



Eco-innovation and sustainable business performance: The moderating effect of market turbulence on tupperware in Indonesia

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ABSTRACT

Waste that accumulates and is not recycled can have a negative impact on the environment, people's lives and health. This has made some people more selective in choosing and buying everyday products, and many are starting to switch to using environmentally friendly and sustainable products. This change is an opportunity for companies to make products that use environmentally friendly production raw materials and are safe for health. This research will examine how eco-innovation (eco-process, eco-product, and eco-organizational) can influence sustainable business performance with market turbulence as a moderating variable for Tupperware products in Indonesia. This research involved 211 people from various regions in Indonesia who were collected online using purposive sampling techniques via questionnaires. Data were analyzed using Structural Equation Modeling (SEM) using AMOS 24. The research results show that eco-process innovation, eco-product innovation and eco-organizational innovation positively and significantly affect sustainable business performance. Meanwhile, market turbulence as a moderator negatively and significantly influences sustainable business performance.

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INTRODUCTION

Currently, waste is a big problem faced by the world due to the increasing amount of plastic waste that is difficult to decompose. Plastic production currently continues to increase with alarming growth throughout the world, initially in 1950 the growth only reached 2 million tonnes but in 2020 it increased to 367 million tonnes (PlasticsEurope, 2021). Plastic packaging accounts for 36% of the total global volume of plastic produced, the majority of this plastic packaging is single-use packaging (Diprose et al., 2023; Geyer, 2020). Based on a Minderoo Foundation report, every Indonesian citizen produces 9 kg of single-use plastic waste, making Indonesia the country with the sixth largest single-use plastic waste per capita in Southeast Asia in 2019. Most Southeast Asian countries are included in the 100 largest contributors of single-use plastic waste. Used as much as

130 metric tons in 2019 (Pusparisa, 2021). Most of the waste is buried or burned, even thrown directly into the surrounding environment, including the ocean. Based on data collected from research (Meijer et al., 2021), the country that produces the largest plastic waste in the oceans in the world is the Philippines, which reaches 356,371 metric tons, and Indonesia is the fifth largest producer of plastic waste in the seas with an amount reaching 56,333 metric tons every year. Waste that accumulates and is not recycled can have a negative impact on the environment, people's lives, and health. Consumer lifestyles and purchasing patterns have a major impact on environmental damage which brings serious problems for future generations (Shiel et al., 2020).

The emergence of environmental concerns can change a person's choice of product by considering the impact it will have on the environment (Farhanah & Kusumastuti, 2020). People are starting to realize that the products they use daily can increase the amount of waste and negatively impact the environment. This has made some people start to be more selective in choosing and buying everyday products, and many people are starting to switch to using environmentally friendly and sustainable products. This change is an opportunity for companies to make products that use environmentally friendly production raw materials and are safe for health. Eco-friendly products are organic, non-toxic, environmentally friendly, and mostly made from recycled materials (Moslehpour et al., 2023). Market opportunities for environmentally friendly products grow by 15% every year, this indicates that people are increasingly aware of the importance of environmentally friendly products (Moslehpour et al., 2023).

Tupperware is an environmentally friendly company founded by an American scientist named Earl Tupper in 1946. Tupperware is a food or drink container that is safe, high quality, and made from selected plastic materials with a manufacturing process that uses high technology and is very detailed, so it is difficult to use imitated by other manufacturers (Tupperware, 2023). Now, every catalog issued by Tupperware products has an Ecolabel icon, which is a form of the company's responsibility to the community to provide information about environmentally friendly products (Irfanita et al., 2021). Through the "No Time to Waste" campaign, Tupperware is committed to creating products using environmentally friendly raw materials called ECO+ raw materials. In 2019, Tupperware introduced ECO+ raw materials by launching the Eco Straw product, Eco Straw comes from circular polymer raw materials that are made by processing mixed single-use plastic waste that will be thrown away and broken down into molecules so that it can be returned to high-quality food grade plastic (TupperwareBrands, 2023). According to data collected from (TopBrand-Award, 2023), in 2023 Tupperware will become the drinking bottle/tumbler product that is most in demand by the public in first place with the highest index value of 41.80%.

