

Sustainable Palm Oil Investment Climate in Indonesia: Foreign and Domestic Promotion by the Local Government

Nina Yusraini^{1*}, Andriyus², Doris Febriyanti³, Agung Wicaksono⁴

¹ Department of Government Studies, Universitas Islam Riau, Indonesia

² Department of Government Studies, Universitas Islam Riau, Indonesia

³ Department of Government Studies, Universitas Indo Global Mandiri, Indonesia

⁴ School of International Relations and Political Science, Corvinus University of Budapest, Hungary

*Corresponding Author Email: ninayusraini@soc.uir.ac.id

Received: 9 December 2023; Revised: 25 March 2024; Accepted: 31 March 2024

Abstract

This paper focuses on foreign and domestic palm oil investment promotion strategies in Dumai, Indonesia, to assess the sustainable development investment climate. Exploratory qualitative research is conducted with a case study to examine the foreign and domestic oil palm investment climate. The researchers employed NVivo 12 Plus software and the Biblioshiny application to collect, analyse and visualise bibliometric data. The research indicates that the Dumai government has pursued a strategy to stabilise the foreign and domestic palm oil investment climate by conducting promotions abroad and domestically. The conclusions show that the oil palm investment climate has been unable to positively contribute to economic, social and environmental growth in sustainable development in Dumai. Positive impacts of oil palm investment include offering livelihoods, creating new jobs and increasing local revenue. This research aids the government of Dumai in improving the global palm oil sustainable development investment climate.

Keywords: Government Strategy; Investment; Palm Oil; Sustainable Development

Copyright © 2024 by Authors, Published by Pusat Penelitian Ilmu Sosial dan Humaniora Kontemporer, Indonesia. This is an open access article under the CC BY-SA License (<https://creativecommons.org/licenses/by-sa/4.0>).

How to Cite: Yusraini, N., Andriyus, A., Febriyanti, D., & Wicaksono, A. (2024). Sustainable Palm Oil Investment Climate in Indonesia: Foreign and Domestic Promotion by the Local Government. *Journal of Contemporary Governance and Public Policy*, 5(1), 71-86. <https://doi.org/10.46507/jcgpp.v5i1.266>

Permalink/DOI: <https://doi.org/10.46507/jcgpp.v5i1.266>

Introduction

The global economy greatly affects businesses facing various challenges in a competitive economy (García-Quevedo et al., 2020; Prasanna et al., 2019). The development of information and communication technology has brought about major global changes in various economic and social sectors, including the palm oil industry (Lim et al., 2021; Teng et al., 2020). Global conditions and technological sophistication have had a considerable impact on today's business environment (Kano et al., 2020; Litvinenko, 2020; Shahzad et al., 2022). In an intensely competitive business environment, it is challenging for businesses to exploit opportunities and maintain their position for the long term (Klein & Todesco, 2021). To maintain a competitive advantage, industries must have a strong strategy to navigate the business technology environment (Klein & Todesco, 2021; Kottika et al., 2020). This competitive imperative derives from the magnitude of competition in today's global era of rapidly developing technology and information (Munirathinam, 2020; Troise et al., 2022). This competitive environment drives companies to substantially change production, marketing, consumer and human resource management (Sima et al., 2020).

Globalisation has changed many industries (Miller et al., 2022), including palm oil in Dumai, Indonesia. The government's initiatives for domestic and foreign investments in palm oil for sustainable development in Dumai are the subject of this study. As previous research shows, palm oil is a remarkable and significant product – one of the largest plantation industries in Southeast Asia (Naidu & Moorthy, 2021; Teng et al., 2020). Santika et al. (2019) showed that oil palm can boost the community's economy, thereby reducing the socioeconomic gap in the local community. Indonesia has many oil palm plantations in comparison with other countries such as Malaysia, Nigeria, Thailand and Colombia. Although Indonesia has been developing palm oil since 1980, many problems remain regarding investment in the sector, such as fluctuating annual investment realisation (Chrisendo et al., 2021; Yuliani et al., 2020).

The government of Dumai is working on the potential of the palm oil sector to attract both foreign and domestic investment (Goh et al., 2016; Yuslimi, Suwaryo, et al., 2023). Dumai is strategically positioned to support import and export activities of domestic and foreign products. The city also offers business prospects, such as the establishment of an international free trade zone (Abidin et al., 2023). With many industries developing, Dumai has become a city of petroleum management and crude palm oil processing (Purnomo et al., 2019).

Indonesia is a developing country in Southeast Asia that suffers from many of the same issues as other emerging nations (Deng et al., 2020). Dumai must embrace initiatives to accelerate development to match advanced economies in the world (Berawi et al., 2021). Economic, social and environmental growth is needed in Indonesia, especially in Dumai, which can be aided by measures such as investment policy planning based on the potential of each region from a local, national and international perspective (Miller & Tonoto, 2023; Syahza & Asmit, 2019).

Regarding investment realisation, Dumai was ranked first in 2023 in the Sumatra region of Indonesia with a realisation amount of 12.75 trillion rupiah. The realisation of foreign and domestic investment in Dumai can be seen in Table 1.

