Enrichment: Journal of Management, 14 (4) (2024)

Published by: Instiute of Computer Science (IOCS)

Enrichment: Journal of Management

Journal homepage: www.enrichment.iocspublisher.org

The influence of environmental knowledge, intentions and behavior of environmentally friendly palm oil entrepreneurs on green products in west Sumatra

Candrianto[1], Isra Mouludi[2], Ester Edwar[3], Radna Ningsih[4]

[1,2,3,4] Agro Industry Logistics Management, Politeknik ATI Padang, Padang City, Indonesia

ARTICLE INFO

Article history:

Received Jul 23, 2024
Revised Aug 20, 2024
Accepted Sep 12, 2024

Keywords:

Environmental knowledge ;
Environmentally friendly;
Entrepreneur behavior;
Green product;
Intention.

ABSTRACT

This research aims to determine the influence of knowledge on environmentally friendly entrepreneurial intentions, entrepreneurial behavior, and green products within the palm oil processing industry in West Sumatra. It also examines the impact of entrepreneurial intentions on environmentally friendly entrepreneurial behavior and the effect of entrepreneurial behavior on green products. The study employs a survey method, distributing questionnaires to 14 palm oil processing companies that received PROPER blue, green, or gold rankings for the 2018-2019 period, with a sample size of 112 managers. The data analysis is conducted using Structural Equation Modeling (SEM) with a Partial Least Squares (PLS) approach. The findings indicate that the environmental knowledge possessed by palm oil managers positively influences their environmentally friendly intentions, behaviors, and the development of green products. Additionally, entrepreneurial intentions towards environmental friendliness have a significant positive effect on environmentally friendly entrepreneurial behavior in the palm oil industry in West Sumatra.

Corresponding Author:

Candrianto,
Agro Industry Logistics Management,
Politeknik ATI Padang,
Jl. Bungo Pasang Tabing Padang, Padang, 25171, Indonesia
Email: candriantokemenperin@gmail.com

INTRODUCTION

The largest palm oil producing country is Indonesia, which is then followed by the neighboring country, namely Malaysia. Palm oil is one of the plantation commodities that has high value and the industry is classified as labor intensive and is an important and strategic commodity because its function is very large in boosting the economy, especially for plantation farmers (Ayompe et al., 2021). With the large benefits from oil palm plantations, several regions in Indonesia are oil palm producers, especially on the islands of Kalimantan and Sumatra (Khatiwada et al., 2021).

West Sumatra Central Statistics Agency (BPS), in 2018-2022 the Dharmasraya district, Agam district, Limapuluh Kota district, West Pasaman district, Sijunjung district and Pesisir Selatan district were the largest palm oil producing areas in West Sumatra. Apart from providing

great benefits, the palm oil processing industry also experiences problems in controlling its production waste (Cisneros et al., 2021). Apart from providing great benefits, the palm oil processing industry also experiences problems in controlling its production waste (Cisneros et al., 2021). According to BPS data, existing companies have followed PROPER. PROPER (Corporate Performance Rating Assessment Program) is an initiative launched by the Ministry of Environment and Forestry of the Republic of Indonesia to evaluate and assess the environmental management performance of companies. PROPER is designed to encourage companies to enhance their environmental performance and comply with applicable environmental regulations.Namely the palm oil processing industry which received a blue 2018 - 2019 PROPER rating, green, and gold, totaling 14 companies.

Places where palm oil waste is formed can be categorized into two types, namely palm oil plantation waste and palm oil industry (factory) waste (Farobie & Hartulistiyoso, 2022). Generally, waste from the palm oil processing industry consists of three types, namely liquid, solid and gas waste (Papilo et al., 2022). Liquid waste from the palm oil processing industry comes from the steaming (sterilization) process, clarification process and dirt from hydrocyclones (Limaho et al., 2022). This liquid waste produces high levels of organic matter so it has the potential to pollute groundwater and water bodies (Amri et al., 2023). Then, solid waste from the palm oil processing industry is categorized into two, namely waste originating from the processing process in the form of empty fruit bunches, shells, fibers, mud and cake and those originating from the liquid waste processing base in the form of activated sludge carried by waste water processing results (Ong et al., 2021). Empty bunches and mud that cannot be handled can cause a foul smell, a nesting place for insects and flies, and have the potential to produce leachate (Kahar et al., 2022). Some of the roles of local communities involved in waste management and green production by providing information to the government through groups using electronic media, increasing awareness in waste management such as providing processing places, participating in decision making such as determining waste processing locations and Initiatives from communities or NGOs that support more sustainable palm oil production practices in the form of providing, reporting companies that do not practice more sustainable palm oil production, and providing awards to companies