According to (Ch'ng et al., 2020), a successful business is a business that can carry out sustainable practices and is able to adapt to challenges. The concept of sustainability has received widespread attention in recent decades, people are gradually realizing the need to reduce the negative impact of human activities on the environment (Rosalin et al., 2022). Sustainable business performance is the process of delivering fundamental business activities to maximize value while meeting financial, social, and environmental goals (Haseeb et al., 2019). In this context, business performance is measured not only based on profits, but also on the positive impact the company produces on society and the surrounding environment. Sustainable business involves incorporating practices into various operational and strategic aspects of a company that includes steps to reduce negative impacts on the environment, promote more efficient use of resources, and produce products or services that benefit society positively.

Meanwhile, eco-innovation can help companies develop, organize, implement, control, and monitor cost reduction for business purposes by determining competent employees and using eco-efficiency methods in production activities (Song et al., 2018; Song & Wang, 2018). Eco-innovation is a collection of novel practices that use new processes, advanced products, and modern systems to reduce negative impacts on the environment, which includes eco-process innovation, eco-product innovation, and eco-organizational innovation (C. C. J. Cheng et al., 2014;

C. C. Cheng & Shiu, 2012). Eco-innovation focuses on efforts to address environmental challenges, such as increasing waste, climate change, and the decline of natural resources. This involves combining technology, design, business processes, and sustainable behaviour to produce more environmentally friendly solutions. Research conducted by (Ceptureanu et al., 2020) illustrates how working with organizations that care about the environment can help develop capabilities of eco-innovation which is important in business and can maintain company performance.

Market turbulence can affect the practices of eco-innovation and sustainable business performance because it increases doubts and risks in business processes, market turbulence has a causal relationship with the business approach and its performance. Uncertainty and unpredictable developments cause the company's environment to become unstable (Liu, 2013). Uncertainty in the market, known as market turbulence, refers to a situation where the market experiences sudden and unexpected changes in factors that influence business dynamics. These factors may include changes in consumer demand, fluctuations in commodity prices, changes in economic conditions, the emergence of new competition, or even changes in government regulations.

This research aims to find out how eco-innovation can influence sustainable business performance with market turbulence as a moderating variable in Tupperware products in Indonesia. Apart from that, this research also aims to provide recommendations to Tupperware Indonesia to improve eco-innovation capabilities and improve sustainable business performance in the face of market turbulence. This research also intends to practically help reduce doubts by the Tupperware company in Indonesia regarding the importance of incorporating eco-innovation when preparing their business investment plans. To achieve this goal, the author raised independent variables related to eco-innovation, in accordance with previous research consisting of eco-process innovation, eco-product innovation, and eco-organizational innovation (Ch'ng et al., 2020). Previous research shows mixed results regarding the relationship between eco-innovation and business performance. Some studies find a positive relationship between eco-innovation and business performance (C. C. J. Cheng et al., 2014; Geng et al., 202), while others report negative or inconclusive findings (Jinliang et al., 2023; Thi et al., 2023). The moderating impact of market turbulence has also been explored in various contexts, for example the Malaysian technology industry (Zulkiffli et al., 2022). However, there is still a lack of research that specifically focuses on Tupperware Indonesia and there is not much empirical research that tests the moderating effects of market turbulence on different aspects of eco-innovation and sustainable business performance, especially those related to developing countries (Ch'ng et al., 2020). Therefore, this research emphasizes how market turbulence influences the relationship between eco-innovation (eco-process, eco-product, eco-organizational) and sustainable business performance.

RESEARCH METHOD

Presently, developing nations are beginning to concentrate on methods to encourage eco-innovation for businesses of all sizes in order to achieve sustainable development (Adomako, 2020; Lindley et al., 2018). To operate in a sustainable and environmentally friendly way, businesses need to include eco-innovation practices into their process, product, and organizational structure (Hojnik & Ruzzier, 2016). Research already conducted indicates that in order for businesses to stay afloat in market turbulence, they must continue to innovate (Santos-Vijande & Álvarez-González, 2007).