Table 1. Realisation of Foreign and Domestic Investment in Riau Province in 2023
Source: Processed by Authors (2023)

Foreign and Domestic Investment in Rupiah		
Province	Project	Investment (Rp)
Riau	2,714	23,771,382,148,139
Sumatera Utara	2,843	10,894,327,716,181
Sumatera Selatan	4,655	10,259,461,276,000
Kepulauan Riau	3,660	7,032,671,375,701
Kepulauan Bangka Belitung	3,566	4,759,338,387,206
Aceh	992	3,296,988,833,495
Lampung	767	3,209,428,571,141
Jambi	1,471	3,051,013,240,261
Lampung	1,747	2,752,528,044,003
Sumatera Barat	1,254	1,279,598,929,894

Table 1 shows that Riau Province's investment realisation is ranked first, with an investment amount of 23.8 trillion rupiah for a domestic and foreign investment realisation of US\$372,028.80. With its significant realisation of investment, Dumai has consistently applied the principle of sustainable development for its oil palm plantations because oil palm not only represents an upstream investment but also a significant downstream source of revenues. Oil palm investment nationally and internationally contributes to the government and the people of Indonesia as well as the global economy (Nesadurai, 2019; Pramudya et al., 2022).

As one of the industrial cities in Riau Province, Dumai City is inseparable from the palm oil industry, which is downstream of palm oil investment. Table 2 suggests Dumai City is attractive for investment, particularly for the palm oil industry.

Overall planning and real investment are needed to strengthen the government of Dumai's strategy for developing investment in the palm oil industry. Promotion is crucial given the enthusiasm of both foreign and domestic investors for the development of the palm oil industry (Brandão et al., 2021; Jacobsen & Johnsen, 2020). In addition, the arrangement of the map of potential markets is a crucial aspect that cannot be separated

from the promotion programme. Although palm oil is the main focus and destination of investments, Dumai has other potential markets that ideally can be explored, developed and maximised by the government of Dumai through promotional programmes. Other examples of plantation investment opportunities include areca nut, pineapple farming, fisheries investments – including canning fish nuggets – and others. However, palm oil investment is still the iconic investment both now and in the future globally (Chapman et al., 2022; Gills & Morgan, 2022; Lusiana et al., 2023). Downstream businesses from palm oil investments include sectors such as crude palm oil, margarine, biodiesel, soap and others (Falatehan & Setiawan, 2020). These revenue sources are factors investors consider when choosing suitable investments in Dumai.

Table 2. Investment and Labour Absorption in Dumai City in 2023
Source: Processed by Authors (2023)

Regency/City	Project	Domestic Investment		
		Investment (Rp)	Indonesian Workers	Foreign Workers
Dumai	76	3,270,887,900,000	305	1
Siak	78	2,592,474,200,000	1,816	–
Indragiri Hilir	72	2,153,775,700,000	2,222	1
Indragiri Hulu	69	1,916,065,800,000	237	–
Rokan Hulu	58	1,086,709,000,000	1,800	–
Pekanbaru	512	1,071,147,000,000	813	–
Pelalawan	68	924,096,500,000	237	–
Kampar	213	790,776,200,000	340	2
Kuantan Singingi	18	328,030,500,000	14	–
Bengkalis	123	199,418,400,000	133	–
Rokan Hilir	28	131,185,600,000	1,787	–
Kepulauan Meranti	8	16,220,300,000	3	–

Oil palm plantations are a promising investment both now and in the future. Safriyana et al. (2021) found that the development of oil palm plantations in Riau Province, Indonesia, is extensive because oil palm is a superior plantation commodity. Research by Zhang et al. (2020) showed that oil palm farms in Riau Province have a variety of effects on the local economy, particularly in terms of job creation. In Dumai, this development may also have a cascading effect that widens the distribution of power.

Previous research has discussed many developments in palm oil, including downstream sectors of the palm oil industry (Pye, 2019; Septiarini et al., 2021). This study employs novel techniques using the Biblioshiny application to analyse topics examined by previous researchers and their countries of origin, as well as keywords used

in previous studies (Le Thi Thu et al., 2021). The Scopus database was used for data collection to identify relevant research topics and assess the development of research. The Scopus search was conducted in October 2023, with the keywords 'Development AND Sustainability AND Palm Oil AND Investment'. This research forms the foundation of this study focusing on foreign and domestic palm oil investment promotion programmes of the government of Dumai. The data obtained with the search keywords referred found 26 articles, which analysed facts and sources from the Biblioshiny application. The authors' contributions can be seen in Figure 1.