The description above shows that data obtained in the field at one of the palm oil companies in West Sumatra, namely Factory Factory X is a local company that has been running the palm oil business since 2008 until now. Data from Factory X, located in Sasak village, West Pasaman Regency, produces several types of waste in the palm oil processing process. The solid waste produced by Factory So far, Factory Even though this method is very practical, it will cause pollution to the environment. Not only that, solid waste is also reprocessed into fertilizer which is used by the factory and some of the surrounding communities.

Thus, it can be said that producing environmentally friendly palm oil can be realized by entrepreneurial intentions and behavior driven by entrepreneurial knowledge of being environmentally friendly (Yi, 2021). Other empirical studies explain that environmental knowledge is a key factor in promoting environmentally friendly behavior (Ahmad et al., 2021). Environmental knowledge provides environmentally friendly values so as to encourage changes in behavior that are more environmentally friendly by providing motivation to entrepreneurs to start environmentally friendly businesses, providing environmentally friendly jobs, and providing financial means and policies to entrepreneurs to start new, more environmentally friendly businesses (Farrukh et al., 2022). Based on the background and phenomena above, efforts must be made to build environmentally friendly production or green products for the palm oil processing industry in West Sumatra by guiding environmental knowledge to encourage the intentions and behavior of palm oil entrepreneurs.

RESEARCH METHOD

This type of research is causative, which is research that aims to determine the cause-and-effect relationship of a phenomenon or solution to the problem being studied and to see how far the influence of the research variables is. This research was carried out using quantitative, descriptive and associative methods using statistical analysis to empirically test the relationship between research variables (Bougie & Sekaran, 2019).

The population in this research is all stakeholders in the palm oil processing industry in West Sumatra with a total of 21 companies using non-probability sampling techniques with a purposive sampling method where sampling is based on predetermined purposes. This sample selection method is by deliberately selecting certain samples and ignoring other samples, because this particular sample has special characteristics that other samples do not have, namely the palm oil processing industry which received a blue 2018 - 2019 PROPER rating, green, and gold, totaling 14 companies. From the sample selection results above, 112 palm oil industry managers in West Sumatra were obtained who could be used as samples using the Likert scale as a data collection tool. The scale used contains statements regarding green products, environmentally friendly entrepreneur intentions, environmentally friendly entrepreneur behavior and environmental knowledge as measured by questionnaire items. The indicators for measuring green products are adapted from the measures used by (Tseng & Hung, 2013; Sdrolia & Zarotiadis, 2019; Ariffin et al., 2016), namely 7 statements. The indicators for measuring environmentally friendly business intentions were adapted from Yi (2021), namely 5 statements. Then the environmentally friendly business behavior indicators were adapted from Yi (2021), namely 5 statements. The measurement of environmental knowledge was adapted from (Huang & Shih, 2009; Martínez-Martínez et al., 2015; Martínez-Martínez et al., 2023), namely 7 statements.

The data analysis technique used in this research is a structural equation model or what is usually called Structural Equation Modeling using the Partial Least Square (SEM-PLS) approach. Hair et al.(2017) explain that SEM PLS consists of two stages, namely evaluation of the outer model or measurement model (measurement model) with measurement criteria a). Convergent Validity, b), Discriminant Validity, c). Reliability Test. The evaluation stage of the inner model or structural model (structural model) with criteria a). Collinear Evaluation, b). R Square, c). F Square, d). Q Square, e). Path Coefficient (T-Statistic) using T-Table 1.96 with a significant level of 5%.