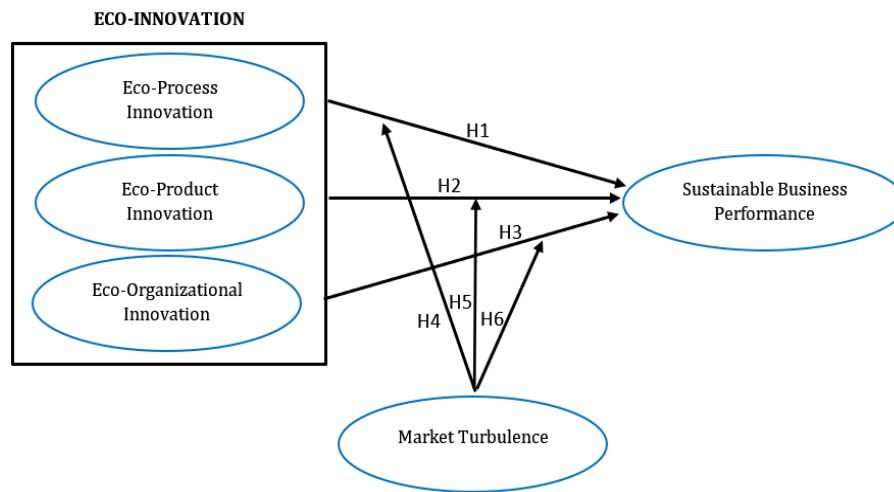


Figure 1. Research framework

Eco-Process Innovation and Sustainable Business Performance

Eco-innovation is a trend that helps companies introduce new products, services or management practices and also helps companies to survive and succeed in highly competitive (Ahmed et al., 2023; Han & Chen, 2021). The idea of eco-innovation not only includes energy efficiency but also resource optimization and rationalization of waste management (Gašior et al., 2022). Eco-innovation is gaining ground in the business sector for various reasons, such as greater pressure from governments, environmentally responsible project financing, and greater consumer awareness (Kuo et al., 2022).

Eco-process innovation often refers to improving existing production processes or introducing new processes to reduce their environmental impact (Al-Hanakta et al., 2023). Incorporating components that consider human health, reducing environmental impacts, and complying with government regulations is necessary to create eco-process innovation (Al-Hanakta et al., 2023). The idea that producers have a negative influence on the environment must be changed into an idea that believes that eco-process innovation tools and methods can improve environmental quality and human living standards (Mat Dahan & Yusof, 2019). To achieve development and sustainability goals, eco-process innovation is needed in every industry (Firman et al., 2023).

Sustainable business performance refers to an organization's ability to carry out its activities without having a negative impact on society and environmental quality (Sharif et al., 2019). Both at the national and international levels, sustainable business performance carries out its activities for the betterment of society and the environment (Phillips et al., 2019). Increasing public knowledge about social and environmental issues means that companies must maintain sustainable business performance in order to be successful in national and international markets (Asiaei & Bontis, 2019; Pearson et al., 2019).

Eco-process innovation can be considered as an effort to integrate eco-innovation activities into the production process (C. C. J. Cheng et al., 2014). This project is closely related to manufacturing operations that can minimize costs and waste through more effective production processes and better use of resources (C. C. J. Cheng et al., 2014; Dong et al., 2014). The aim of eco-process innovation is to provide a competitive advantage for companies so that they can produce the number of finished products that the market demands and desires (Sukri et al., 2023). Effective implementation of eco-process innovation can help companies save long-term operational costs and reduce negative impacts on the environment.