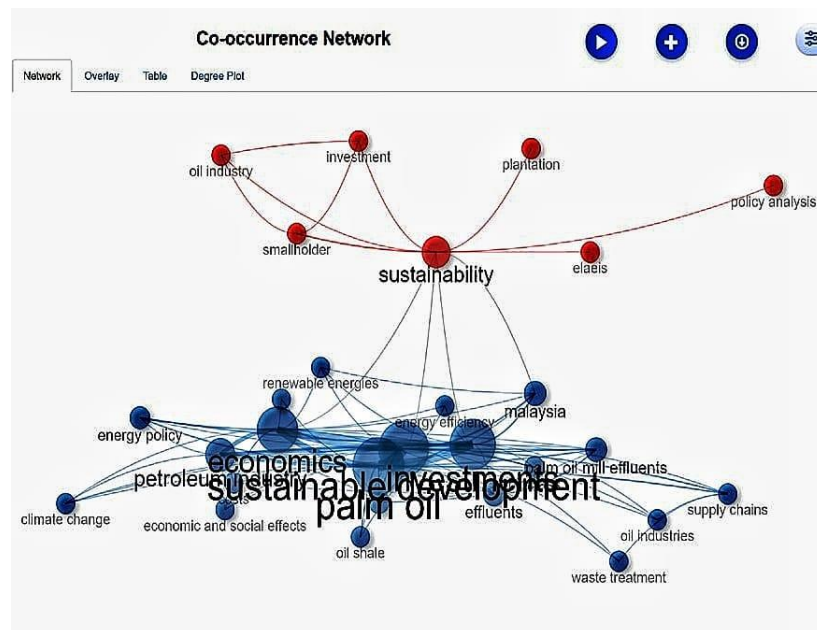


Figure 1. Co-Occurrence Network

Source: Processed through Biblioshiny application from Scopus database (2023)

As seen in Figure 1, the researcher used the Co-Occurrence Network on the Scopus database to undertake research on themes linked to the sustainable development of palm oil. Using 26 data points, Biblioshiny software's research mapping revealed that sustainable oil palm production remains uncommon, particularly in studies carried out in Dumai. Five key trending issues include (1), the petroleum industry, (2), the economy, (3), investment, (4), sustainable development, and (5) palm oil. To our best knowledge, no one has examined the Indonesian government's strategy in foreign and domestic palm oil investment. Researchers have conducted studies because challenges related to sustainable development are still being faced today, as seen by the pattern of prior studies published with themes based on the mapping in Figure 1.

This study examines the government's strategy for increasing foreign and domestic palm oil investment in Dumai with a view toward sustainable development. The realisation of foreign and domestic palm oil investment remains unstable. The Indonesian administration of Dumai intends to bolster investment in the palm oil industry through both domestic and international promotional measures. To understand this issue, the

researcher has crafted a theoretical definition of a promotion programme to empirically test oil palm investment in Dumai. The research questions include RQ1, ‘What is the strategy of the government of Dumai to increase foreign and domestic oil palm investment for sustainable development?’ and RQ 2, ‘What is the foreign and domestic oil palm investment climate in Dumai?’.

The results of this research can inform Dumai government policies for carrying out foreign and domestic palm oil investment promotion strategies for sustainable development. This study also provides input to the government, particularly at the investment office, and one-stop, integrated services for strategies creating a conducive investment climate.

Research Methods

This research examines the Dumai government’s strategy to stimulate foreign and domestic investment in sustainable oil palm development. Dumai was selected for the study location because of its strategic location on the border of Malaysia and Singapore, which has the busiest shipping in the world. The study uses a qualitative method with an exploratory approach (Creswell et al., 2007; Gallagher & Savage, 2023; McGowan et al., 2020). The purpose of this research is to produce in-depth findings that describe actual circumstances that cannot be measured by numbers. The study obtained qualitative data analysis results using NVivo 12 Plus software (Allsop et al., 2022).

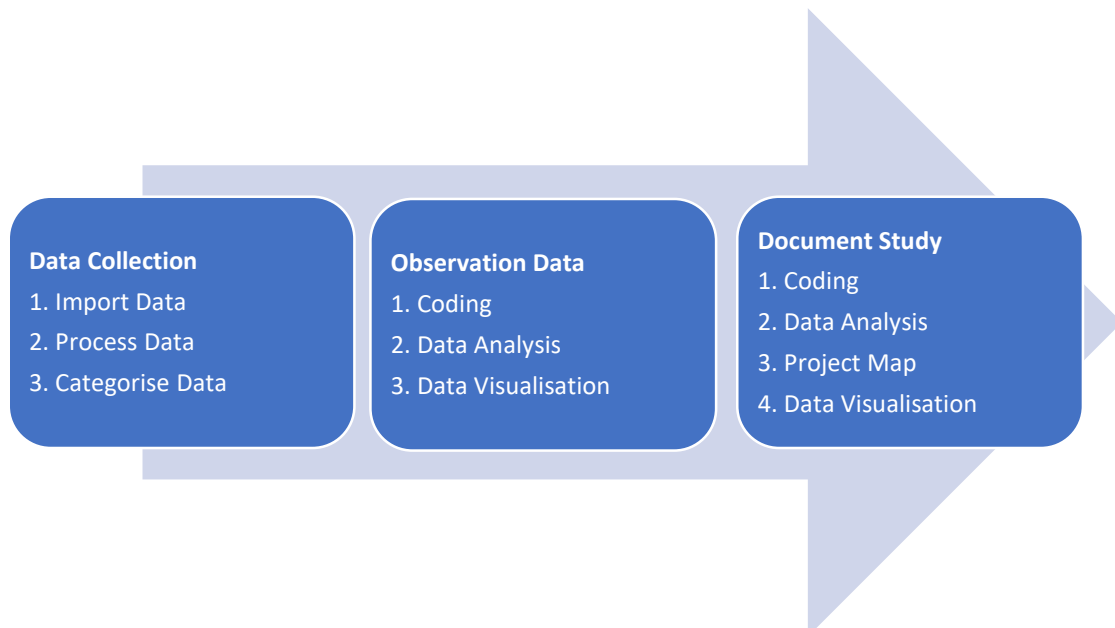


Figure 2. Co-Occurrence Network
Source: Processed by Authors (2023)

This research also uses the Biblioshiny application, which is a web-based application specifically designed for bibliometric analysis. The application was created to make it easier for researchers to analyse scientific literature, providing various tools and

features that can be used to collect, analyse and visualise bibliometric data. The researchers chose this method because the relevant data is usually secondary data, such as government websites, electronic documents, statistical data and digital reports on the Dumai palm oil sector. This study examines government strategies for foreign and domestic investment in sustainable oil palm development in Dumai plantations. Secondary data processed consisted of electronic documents, reports, government websites, palm oil investment statistics, various studies and social media trends related to foreign and domestic palm oil investment.