RESULTS AND DISCUSSIONS

The results of distributing questionnaires to the research sample were 112 questionnaires which produced 98 responses with 10 responses that were not returned and 4 responses that were rejected because they were incomplete. Thus the response rate in this study was 87%. The response rate in this study is in accordance with the statement Zahl-Thanem et al. (2021) that a higher response rate is desirable because it proves the dependability and validity of the results. Rogelberg & Stanton (2007) explained that a higher response rate ensures the representativeness of the data collected and reduces concerns about nonresponse bias. Not only that, a higher response rate results in a larger data set which will ultimately result in higher statistical power (Ali et al., 2021). Thus it will lead to higher credibility.

Descriptive Statistics of Research Variables

Before carrying out the hypothesis testing stage, a frequency distribution analysis of the research variables is first carried out, the purpose of which is to describe the latent variables and find out the responses to the latent variables which consist of environmental knowledge, intentions and behavior of environmentally friendly entrepreneurs and green products in the palm oil processing industry in West Sumatra. with the general results of the measurement items also

showing the respondent's level of achievement in the very good category because the value is above 80%.

SEM-PLS evaluation

Measurement Model

Evaluation of the measurement model through confirmatory factor analysis using the MTMM (MultiTrait-MultiMethod) approach by testing Convergent Validity and Discriminant Validity. Meanwhile, reliability testing is carried out in two ways, namely with Cronbach' Alpha and Composite Reliability (Hair et al.,2017).

To achieve a valid measurement model in research, there are 3 loading factor calculation processes with a loading factor value ≥ 0.7 which is said to be ideal, meaning that the indicator is valid in measuring the variable it forms and vice versa if the loading factor value is ≤ 0.7 then the indicator is invalid and is excluded from the research model (Hair et al.,2017). The first loading factor calculation eliminates 5 indicator items consisting of EK02, GEI01, GEB02, GEB03, and GEB04. This item has a loading factor value below 0.7 and then the model is calculated in the second stage. In the second stage, delete the EK03 indicator and the model is calculated again in the third stage. In this third stage, the model is valid because the construct building indicators already have a value above 0.7 as in Figure 1 above and the table below.

Table 1. Valid Measurement Model

Indikator	Environmental Knowledge (EK)	Green Product (GP)	Environmentally friendly entrepreneur behavior (EFEB)	Environmentally friendly entrepreneur intentions (EFEI)
EK01	0,778			
EK04	0,784			
EK05	0,858			
EK06	0,876			
EFEB01			0,871	
EFEB05			0,767	
EFEI02				0,754
EFEI03				0,740
EFEI04				0,842
EFEI05				0,769
GP01		0,702		
GP02		0,725		
GP03		0,820		
GP04		0,720		
GP05		0,758		
GP06		0,738		
GP07		0,743		

Structural model

After building a reliable and accurate measurement model, the next stage is to estimate the causal linear relationship and covariance between exogenous (independent) and endogenous (dependent) latent variables. SEM-PLS was used to evaluate overall model fitting. The structural model was tested using path coefficients, coefficient of determination (R2), effect size (f2), and predictive relevance (Q2).

Path coefficient

The relationship between exogenous and endogenous variables was investigated using the bootstrap technique with resampling (5,000 resamples) (Hair et al.,2017). The PLS Bootstrapping method is used to produce t values which are used to determine the significance of the regression coefficient (β). The significance of each was assessed using the t-statistic output, for each predicted

path. The hypothesis is accepted if the t statistics value is greater than 1.96 and the P value is smaller than 5%. The table below shows the path coefficients, observed t-statistics, and significance levels (results from Bootstrapping).