Eco-Product Innovation and Sustainable Business Performance

The creation or acceptance of new components that provide added social or economic value through the discovery of goods, market services/production techniques, and management systems is the definition of eco-product innovation (Crossan & Apaydin, 2010). Adapt eco-product innovation effective practices in business enterprises can lead to innovative practices (Maldonado-Guzmán & Garza-Reyes, 2020). Businesses that use eco-product innovation can increase sales and profit margins by increasing environmentally friendly products which are of great concern to consumers today (Sukri et al., 2023).

The company's focus on creating new, environmentally friendly goods or services, such as materials, construction, and packaging, is known as eco-product innovation (C. C. J. Cheng et al., 2014; He et al., 2018). This innovation focuses on reducing a product's environmental footprint throughout its life cycle. Environmentally friendly business models with more viable business performance now have a competitive advantage in the market (Chen et al., 2006; França et al., 2017; Liao, 2018). Eco-product innovation can help businesses achieve sustainable development and reduce negative impacts on the environment by serving an increasingly environmentally conscious market.

Eco-Organizational Innovation and Sustainable Business Performance

Corporate cultures and management methods known as eco-organizational innovation actively engage in ecological efforts by monitoring and managing environmental consequences throughout the company (C. C. J. Cheng et al., 2014; He et al., 2018; Liao, 2018). Changes in innovation, guidelines, and management tools are influenced by eco-organizational innovation (Firman et al., 2023). To ensure that manufacturers' activities remain focused on environmental sustainability, top-level management guidelines and instructions are essential to promote and ensure eco-organizational innovation in manufacturing organizations (Janahi et al., 2021). When developing a business strategy business owners and managers consider various factors, including products, process, marketing, technology, and other innovations that can help the company provide excellence and value to both the internal and external environment, this is the meaning of eco-organizational innovation (Rodríguez-Rebés et al., 2021).

Specifically, eco-organizational approaches are defined by (Pacheco et al., 2017) as innovative adjustments to service systems (such as waste management or electricity consumption) and management infrastructure (such as environmental audit tools). Eco-organizational innovation has been shown to improve performance not only in terms of money (Liao, 2018) but also in terms of social and environmental accomplishments (C. C. J. Cheng et al., 2014).

The Role of Market Turbulence as Moderation

Market turbulence may cause changes in consumer preferences and the demand for products and services (Ebrahimi & Mirbargkar, 2017; Zhou et al., 2018). Market turbulence refers to external conditions such as the pace of change in customer composition, shifts in customer preferences, degree of volatility inside a firm, and spikes in demand for new products and services (Jaworski & Kohli, 1993; Low & Mohr, 2001).

Market turbulence is the result of rapid technical progress, intense competition and unexpected shifts in consumer tastes and preferences, these factors create a high level of complexity and require businesses to operate in a highly unpredictable environment (Atuahene-Gima et al., 2006; Wang et al., 2015). Market turbulence can impact entire companies and force companies to adapt how they meet changing customer desires (Jaworski & Kohli, 1993; Low & Mohr, 2001). Environmental innovation may tend to receive more attention and corporate strategies such as cutting waste costs and building corporate image may receive more attention when market turbulence is very dynamic and competitive (Sung & Choi, 2019; Wang et al., 2015).

The method used in this research is quantitative, this research uses a questionnaire which is announced to respondents who are deemed to meet the predetermined criteria. The questionnaire uses a Likert scale of 1 to 5 with categories: 5) Strongly agree; 4) Agree; 3) Doubtful; 2) Disagree; 1) Strongly Disagree. The sample for this research is every reseller agent or distributor of Tupperware Indonesia products with a total sample of 211 respondents. The sampling technique used was purposive sampling with the following criteria: 1) Active as a reseller agent or distributor of Tupperware products until now (at least 1 year); 2) Aged 18-50 years; 3) Domiciled in Indonesia. This data was collected for 1 month from August – September 2023, questionnaires were distributed throughout Indonesia in Tupperware Indonesia community groups on social media. This research uses Structural Equation Modeling (SEM) with AMOS 24 statistical tools to analyze and deploy measurement models and structural models of the research construction being built. The four items from each eco-innovation variable, namely eco-process Innovation, eco-eco product Innovation, and eco-organizational Innovation in this research refer to previous research conducted by (Ch'ng et al., 2020). The fifth item on the sustainable business performance variable refers to previous research by (Singh et al., 2020) and (AlQershi et al., 2023). The nine items on market turbulence in this study are based on previous research conducted by (Jaworski & Kohli, 1993) and (AlQershi et al., 2023).