Data were obtained through field observations, a literature review (Pranckutė, 2021) and examining documentation to obtain information. Data researched include the amount of money invested in oil palm in Dumai both locally and internationally. The following section describes our procedures for gathering qualitative data.

As shown in Figure 2, we used qualitative methods to analyse data using NVivo 12 Plus software (Allsop et al., 2022). We categorised the research concept into three areas. (1) The process of gathering and examining as much information as may be immediately viewed and recorded as possible is known as data collection. This type of data is numerical. (2) The process of gathering research data through field observations of actual events and circumstances is known as data observation. (3) A technique for gathering data is called a documentation study, involving looking through documents to find information about the issue being researched. In this research method, there are shortcomings and weaknesses of qualitative research, namely that it is too subjective, depending on the character of the researcher. To address this shortcoming, researchers triangulate their data and methods. The veracity of the data is also double-checked, and the appropriateness of the chosen methodologies is examined.



Figure 3. Word Cloud on Growth of Sustainable Investment in Indonesian Palm Oil
Source: Analysis Using NVivo 12 Plus (2023)

Qualitative data represents information that is analysed and obtained through clear, interactive data analysis techniques (Cassell & Bishop, 2019). Data presentation, data verification and conclusion-drawing provide an explanation of the stages involved in technical and interactive analysis. The NVivo 12 Plus program was used to assess and

identify research topics related to domestic and foreign palm oil investment in sustainable development, as illustrated in Figure 3.

Using data shown in Figure 3, this research (1) analysed whether oil palm is sustainable in Dumai, (2) derived fundamental conclusions about local and international investment in palm oil drawn from the data findings, and (3) conducted analysis based on the goals of the study after making deductions. The researcher triangulated data, verified the applicability of the approach and examined the data's veracity.

This research discusses the concept of investment strategies for the palm oil industry to examine foreign and domestic investment issues, such as environmentally friendly technology financing for sustainability programmes, relevant friendly technology financing regulations and social and environmental interests.

Results and Discussion

One of the government's strategies for increasing domestic and foreign investment is through promotional programmes at home and abroad (Luo et al., 2010; Osano, 2019; Zhan & Santos-Paulino, 2021). Promotion is decisive in addition to acting as the main corridor providing clarity of information related to potential investment opportunities for investors or business actors (Azubuike et al., 2023; Schachenhofer et al., 2023; Yusraini, Sumadinata, et al., 2023). It is certain that one of the basic foundations in boosting investment progress is through an innovative promotional agenda and sustainable development targeting investors both outside and within the country. Development in Dumai would inevitably slow in the absence of ongoing promotion as the general public is unaware of the extent of possible investment opportunities in the city. Dumai City has many investment opportunities, particularly in the palm oil industry, and promotion programmes are essential to attract investors both at home and abroad so they can increase investment realisation, particularly for palm oil.

As Evans and French (2021) observed, 'promotion' is any form of communication used to inform, persuade and remind the target market about products produced by organisations, individuals or households. This definition is reinforced by Lahtinen et al. (2020), who remarked that promotion is one of the variables in the marketing mix that is vital for companies or organisations to implement when marketing service products. Promotional activities not only function as a means of communication between companies and consumers but also as a tool to influence consumers in purchasing or using services according to their wants and needs. Investment in Dumai is attractive to investors. If the Dumai government can maximise this appetite, there are also many other opportunities apart from the palm oil industry that are no less attractive to investors.

Researchers have also elaborated on the investment implementation control programme. Control of the implementation of investments is under the authority of the city region, which is carried out through the activities of coordinating and synchronising (1) the monitoring of investment implementation, (2) guidance on investment implementation, and (3) the supervision of investment implementation.

Investment promotion must be conducted to mobilise a business climate conducive to investment, thereby improving the national and international economy and increasing investment in the short and long term (Su et al., 2021; Zhan & Santos-Paulino, 2021). In the context of government, an investment promotion strategy not only includes local regulations but also various tools to promote investment in the region as well as investment targets a region wants to achieve in a specified period (Mayer, 2021; Song et al., 2021). Regarding the above description and aligned with Forestier and Kim (2020), government strategy can be viewed as a pattern of goals, policies, programmes of action, decisions or resource allocations that define how the organisation functions, what it does and why it does it. The preparation of government strategies considers the goals and objectives to be achieved in the future. Additionally, an organisation interacts with the environment where the government strategy will be implemented, ensuring the strategy does not conflict but is in line and in accordance with environmental conditions. The organisation also examines internal and external capabilities, including the strengths and weaknesses of the organisation (Awang et al., 2021; Desouza et al., 2020; Fatmawati et al., 2022). From this explanation, government strategy is an expansion of the mission to bridge the organisation with its environment (Fronidizi et al., 2019; Gong et al., 2020). Government strategy in general can fail when organisations lack consistency between what they say and what they do (Prianto et al., 2021; Semieniuk et al., 2021).