Table 2. Path Coefficients, t-statistics, and Significance Levels

Hipotesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
H1 : Environmental Knowledge -> Environmentally friendly entrepreneur intentions	0,673	0,685	0,059	11,475	0,000	Accepted
H2: Environmental Knowledge -> Environmentally friendly entrepreneur behavior	0,257	0,240	0,096	2,670	0,008	Accepted
H3: Environmental Knowledge -> Green Product	0,616	0,625	0,086	7,184	0,000	Accepted
H4: Environmentally friendly entrepreneur intentions -> Environmentally friendly entrepreneur behavior	0,552	0,574	0,085	6,512	0,000	Accepted
H5: Environmentally friendly entrepreneur behavior -> Green Product	0,143	0,143	0,095	1,508	0,002	Rejected

Based on the statistical T value obtained from the results of the calculation hypothesis, it shows that the environmental knowledge variable has a significant influence on the intentions of environmentally friendly entrepreneurs, the behavior of environmentally friendly entrepreneurs and green products. Meanwhile, the intentions of environmentally friendly entrepreneurs have a significant influence on the behavior of environmentally friendly entrepreneurs. This can be seen. that the T-statistic value is > 1.96 and the P value is less than 5%, and the environmentally friendly entrepreneur variable does not have a significant influence on green products because the t-statistic value is < 1.96

Coefficient of Determination (R^2)

The coefficient of determination (R^2) is a measure of how much influence the independent variable has on the dependent variable. The percentage of the dependent variable or treatment variable explained by the independent variable is shown by R^2. The R^2 value is the percentage of variance in the dependent variable that can be explained by the independent variable. According to Hair et al. (2017) the R^2 criteria consists of three classifications, namely R^2 values of 0.67, 0.33 and 0.19 as substantial, moderate and weak. The Smart PLS algorithm function is used to calculate the R^2 value, while the Smart PLS bootstrapping function is used to calculate the t-statistic value in this study. The table below informs about the R^2 value.

Table 3. R^2 value

Construct	R Square
Green Product	0,511
Environmentally friendly entrepreneur behavior	0,562
Environmentally friendly entrepreneur intentions	0,452

Based on table 3 above, it can be interpreted that environmental knowledge, intentions and behavior of environmentally friendly entrepreneurs explain green products by 51%. It can be said that environmental knowledge, intentions and behavior of environmentally friendly entrepreneurs influence green products moderately. Likewise, the behavior of environmentally friendly entrepreneurs has an R Square value of 56%, meaning that environmental knowledge and the intentions of environmentally friendly entrepreneurs influence the behavior of environmentally friendly entrepreneurs moderately and the intentions of environmentally friendly entrepreneurs

have an R Square value of 45%, meaning that environmental knowledge influences the intention of environmentally friendly entrepreneurs moderately.

Effect Size

Changes in the R^2 value can be used to see whether the influence of exogenous constructs on endogenous constructs has a substantive effect. This can be measured using an effect size (f^2) assessment. If the f^2 value is 0.02 then it has a weak influence, while 0.15 has a moderate influence and a value of 0.35 has a strong influence (Hair et al.,2017). The table below will provide information on the f2 value.

Table 4. f^2 value

Path	f^2	Effect size
Environmental Knowledge -> Environmentally friendly entrepreneur intentions	0,826	strong
Environmental Knowledge -> Environmentally friendly entrepreneur behavior	0,083	weak
Environmental Knowledge -> green product	0,469	strong
Environmentally friendly entrepreneur intentions -> Environmentally friendly entrepreneur behavior	0,382	strong
Environmentally friendly entrepreneur behavior -> green product	0,025	weak

Referring to table 4 above, it can be seen that what has a strong path is environmental knowledge towards the intentions of environmentally friendly entrepreneurs and green products as well as the intentions of environmentally friendly entrepreneurs towards environmentally friendly business behavior, while environmental knowledge towards the behavior of environmentally friendly entrepreneurs has a weak path as well as the behavior of environmentally friendly entrepreneurs towards green products.

Relevance of predictions (Q^2)

Q^2 is used as an indicator of the model's predictive relevance. Predictive relevance test (Q^2) was applied to determine the predictive relevance of the independent variables in the model. A Q^2 value greater than zero for a specific reflective endogenous latent variable indicates the model has predictive relevance, while a Q^2 value less than zero indicates less predictive relevance (Hair et al.,2017). The results of the predictive relevance test (Q^2) are presented in the table below.

