an approach based on variance or component-based structural equation modeling. The purpose of PLS-SEM is to develop a theory or build a theory (prediction orientation) (Hair et al., 2019; Sarstedt et al., 2020). PLS is used to explain whether there is a relationship between latent variables (prediction). PLS is

a powerful analytical method because it does not assume current data with a certain scale measurement, the number of samples is small. Validity and reliability tests are carried out to ensure that the measurements used are accurate and reliable (valid and reliable). The validity and reliability test can be seen at: First, Convergent Validity is a metric that is assessed in terms of the correlation between item/component scores and construct scores, as seen in the standard loading factor which describes the magnitude of the correlation between each measured item and its construct. If correlated Individual reflex measurements are said to be high if > 0.7. Second, discriminant validity is a measurement model with a reflection index that is assessed based on the size and cross-loading construct. Discriminant validity, which is comparing the extracted root mean square of variance (AVE), a tool is declared valid if the AVE value is > 0.5. Third, Composite reliability is a measure of a structure that can be seen in terms of the coefficient of the latent variable. In this measurement, if a value > 0.70 is reached, the construction can be said to have high reliability. Fourth, Cronbach's Alpha is a reliability test designed to strengthen composite reliability results. A variable can be declared reliable if the value of Cronbach's alpha > 0.7.

The dependent construct R-square is used to analyze the effect of the specific independent variable on the dependent latent variable, which displays the magnitude of the effect. Inner Model Analysis, also known as Structural Modeling, is a technique for predicting causal relationships between model variables. Hypotheses were tested during deep model analysis in Smart PLS testing. The value of t-statistics and probability values can be shown in evaluating the hypothesis. The t-statistics result used to test the hypothesis by using the statistical value by 1.96 for alpha 5 percent, while the beta score is used to determine the direction of the influence of the relationship between variables. The criteria for acceptance/rejection of the hypothesis are: Ha= t-statistic > 1.96 with p-values score < 0.05. H0= t-statistic < 1.96 with p-values score > 0.05.

3. RESULTS AND DISCUSSIONS

Results
Outer Model Analysis
Validity test is used to measure the valid or invalid of a questionnaire. In this research, validity test is carried out using convergent validity and AVE. The validity uses convergent validity, which the measurement model with indicator reflections is assessed based on the correlation between the item scores/component scores calculated by PLS. Individual reflection size is said to be high if it has a correlation of more than 0.7 with the measured construction. However, research in the early stages of developing a measurement scale, a loading value of 0.5 to 0.6 is considered sufficient. Validity test result is show in Table 1.

Table 1. Validity Test Results

Variable		Outer Loading	AVE	Explanation
Green Development Model (X1)	X1.1	0.747	0.558	Valid
	x1.2	0.643		Invalid
	x1.3	0.579		Invalid
	x1.4	0.709		Valid
	x1.5	0.801		Valid
	x1.6	0.619		Invalid
	x1.7	0.684		Invalid
	x1.8	0.758		Valid
	x1.9	0.813		Valid
	x1.10	0.798		Valid
	x1.11	0.869		Valid
	x1.12	0.654		Invalid
	x1.13	0.730		Valid
	x1.14	0.656		Invalid
	x1.15	0.883		Valid
	x1.16	0.852		Valid
	x1.17	0.817		Valid
Business Sustainability (Y)	Y.1	0.811	0.540	Valid
	Y.2	0.885		Valid
	Y.3	0.856		Valid
	Y.4	0.612		Invalid
	Y.5	0.831		Valid

Variable	Outer Loading	AVE	Explanation
Y.6	0.791		Valid
Y.7	0.772		Valid
Y.8	0.720		Valid
Y.9	0.727		Valid
Y.10	0.753		Valid
Y.11	0.714		Valid
Y.12	0.821		Valid
Y.13	0.615		Invalid
Y.14	0.655		Invalid

Based on Table 1 show the results validity test of the instrument, it is known that from 31 indicators, but there are 9 indicators that are invalid, so that in this study only 22 indicators were used. This study uses 2 types of reliability tests, that are Cronbach Alpha test and Composite Reliability test. Cronbach Alpha measures the lowerbound reliability. The data is declared reliable if the data has a Cronbach alpha value> 0.7. Composite reliability measures the actual reliability value of a variable. Data is declared to have high reliability if it has a composite reliability score >0.7. The reliability test result is show in **Table 2.**

Table 2. Reliability Test Results

	Cronbach's Alpha	Composite Reliability	Explanation
Business Sustainability	0.936	0.942	Reliable
Green Development Model	0.950	0.955	Reliable