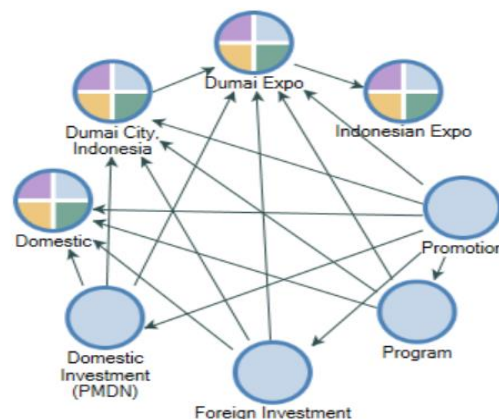


Figure 4. Government Promotional Strategies for Palm Oil Investment
Source: Analysis Using NVivo 12 Plus (2023)

The government has a part in spurring foreign and domestic palm oil investment. For Dumai City, the most important role for the realisation of investments is holding expo programmes both domestically and abroad. Expos are a form of promotional strategy for Dumai to attract foreign and domestic palm oil investment, for example, the Riau Expo, Dumai Expo and visits to other provinces, such as West Java. Overseas visits have also been conducted to neighbouring Malaysia, Brunei Darussalam, Singapore and Middle Eastern countries with the aim of increasing investment in Dumai. This activity is carried out annually.

This paper examines effects of the Dumai government's strategy for investing in the sustainable growth of both domestic and imported palm oil through both internal and international promotion efforts. Without promotion, investors will not know the potential that exists in Dumai to increase sustainable development in the palm oil sector. The government's commitment to the development of a sustainable palm oil industry is vital and must be supported by adequate human resources. As revealed in Table 3, the investment climate for sustainable oil palm development in Dumai remains fluctuating each year.

Table 3. Investment and Labour Absorption in Dumai City in 2023
Source: Processed by Authors (2023)

Type	Quarter I	Quarter II	Quarter III	Quarter IV	Total
Domestic	Rp 1,359,582,300,000	Rp 1,261,874,300,000	Rp 2,365,122,000,000	Rp 2,130,526,900,000	Rp 7,117,105,500,000.00
Foreign	\$309,279,000	\$61,882,500	\$13,822,000	\$20,863,200	\$405,846,700
	Rp 4,453,617,600,000	Rp 891,108,000,000	Rp 199,036,800,000	Rp 300,430,080,000	Rp 5,844,192,480,000
Total	Rp 5,813,199,900,000	Rp 2,152,982,300,000	Rp 2,564,158,800,000	Rp 2,430,956,980,000	Rp 12,961,297,980,000

Table 3 shows that the climate for foreign and domestic investment fluctuates annually. Ideally, investment realisation should rise to keep the business climate in Dumai conducive for investment. Regarding aspects of sustainable development, such as social, economic and environmental improvements in the community, the investment climate has a positive impact on socioeconomic development. For example, the absorption of local labour is an output from incoming investment in Dumai. The promotion of foreign and domestic palm oil investment improves welfare and national resilience in the economic and social fields of society through sustainable development.

The labour absorption ratio is the ratio between labour working in foreign and domestic companies. In Dumai, the labour absorption ratio has varied. Companies do not reflect a high number of workers because large companies absorb many workers while small companies have little absorption. Table 4 shows data on the number of foreign and domestic workers in the city of Dumai.

Table 4. Number Of Foreign And Domestic Workers in Dumai City in 2023
Source: Processed by Authors (2023)

Year	Foreign Workers	Domestic Labour	Percentage
2018	410	619	9.57%
2019	7	6	14.18%

The labour absorption ratios in 2018 and 2019 were 9.57% and 14.18%, respectively. These ratios demonstrate that investments in palm oil in Dumai do not contribute to sustainable development objectives, such as enhancing the socioeconomic environment. Based on existing laws in Indonesia, such as the mandatory Indonesian

Sustainable Palm Oil (ISPO) certification, which serves as a guide for the application of sustainable palm oil made and developed in accordance with Indonesian laws, the sustainably developed palm oil industry in Indonesia is commercially viable as well as socially and environmentally friendly. Sustainable palm oil is essential to national development goals, according to ISPO and in accordance with the mandate of the Indonesian State Constitution in Law Number 1945 article 33 father (4) and Law Number 32 of 2009 Concerning the Environment Article 1, Point (3). As stipulated in Presidential Regulation No. 44/2020, the strengthening of palm oil development will advance with two items, namely the implementation of sustainable development with the existence of ISPO and the enforcement of regulations to improve the quality and productivity of oil palm from start to finish, and a balanced approach to social, economic and environmental aspects.

Based on the research that has been conducted in light of the limitations of the study previously described, we suggest that further research is needed. First, future researchers should further examine what strategies must be added to increase foreign and domestic palm oil investment. Second, researchers should discuss the positive and negative impacts of palm oil investment on society regarding sustainable development.