Table 5. Predictive Relevance Test Results (Q^2)

Construct	Predictive relevance (Q^2)
Green product	0,567
Environmentally friendly entrepreneur behavior	0,345
Environmentally friendly entrepreneur intentions	0,236

Based on table 5 above, the structural model has predicted relevance. This means that environmental knowledge is suitable as an explanatory variable that is able to predict the intentions of environmentally friendly entrepreneurs, then environmental knowledge and the intentions of environmentally friendly entrepreneurs are suitable as explanatory variables that are able to predict the behavior of environmentally friendly entrepreneurs. Finally, environmental knowledge, intentions and behavior of environmentally friendly entrepreneurs are suitable as explanatory variables capable of predicting green products.

The results of data analysis show that the knowledge that palm oil managers have regarding the environment has a positive influence on environmentally friendly intentions in West Sumatra. This means that by gaining comprehensive environmental knowledge, the manager's intention to be environmentally friendly will be formed and vice versa, if environmental knowledge is low then the manager's intention to manage the environment will not be formed. It can be said that managers' knowledge of the environment plays an important role in forming environmentally friendly intentions. This is confirmed by previous studies such as (Belz & Binder,

2017; Farny, 2016;Hooi, Ahmad, Amran, & Rahman, 2016; Hörisch, 2016; Bell & Stellingwerf, 2012; Kasimu, Peter, & Peter, 2018;. Frese & Gielnik, 2014; Kasimu et al., 2018; Zacher & Frese, 2018) that the process of developing environmentally friendly entrepreneurial intentions begins with environmental knowledge so that future entrepreneurs have information about the activities carried out to successfully start and run a friendly entrepreneurial business. environment.

Based on the results of the processed data, it shows that environmental knowledge has a positive influence on the behavior of environmentally friendly managers in the palm oil processing industry in West Sumatra. This means that the wider the manager's knowledge of the environment obtained from environmental education, the greater the possibility that the manager will have an environmentally friendly entrepreneurial spirit. Then managers of the palm oil industry in West Sumatra have significant environmental knowledge regarding environmentally friendly behavior. This means that environmental knowledge plays an important role in forming environmentally friendly behavior. The results of this research are in line with (Tudor, Barr & Gilg, 2018; Chan et al., 2014; Zsoka et al., 2013; Safari et al.,2018; Chan, 2019; Ibrahim et al., 2019) that environmental knowledge will influencing an individual's environmentally friendly behavior.

The results of this research are in accordance with studies conducted by (Redman, 2014; J.Li et al., 2019) which found that environmental knowledge has a positive and significant impact on green products, meaning that producers have complete and accurate knowledge about environmental issues. like managers, they can create environmentally friendly products so that consumers' high needs and desires for environmentally friendly products can be fulfilled and vice versa, when the management process has low environmental knowledge, they are unable to create environmentally friendly products. Then significant can be interpreted as an environmentally friendly product that can be realized with the role of management knowledge regarding the environment.

The research results show that the intention of environmentally friendly entrepreneurs has a positive and significant effect on the behavior of environmentally friendly entrepreneurs in the palm oil industry in West Sumatra. This means that intention is the best predictor of planned behavior. Entrepreneurs' intentions have been a focus of entrepreneurship research because entrepreneurship is generally seen as intentional behavior and entrepreneurs' behavior is the result of intentions. The results of this research are in accordance with TPB theory, in this theory defines intention as an individual's readiness to engage in entrepreneurial behavior or commitment to creating a new business, which means, the stronger the manager's intention to engage in environmentally friendly behavior, the greater the possibility that the actual behavior will be achieved. TPB theory also explains that there is a significant positive influence of intention on entrepreneur behavior. The stronger the manager's intention to engage in environmentally friendly behavior, the more likely they will start new activities. It was confirmed by (de Leeuw, Valois, Ajzen, & Schmidt, 2015) that the intention shown through environmentally friendly behavior is a direct antecedent of environmental protection behavior.