Base on Table 2, the test results show that all instruments are declared reliable with a Cronbach Alpha score and Composite reliability > 0.7. The following is a figure of the calculation results of the PLS SEM model after the indicator that does not meet the requirements for the factor loading value is deleted, in the figure it can be seen that the factor loading value of the indicators in each variable is not below 0.6, thus the analysis continues on the Discriminant Validity test. Convergent validity test after modification is show in Figure 1.
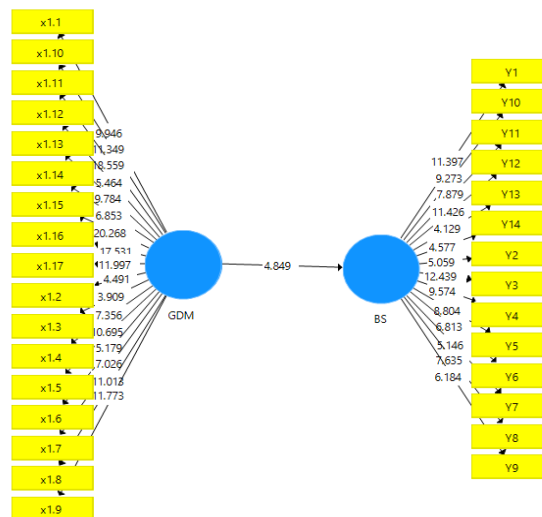

Figure 1. Convergent Validity Test after modification

R-Square Coefficient determination (R-Square) test is used to measure how much the endogenous variable is affected by other variables. Based on the data analysis carried out through the use of the smartPLS program, the R-Square value is obtained as shown in the Table 3.

Table 3. R-Square Test

	R Square	R Square Adjusted
Business Sustainability (Y)	0.316	0.299

Based on Table 3, the test results obtained an R-Square score for Business Sustainability (Y) of 0.316, which means that Business Sustainability is affected by the Green Development Model by 31.6% and the other 68.4% is affected by variables that have not been explained in this study. Hypothesis test can be seen through the value of t-statistics and probability values. To test the hypothesis using statistical values, for alpha 5% by comparing t count with t table. So, the criteria for acceptance or rejection of the hypothesis is that H0 is rejected if t-statistics > t count. To reject/accept the hypothesis using probability then Ha is accepted if the p value <0.05

Discussion

The results of hypothesis test there is an effect between the Green Development Model on Business Sustainability, it is shown that the p-value is 0.000, which is smaller than 0.05. And the t-statistic value is 4.849, which is greater than 1.660 and the beta score is 0.562. So, from the explanation above, it will show that the Green Development Model has a significant positive effect on Business Sustainability. Over the past few decades, society's perception of corporate responsibility has expanded from a focus on its shareholders to a broader community of stakeholder groups. The company has emphasized sustainability as a strategic aims, but the effectiveness of the response in overcome sustainability challenges remains insignificant. Business sustainability today that does not ignore the needs of future generations. The term 'sustainability' is based on two concepts namely the needs of the poor and the current limitations of the environment to meet future needs (Guo et al., 2020; Hermelingmeier & von Wirth, 2021). Sustainability is concerned with creating benefits for stakeholders, improving the lives of people in the surrounding environment, and protecting the environment. Previous research stated that the organization aims to achieve profitability and will minimize waste in order to increase profits (Bansal, 2019). This can be done by recycling and reusing limited resources to improve economic performance, which is one of the goals to achieve business sustainability.

The existence of environmental pollution that occurs due to industrial activities, causes a loss of public and stakeholder trust regarding how the company is responsible for the damage that has occurred. Stakeholders and investors need more information regarding how companies treat their environment. In response, management discloses social and environmental information through annual reports to meet stakeholder expectations. It is in line with the technological change of Shanghai's industrial production biases to energy use and capital saving, causing a high energy demand of industrial development (Shao et al., 2016). Under the dual impacts of economic development and energy-saving and emission-reduction policies, the degree of technological change biased to the environmental factor (carbon emissions) displays strong and weak alternations, indicating that the green bias of industrial technological change in Shanghai is not stable and that the green transformation of industrial development model needs to be further advanced (Jiang & Gao, 2019; Shao et al., 2016; Sujai & Juwana, 2021).

The existence of an ecological crisis marked by environmental pollution, global warming, climate change, and the scarcity of natural resources is an environmental problem that causes increasing public awareness of the importance of environmental sustainability for human welfare. This is the causes establishment of the concept of sustainable development in the SDGs, which consists of 3 pillars, namely economic, social, legal and governance pillars. One of the company's goals is the sustainability of operational activities, therefore, in addition to the profits expected by the company in the long term, the company's activities must be in line with legal justice and to protect the surrounding environment. With the SDGs, it will help companies to set goals to be achieved, performance measure, and manage of change, so that their operations are more sustainable. A real estate company that is also implementing the Green Development Model is a form of Business Sustainability that is currently being implemented so that it is very influential between the Green Development Model on Business Sustainability. By implementing a good Green Development Model, it will increase Business Sustainability.