Conclusion

The strategy of the government of Dumai is to conduct promotions both at home and abroad to increase investment in sustainable oil palm development, for example, participating in the Dumai Expo, Riau Expo and Indonesia Expo activities. In addition, the government of Dumai promotes abroad, such as to neighbouring Malaysia, Singapore, Brunei Darussalam, the European continent and the Middle East. With both abroad and domestic promotion, investment will increase. Promotion is the first step in carrying out a strategy to create a conducive investment climate for sustainable development because the increase in investment is believed to be able to boost the economy, social society, but the reality in the field shows that investment is still fluctuating every year and is directly proportional to the absorption of a small workforce, and has less impact on society as in the absorption of local and national labour, while absorbing more labour from abroad. The form of sustainable development is viewed from the economic, social and environmental aspects. Regarding environmental aspects such as the ISPO, which is a form of government regulation to support foreign and domestic palm oil investment in Dumai. Various strategies have been carried out by the government of Dumai to stabilise the investment climate, but the strategies are still not well realised to create sustainable development.

This research is not free from limitations; for instance, only the strategies of the government of Dumai regarding foreign and domestic investment in sustainable development are discussed. Promotion carried out by the government of Dumai still lacks city funding. Nevertheless, this study attempted to gather relevant information and policies to support this research, so that the findings are still objective and able to find new findings.

Acknowledgement

We would like to extend our appreciation to Universitas Islam Riau, Indonesia, and all the contributing authors for their assistance throughout the publication process of this paper.

References

- Abidin, Z., Adawiyah, W. R., Shaferi, I., & Sodiq, A. (2023). Financing innovation for sustainable supply chain management in social business: a case of Qurban rituals in Indonesia. *Journal of Islamic Accounting and Business Research*.
- Allsop, D. B., Chelladurai, J. M., Kimball, E. R., Marks, L. D., & Hendricks, J. J. (2022). Qualitative methods with Nvivo software: A practical guide for analyzing qualitative data. *Psych*, 4(2), 142–159.
- Awang, A. H., Rela, I. Z., Abas, A., Johari, M. A., Marzuki, M. E., Mohd Faudzi, M. N. R., & Musa, A. (2021). Peat land oil palm farmers' direct and indirect benefits from good agriculture practices. *Sustainability*, 13(14), 7843.
- Azubuike, S. I., Nakanwagi, S., & Pinto, J. (2023). Mining Resource Corridor development in Nigeria: critical considerations and actions for a diversified and sustainable economic future. *Mineral Economics*, 36(1), 59–75.
- Berawi, M. A., Basten, V., Muljono, T. E., & Gunawan, G. (2021). Urban Planning in the Context of Seatropolis City Through the Public–Private Partnership Scheme. *Collabouration and Integration in Construction, Engineering, Management and Technology: Proceedings of the 11th International Conference on Construction in the 21st Century, London 2019*, 47–52.
- Brandão, F., Schoneveld, G., Pacheco, P., Vieira, I., Piraux, M., & Mota, D. (2021). The challenge of reconciling conservation and development in the tropics: Lessons from Brazil's oil palm governance model. *World Development*, 139, 105268.
- Cassell, C., & Bishop, V. (2019). Qualitative data analysis: Exploring themes, metaphors and stories. *European Management Review*, 16(1), 195–207.
- Chapman, C. A., Abernathy, K., Chapman, L. J., Downs, C., Effiom, E. O., Gogarten, J. F., Golooba, M., Kalbitzer, U., Lawes, M. J., & Mekonnen, A. (2022). The future of sub-Saharan Africa's biodiversity in the face of climate and societal change. *Frontiers in Ecology and Evolution*, 10, 790552.
- Chrisendo, D., Siregar, H., & Qaim, M. (2021). Oil palm and structural transformation of agriculture in Indonesia. *Agricultural Economics*, 52(5), 849–862.
- Creswell, J. W., Hanson, W. E., Clark Plano, V. L., & Morales, A. (2007). Qualitative research designs: Selection and implementation. *The Counseling Psychologist*, 35(2), 236–264.
- Deng, J.-B., Wahyuni, H. I., & Yulianto, V. I. (2020). Labour migration from Southeast Asia to Taiwan: Issues, public responses and future development. *Asian Education and Development Studies*, 10(1), 69–81.
- Desouza, K. C., Dawson, G. S., & Chenok, D. (2020). Designing, developing, and deploying artificial intelligence systems: Lessons from and for the public sector. *Business*

Horizons, 63(2), 205–213.