CONCLUSION

This research concludes that the knowledge that palm oil managers have regarding the environment has a positive influence on environmentally friendly intentions, environmentally friendly manager behavior and green products in the palm oil industry in West Sumatra. This means that by gaining comprehensive environmental knowledge, the manager's intention to be environmentally friendly will be formed, and conversely, if environmental knowledge is low, the manager's intention to manage the environment will not be formed, and the wider the manager's knowledge of the environment obtained from environmental education, the greater it will be. it is likely that managers will have an entrepreneurial spirit that is environmentally friendly. Furthermore, with complete and accurate knowledge about environmental issues that managers

have, they can create environmentally friendly products so that consumers' high needs and desires for environmentally friendly products can be fulfilled and vice versa, when the management process has low environmental knowledge, they are unable to create environmentally friendly products.

The intention of environmentally friendly entrepreneurs has a positive and significant effect on the behavior of environmentally friendly entrepreneurs in the palm oil industry in West Sumatra. This means that intention is the best predictor of planned behavior. Environmentally friendly behavior thus influences environmentally friendly products, meaning that if managers want to develop environmentally friendly products successfully then they must use the concept of an environmentally friendly mindset which is demonstrated by environmentally friendly behavior and vice versa. Practical recommendations for palm oil industry managers to improve environmental knowledge so that managers can produce environmentally friendly palm oil and get a green predicate so as not to pollute the environment. These findings contribute to the existing literature such as the development of research variables such as institutional support, in forming entrepreneurial attitudes through environmental awareness. The limitation of the study is that the number of samples is limited to PROPER companies in West Sumatra and for further research it is recommended to conduct research at a wider level such as PROPER companies at the national level.

References

Ahmad, S., Islam, T., Sadiq, M., & Kaleem, A. (2021). Promoting green behavior through ethical leadership: a model of green human resource management and environmental knowledge. *Leadership & Organization Development Journal*, *42*(4), 531–547.

Ali, F., Ciftci, O., Nanu, L., Cobanoglu, C., & Ryu, K. (2021). Response rates in hospitality research: An overview of current practice and suggestions for future research. *Cornell Hospitality Quarterly*, *62*(1), 105–120.

Amri, I., Meldha, Z., Herman, S., Karmila, D., & Ramadani, M. F. (2023). Effects of electric voltage and number of aluminum electrodes on continuous electrocoagulation of liquid waste from the palm oil industry. *Materials Today: Proceedings*, *87*, 345–349.

Ariffin, S., Yusof, J. M., Putit, L., & Shah, M. I. A. (2016). Factors influencing perceived quality and repurchase intention towards green products. *Procedia Economics and Finance*. https://www.sciencedirect.com /science/article/pii/S2212567116301423

Ayompe, L. M., Schaafsma, M., & Egoh, B. N. (2021). Towards sustainable palm oil production: The positive and negative impacts on ecosystem services and human wellbeing. *Journal of Cleaner Production*, *278*, 123914.

Bell, J., & Stellingwerf, J. (2012). *Sustainable entrepreneurship: The motivations and challenges of sustainable entrepreneurs in the renewable energy industry*.

Belz, F. M., & Binder, J. K. (2017). Sustainable entrepreneurship: A convergent process model. *Business Strategy and the Environment*, *26*(1), 1–17.

Bougie, R., & Sekaran, U. (2019). *Research methods for business: A skill building approach*. John Wiley & Sons.

Cisneros, E., Kis-Katos, K., & Nuryartono, N. (2021). Palm oil and the politics of deforestation in Indonesia. *Journal of Environmental Economics and Management*, *108*, 102453.

Farny, S. (2016). *Revisiting the nexus of entrepreneurship and sustainability-towards an affective and interactive framework for the sustainability entrepreneurship journey*.

Farobie, O., & Hartulistiyoso, E. (2022). Palm oil biodiesel as a renewable energy resource in Indonesia: current status and challenges. *Bioenergy Research*, 1–19.

Farrukh, M., Ansari, N., Raza, A., Wu, Y., & Wang, H. (2022). Fostering employee's pro-environmental behavior through green transformational leadership, green human resource management and environmental knowledge. *Technological Forecasting and Social Change*, *179*, 121643.