4. CONCLUSION

Based on the results of the research above, it is known that there is an effect between the Green Development Model on Business Sustainability. The results of this study state that the Green Development Model has a significant positive effect on Business Sustainability. A real estate company that is also implementing the Green Development Model is a form of Business Sustainability that is currently being implemented so that it is very influential between the Green Development Model on Business Sustainability.

5. REFERENCES

Agyemang, M., Zhu, Q., Adzanyo, M., Antarciuc, E., & Zhao, S. (2018). Evaluating barriers to green supply chain redesign and implementation of related practices in the West Africa cashew industry. *Resources, Conservation and Recycling*. https://doi.org/10.1016/j.resconrec.2018.04.011.

Ahmadalipour, A., & Moradkhani, H. (2018). Escalating heat-stress mortality risk due to global warming in the Middle East and North Africa (MENA). *Environment International*. https://doi.org/10.1016/j.envint.2018.05.014.

Almaududi, S. (2018). Employee Performance: a Perspective of Organizational Citizenship Behavior (Ocb). *Journal of Business Studies and Management Review (JBSMR)*, *2*(1), 35–38. https://doi.org/10.22437/jbsmr.v2i1.6459.

Anekwe, D. E., Koo, K. K. Y., de Marchie, M., Goldberg, P., Jayaraman, D., & Spahija, J. (2019). Interprofessional Survey of Perceived Barriers and Facilitators to Early Mobilization of Critically Ill Patients in Montreal, Canada. *Journal of Intensive Care Medicine*. https://doi.org/10.1177/0885066617696846.

Bansal, P. (2019). GUIDEPOST: Sustainable Development in an Age of Disruption. *Academy of Management Discoveries*.

Barratt, M., Kull, T. J., & Sodero, A. C. (2018). Inventory record inaccuracy dynamics and the role of employees within multi-channel distribution center inventory systems. *Journal of Operations Management*. https://doi.org/10.1016/j.jom.2018.09.003.

Carayannis, E. G., & Morawska-Jancelewicz, J. (2022). The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. *Journal of the Knowledge Economy*, *0123456789*. https://doi.org/10.1007/s13132-021-00854-2.

Franken, J. C. M., van Dun, D. H., & Wilderom, C. P. M. (2021). Kaizen event process quality: towards a phase-based understanding of high-quality group problem-solving. *International Journal of Operations and Production Management*. https://doi.org/10.1108/IJOPM-09-2020-0666.

Gong, M., Simpson, A., Koh, L., & Tan, K. H. (2018). Inside out: The interrelationships of sustainable performance metrics and its effect on business decision making: Theory and practice. *Resources, Conservation and Recycling*. https://doi.org/10.1016/j.resconrec.2016.11.001.

Guo, Y., Tong, L., & Mei, L. (2020). The effect of industrial agglomeration on green development efficiency in Northeast China since the revitalization. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2020.120584.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In *European Business Review*. https://doi.org/10.1108/EBR-11-2018-0203.

Harlan, T. (2020). Green development or greenwashing? A political ecology perspective on China's green beltand road. In *Eurasian Geography and Economics*. https://doi.org/10.1080/15387216.2020.1795700.

Hermelingmeier, V., & von Wirth, T. (2021). The nexus of business sustainability and organizational learning: A systematic literature review to identify key learning principles for business transformation. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.2719.

Ivashova, V., Goncharov, V., Erokhin, A., Kolosova, O., Migacheva, M., & Berkovsky, V. (2019). Education in a Digital Society: The Problem of Formation of Information Culture. *International Journal of Civil Engineering and Technology (IJCIET)*, *10*(3), 1341–1347. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3456657.

Jiang, Y., & Gao, Y. (2019). Factors that Influence Potential Green Hotel Customers' Decision-making Process–Evidence from China. *Journal of China Tourism Research*, *15*(4), 455–477. https://doi.org/10.1080/19388160.2018.1558139.

Karaaslan, A., & Çamkaya, S. (2022). The relationship between CO2 emissions, economic growth, health expenditure, and renewable and non-renewable energy consumption: Empirical evidence from Turkey. *Renewable Energy*. https://doi.org/10.1016/j.renene.2022.03.139.

Marota, R. (2017). Green Concepts And Material Flow Cost Accounting Application For Company Sustainability. *Indonesian Journal of Business and Entrepreneurship*, *3*(1). https://doi.org/10.17358/ijbe.3.1.43.

Peter, M. K., Kraft, C., & Lindeque, J. (2020). Strategic action fields of digital transformation: An exploration of the strategic action fields of Swiss SMEs and large enterprises. *Journal of Strategy and Management*, *13*(1), 160–180. https://doi.org/10.1108/JSMA-05-2019-0070.