- Evans, W. D., & French, J. (2021). Demand creation for COVID-19 vaccination: overcoming vaccine hesitancy through social marketing. *Vaccines*, 9(4), 319.
- Falatehan, A. F., & Setiawan, B. I. (2020). Economic risk characteristics of an Indonesian palm oil value chain and identifying sources of uncertainty in policy making. *Supply Chain Resilience: Reducing Vulnerability to Economic Shocks, Financial Crises, and Natural Disasters*, 109–137.
- Fatmawati, F., Mustari, N., Haerana, H., Niswaty, R., & Abdillah, A. (2022). Waste Bank Policy Implementation through Collaborative Approach: Comparative Study—Makassar and Bantaeng, Indonesia. *Sustainability (Switzerland)*, 14(13).
- Forestier, O., & Kim, R. E. (2020). Cherry-picking the Sustainable Development Goals: Goal prioritization by national governments and implications for global governance. *Sustainable Development*, 28(5), 1269–1278.
- Frondizi, R., Fantauzzi, C., Colasanti, N., & Fiorani, G. (2019). The evaluation of universities' third mission and intellectual capital: Theoretical analysis and application to Italy. *Sustainability*, 11(12), 3455.
- Gallagher, S. E., & Savage, T. (2023). Challenge-based learning in higher education: an exploratory literature review. *Teaching in Higher Education*, 28(6), 1135–1157.
- García-Quevedo, J., Jové-Llopis, E., & Martínez-Ros, E. (2020). Barriers to the circular economy in European small and medium-sized firms. *Business Strategy and the Environment*, 29(6), 2450–2464.
- Gills, B., & Morgan, J. (2022). Global climate emergency: After COP24, climate science, urgency, and the threat to humanity. In *Economics and Climate Emergency* (pp. 253–270). Routledge.
- Goh, C. S., Wicke, B., Versteegen, J., Faaij, A., & Junginger, M. (2016). Linking carbon stock change from land-use change to consumption of agricultural products: A review with Indonesian palm oil as a case study. *Journal of Environmental Management*, 184, 340–352.
- Gong, Y., Yang, J., & Shi, X. (2020). Towards a comprehensive understanding of digital transformation in government: Analysis of flexibility and enterprise architecture. *Government Information Quarterly*, 37(3), 101487.
- Jacobsen, D. I., & Johnsen, Å. (2020). Alignment of strategy and structure in local government. *Public Money & Management*, 40(4), 276–284.
- Kano, L., Tsang, E. W. K., & Yeung, H. W. (2020). Global value chains: A review of the multi-disciplinary literature. *Journal of International Business Studies*, 51, 577–622.
- Klein, V. B., & Todesco, J. L. (2021). COVID-19 crisis and SMEs responses: The role of digital transformation. *Knowledge and Process Management*, 28(2), 117–133.
- Kottika, E., Özsoy, A., Rydén, P., Theodorakis, I. G., Kaminakis, K., Kottikas, K. G., & Stathakopoulos, V. (2020). We survived this! What managers could learn from SMEs who successfully navigated the Greek economic crisis. *Industrial Marketing Management*, 88, 352–365.
- Lahtinen, V., Dietrich, T., & Rundle-Thiele, S. (2020). Long live the marketing mix. Testing the effectiveness of the commercial marketing mix in a social marketing context.

Journal of Social Marketing, 10(3), 357–375.

- Le Thi Thu, H., Tran, T., Trinh Thi Phuong, T., Le Thi Tuyet, T., Le Huy, H., & Vu Thi, T. (2021). Two decades of stem education research in middle school: A bibliometrics analysis in scopus database (2000–2020). *Education Sciences*, 11(7), 353.
- Lim, C. H., Lim, S., How, B. S., Ng, W. P. Q., Ngan, S. L., Leong, W. D., & Lam, H. L. (2021). A review of industry 4.0 revolution potential in a sustainable and renewable palm oil industry: HAZOP approach. *Renewable and Sustainable Energy Reviews*, 135, 110223.
- Litvinenko, V. S. (2020). Digital economy as a factor in the technological development of the mineral sector. *Natural Resources Research*, 29(3), 1521–1541.
- Luo, Y., Xue, Q., & Han, B. (2010). How emerging market governments promote outward FDI: Experience from China. *Journal of World Business*, 45(1), 68–79.
- Lusiana, B., Slingerland, M., Miccolis, A., Khasanah, N., Leimona, B., & van Noordwijk, M. (2023). Oil palm production, instrumental and relational values: the public relations battle for hearts, heads, and hands along the value chain. *Current Opinion in Environmental Sustainability*, 64, 101321.
- Mayer, C. (2021). The future of the corporation and the economics of purpose. *Journal of Management Studies*, 58(3), 887–901.
- McGowan, L. J., Powell, R., & French, D. P. (2020). How can use of the Theoretical Domains Framework be optimized in qualitative research? A rapid systematic review. *British Journal of Health Psychology*, 25(3), 677–694.
- Miller, M. A., & Tonoto, P. (2023). Leveraging plural valuations of mangroves for climate interventions in Indonesia. *Sustainability Science*, 1–15.
- Miller, M. A., Tonoto, P., & Taylor, D. (2022). Sustainable development of carbon sinks? Lessons from three types of peatland partnerships in Indonesia. *Sustainable Development*, 30(1), 241–255.
- Munirathinam, S. (2020). Industry 4.0: Industrial internet of things (IIOT). In *Advances in computers* (Vol. 117, Issue 1, pp. 129–164). Elsevier.
- Naidu, L., & Moorthy, R. (2021). A review of key sustainability issues in Malaysian palm oil industry. *Sustainability*, 13(19), 10839.
- Nesadurai, H. E. S. (2019). Transnational Private Governance as a Developmental Driver in Southeast Asia: The Case of Sustainable Palm Oil Standards in Indonesia and Malaysia. *The Journal of Development Studies*, 55(9), 1892–1908.
- Osano, H. M. (2019). Global expansion of SMEs: role of global market strategy for Kenyan SMEs. *Journal of Innovation and Entrepreneurship*, 8(1), 13.
- Pramudya, E. P., Wibowo, L. R., Nurfatmiani, F., Nawireja, I. K., Kurniasari, D. R., Hutabarat, S., Kadarusman, Y. B., Iswardhani, A. O., & Rafik, R. (2022). Incentives for Palm Oil Smallholders in Mandatory Certification in Indonesia. *Land*, 11(4), 576.
- Pranckutė, R. (2021). Web of Science (WoS) and Scopus: The titans of bibliographic information in today's academic world. *Publications*, 9(1), 12.
- Prasanna, R., Jayasundara, J., Naradda Gamage, S. K., Ekanayake, E. M. S., Rajapakshe, P. S. K., & Abeyrathne, G. (2019). Sustainability of SMEs in the competition: A systemic