Frese, M., & Gielnik, M. M. (2014). The psychology of entrepreneurship. *Annu. Rev. Organ. Psychol. Organ. Behav.*, *1*(1), 413–438.

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*.

Hooi, H. C., Ahmad, N. H., Amran, A., & Rahman, S. A. (2016). The functional role of entrepreneurial orientation and entrepreneurial bricolage in ensuring sustainable entrepreneurship. *Management Research Review*.

Hörisch, J. (2016). *Entrepreneurship as Facilitator for Sustainable Development? Editorial for the Special Issue "Advances in Sustainable Entrepreneurship."* Multidisciplinary Digital Publishing Institute.

Huang, P.-S., & Shih, L.-H. (2009). Effective environmental management through environmental knowledge management. *International Journal of Environmental Science & Technology*, *6*(1), 35–50.

Kahar, P., Rachmadona, N., Pangestu, R., Palar, R., Adi, D. T. N., Juanssilfero, A. B., Manurung, I., Hama, S., & Ogino, C. (2022). An integrated biorefinery strategy for the utilization of palm-oil wastes. *Bioresource Technology*, *344*, 126266.

Kasimu, S., Peter, T., & Peter, T. (2018). Sustainable entrepreneurship intention among university students in Uganda: A conceptual paper. *African Journal of Business Management*, *12*(6), 131–139. https://doi.org/10.5897/ajbm2017.8447

Khatiwada, D., Palmén, C., & Silveira, S. (2021). Evaluating the palm oil demand in Indonesia: production trends, yields, and emerging issues. *Biofuels*, *12*(2), 135–147.

Limaho, H., Sugiarto, Pramono, R., & Christiawan, R. (2022). The need for global green marketing for the palm oil industry in Indonesia. *Sustainability*, *14*(14), 8621.

Martínez-Martínez, A., Cegarra-Navarro, J.-G., & Garcia-Perez, A. (2023). Sustainability knowledge management and organisational learning in tourism: Current approaches and areas for future development. *Knowledge Management, Organisational Learning and Sustainability in Tourism*, 1–13.

Martínez-Martínez, A., Cegarra-Navarro, J.-G., & García-Pérez, A. (2015). Environmental knowledge management: A long-term enabler of tourism development. *Tourism Management*, *50*, 281–291.

Ong, E. S., Rabbani, A. H., Habashy, M. M., Abdeldayem, O. M., Al-Sakkari, E. G., & Rene, E. R. (2021). Palm oil industrial wastes as a promising feedstock for biohydrogen production: A comprehensive review. *Environmental Pollution*, *291*, 118160.

Papilo, P., Marimin, M., Hambali, E., Machfud, M., Yani, M., Asrol, M., Evanila, E., Prasetya, H., & Mahmud, J. (2022). Palm oil-based bioenergy sustainability and policy in Indonesia and Malaysia: A systematic review and future agendas. *Heliyon*, *8*(10).

Rogelberg, S. G., & Stanton, J. M. (2007). Introduction: Understanding and dealing with organizational survey nonresponse. In *Organizational research methods* (Vol. 10, Issue 2, pp. 195–209). Sage Publications Sage CA: Los Angeles, CA.

Sdrolia, E., & Zarotiadis, G. (2019). A comprehensive review for green product term: From definition to evaluation. *Journal of Economic Surveys*, *33*(1), 150–178.

Tseng, S.-C., & Hung, S.-W. (2013). A framework identifying the gaps between customers' expectations and their perceptions in green products. *Journal of Cleaner Production*, *59*, 174–184.

Yi, G. (2021). From green entrepreneurial intentions to green entrepreneurial behaviors: The role of university entrepreneurial support and external institutional support. *International Entrepreneurship and Management Journal*, *17*(2), 963–979.

Zacher, H., & Frese, M. (2018). *Action regulation theory: Foundations, current knowledge and future directions.*

Zahl-Thanem, A., Burton, R. J. F., & Vik, J. (2021). Should we use email for farm surveys? A comparative study of email and postal survey response rate and non-response bias. *Journal of Rural Studies*, *87*, 352–360.