Phongchiewboon, A. (2018). Green Development: Environment and Sustainability in a Developing World. *PSAKU International Journal of Interdisciplinary Research*. https://doi.org/10.12778/235108618x15452373186137.

Rieckhof, R., & Guenther, E. (2018). Integrating life cycle assessment and material flow cost accounting to account for resource productivity and economic-environmental performance. *International Journal of Life Cycle Assessment*, *17*, 1725–1737. https://doi.org/10.1007/s11367-018-1447-7.

Sarstedt, M., Ringle, C. M., Cheah, J. H., Ting, H., Moisescu, O. I., & Radomir, L. (2020). Structural model robustness checks in PLS-SEM. *Tourism Economics*, *26*(4). https://doi.org/10.1177/1354816618823921.

Seele, P. (2017). Predictive Sustainability Control: A review assessing the potential to transfer big data driven 'predictive policing'to corporate sustainability management. *Journal of Cleaner Production*, *153*, 673–686. https://doi.org/10.1016/j.jclepro.2016.10.175.

Shalihin, M. Y., Suharman, H., & Hasyir, D. A. (2020). Impact of Corporate Sustainability on Firm Value: Indonesian Context. *Journal of Accounting Auditing and Business*, *3*(1), 102. https://doi.org/10.24198/jaab.v3i1.25834.

Shao, S., Luan, R., Yang, Z., & Li, C. (2016). Does directed technological change get greener: Empirical evidence from Shanghai's industrial green development transformation. *Ecological Indicators*, *69*, 758–770. https://doi.org/10.1016/j.ecolind.2016.04.050.

Sohn, E. J., Lee, Y., Park, N., Park, M., Kim, N. H., Park, S., Min, K., Gu, S., Park, Y., Song, J., An, D. jun, & Hwang, I. (2018). Development of Plant-produced E2 Protein for Use as a Green Vaccine Against Classical Swine Fever Virus. *Journal of Plant Biology*. https://doi.org/10.1007/s12374-018-0133-4.

Sugiyono. (2017). Metode Penelitian Bisnis (Pendekatan Kuantitatif, Kualitatif, Kombinasi dan R&D). In *Metodelogi Penelitian*.

Sujai, S. R. A. N., & Juwana, I. (2021). Waste management planning toward zero waste in Hotel XYZ Bandung with circular economy principles (case study: Room service facility's solid waste). *IOP Conference Series: Earth and Environmental Science*, *940*(1). https://doi.org/10.1088/1755-1315/940/1/012052.

Sullivan, K., Thomas, S., & Rosano, M. (2018). Using industrial ecology and strategic management concepts to pursue the Sustainable Development Goals. *Journal of Cleaner Production*, *174*, 237–246. https://doi.org/10.1016/j.jclepro.2017.10.201.

Tilt, C. A., Qian, W., Kuruppu, S., & Dissanayake, D. (2021). The state of business sustainability reporting in sub-Saharan Africa: an agenda for policy and practice. *Sustainability Accounting, Management and Policy Journal*, *12*(2), 267–296. https://doi.org/10.1108/SAMPJ-06-2019-0248.

Ukko, J., Nasiri, M., Saunila, M., & Rantala, T. (2019). Sustainability strategy as a moderator in the relationship between digital business strategy and financial performance. *Journal of Cleaner Production*, *236*, 117626. https://doi.org/10.1016/j.jclepro.2019.117626.

Wang, Y., Zhao, N., Lei, X., & Long, R. (2021). Green finance innovation and regional green development. *Sustainability (Switzerland)*, *13*(15), 8230. https://doi.org/10.3390/su13158230.

Wu, H., Li, Y., Hao, Y., Ren, S., & Zhang, P. (2020). Environmental decentralization, local government competition, and regional green development: Evidence from China. *Science of the Total Environment*, *708*, 135085. https://doi.org/10.1016/j.scitotenv.2019.135085.

Yuan, B., & Xiang, Q. (2018). Environmental regulation, industrial innovation and green development of Chinese manufacturing: Based on an extended CDM model. *Journal of Cleaner Production*, *176*, 895–908. https://doi.org/10.1016/j.jclepro.2017.12.034.

Yusoff, Y. M., Omar, M. K., Kamarul Zaman, M. D., & Samad, S. (2019). Do all elements of green intellectual capital contribute toward business sustainability? Evidence from the Malaysian context using the Partial Least Squares method. *Journal of Cleaner Production*, *234*, 626–637. https://doi.org/10.1016/j.jclepro.2019.06.153.

Zhang, J., Zhang, K., & Zhao, F. (2020). Research on the regional spatial effects of green development and environmental governance in China based on a spatial autocorrelation model. *Structural Change and Economic Dynamics*, *55*, 1–11. https://doi.org/10.1016/j.strueco.2020.06.001.