- review on technological challenges and SME performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(4), 100.
- Prianto, A. L., Nurmandi, A., Qodir, Z., & Jubba, H. (2021). Climate change and religion: from ethics to sustainability action. *E3S Web of Conferences*, 277, 6011.
- Purnomo, E. P., Ramdani, R., Agustiyara, A., Tomaro, Q. P. V, & Samidjo, G. S. (2019). Land ownership transformation before and after forest fires in Indonesian palm oil plantation areas. *Journal of Land Use Science*, 14(1), 37–51.
- Pye, O. (2019). Commodifying sustainability: Development, nature and politics in the palm oil industry. *World Development*, 121, 218–228.
- Safriyana, S., Marimin, M., Anggraeni, E., & Sailah, I. (2021). Spatial-based model for oil palm plantation suitability rating and its smallholder farmers' competitiveness: A case study at Kampar Regency, Riau Province, Indonesia. *Journal of Science and Technology Policy Management*, 12(2), 283–308.
- Santika, T., Wilson, K. A., Budiharta, S., Law, E. A., Poh, T. M., Ancrenaz, M., Struebig, M. J., & Meijaard, E. (2019). Does oil palm agriculture help alleviate poverty? A multidimensional counterfactual assessment of oil palm development in Indonesia. *World Development*, 120, 105–117.
- Schachenhofer, L., Kummer, Y., & Hirsch, P. (2023). An analysis of underused urban infrastructures: usage opportunities and implementation barriers for sustainable logistics. *Applied Sciences*, 13(13), 7557.
- Semieniuk, G., Campiglio, E., Mercure, J., Volz, U., & Edwards, N. R. (2021). Low-carbon transition risks for finance. *Wiley Interdisciplinary Reviews: Climate Change*, 12(1), e678.
- Septiarini, A., Sunyoto, A., Hamdani, H., Kasim, A. A., Utaminingrum, F., & Hatta, H. R. (2021). Machine vision for the maturity classification of oil palm fresh fruit bunches based on color and texture features. *Scientia Horticulturae*, 286, 110245.
- Shahzad, U., Ferraz, D., Nguyen, H.-H., & Cui, L. (2022). Investigating the spill overs and connectedness between financial globalization, high-tech industries and environmental footprints: Fresh evidence in context of China. *Technological Forecasting and Social Change*, 174, 121205.
- Sima, V., Gheorghe, I. G., Subić, J., & Nancu, D. (2020). Influences of the industry 4.0 revolution on the human capital development and consumer behavior: A systematic review. *Sustainability*, 12(10), 4035.
- Song, Y., Zhang, X., & Zhang, M. (2021). The influence of environmental regulation on industrial structure upgrading: Based on the strategic interaction behavior of environmental regulation among local governments. *Technological Forecasting and Social Change*, 170, 120930.
- Su, S., Zhang, H., Wang, M., Weng, M., & Kang, M. (2021). Transit-oriented development (TOD) typologies around metro station areas in urban China: A comparative analysis of five typical megacities for planning implications. *Journal of Transport Geography*, 90, 102939.
- Syahza, A., & Asmit, B. (2019). Regional economic empowerment through oil palm economic institutional development. *Management of Environmental Quality: An International Journal*, 30(6), 1256–1278.

- Teng, S., Khong, K. W., & Che Ha, N. (2020). Palm oil and its environmental impacts: A big data analytics study. *Journal of Cleaner Production*, 274, 122901.
- Troise, C., Corvello, V., Ghobadian, A., & O'Regan, N. (2022). How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era. *Technological Forecasting and Social Change*, 174, 121227.
- Yuliani, E. L., de Groot, W. T., Knippenberg, L., & Bakara, D. O. (2020). Forest or oil palm plantation? Interpretation of local responses to the oil palm promises in Kalimantan, Indonesia. *Land Use Policy*, 96, 104616.
- Yuslaini, N., Sumadinata, R. W. S., Fedryansyah, M., Abdillah, A., Prianto, A. L., & Febriyanti, D. (2023). Sustainable investment strategies in the palm oil industry in Indonesia. *Journal of Infrastructure, Policy and Development*, 7(3).
- Yuslaini, N., Suwaryo, U., Deliarnoor, N. A., & Sri Kartini, D. (2023). Palm oil industry and investment development in Dumai City, Indonesia: A focus on local economy development and sustainability. *Cogent Social Sciences*, 9(1), 2235780.
- Zhan, J. X., & Santos-Paulino, A. U. (2021). Investing in the Sustainable Development Goals: Mobilization, channeling, and impact. *Journal of International Business Policy*, 4(1), 166–183.
- Zhang, X., Tan, Y., Hu, Z., Wang, C., & Wan, G. (2020). The trickle-down effect of fintech development: From the perspective of urbanization. *China & World Economy*, 28(1), 23–40.