RESULTS AND DISCUSSIONS

Characteristics of Respondents

Data The characteristics of the respondents are presented in Table 1, totaling 211 respondents. The data is dominated by women (85.8%), domiciled on the island of Kalimantan (30.8%), age range 34 – 41 years (34.5%), last education Bachelor/S1 (49.3%), private employee occupation (39.3%), and income/ pocket money per month > IDR 3,000,000 – IDR 4,000,000 (35.5%).

Table 1. Characteristics of Respondents

Categories	Items	f	%
Gender	Woman	181	85.8%
	Man	30	14.2%
	TOTAL	211	100%
Domicile	Java	49	23.2%
	Kalimantan	65	30.8%
	Sulawesi	35	16.6%
	Sumatra	37	17.5%
	Papua	25	11.9%
	TOTAL	211	100%
Age	18 – 25 years	38	18.2%
	26 – 33 years	59	27.9%
	34 – 41 years	73	34.5%
	42 – 50 years	41	19.4%
	TOTAL	211	100%
Last education	Junior High School	6	2.8%
	Senior high school	58	27.5%
	D1/D2/D3/D4	39	18.5%
	Bachelor Degree (S1)	104	49.3%
	Post Graduate (S2/S3)	4	1.9%
	TOTAL	211	100%
Work	Student/College Students	14	6.6%
	BUMN	14	6.6%
	PNS	24	11.4%
	Businessman	29	13.8%
	Private Sector Employee	83	39.3%
	Housewife	47	22.3%

		TOTAL	211	100%
Income/Pocket Money per month	<Rp 1,000,000		15	7.1%
	IDR 1,000,000 - IDR 2,000,000		16	7.6%
	>IDR 2,000,000 - IDR 3,000,000		44	20.9%
	>Rp. 3,000,000 - Rp. 4,000,000		75	35.5%
	>Rp 4,000,000		61	28.9%
	TOTAL		211	100%
How long have you been a reseller agent or distributor of Tupperware products in Indonesia	15 years		77	36.5%
	6 - 10 years		91	43.1%
	11 - 15 years		39	18.5%
	>15 years		4	1.9%
		TOTAL	211	100%
How much can you sell Tupperware products for 1 month	<10 products		23	10.9%
	10- 20 products		76	36.0%
	21- 30 products		56	26.5%
	31- 40 products		32	15.2%
	>40 products		24	11.4%
		TOTAL	211	100%

Model Measurements

Table 2. Goodness of Fit Index

Goodness of Fit Index	Cut off Value	Results
χ^2	Expected to be low	718,594
Df		368
χ^2 - Significance Probability	≥ 0.05	0,000
CMIN/DF	≤ 3.00	1,953
RMSEA	≤ 0.08	0.067
RMR	< 0.05	0.223
NFI	≥ 0.90	0.907
IFI	≥ 0.90	0.952
TLI	≥ 0.90	0.947
CFI	≥ 0.90	0.952

Table 2 shows the results of the model fit test. The results of the model suitability test show that the model suitability requirements are acceptable and declared fit. The results of the model suitability test show that the six indicators meet the Good Fit suitability criteria, which shows that this research is good and hypothesis testing can be continued.

Tabel 3. Value of Standardized Loading Factor, Construct Reliability (CR), and Average Variance Extracted (AVE) in Overall Model Fit

Variabel	Items	SLF	CR	AVE
Eco-Process Innovation	Tupperware uses innovative technology in the manufacturing process to reduce plastic waste at every stage of the product cycle that Tupperware makes, from design, manufacture, distribution, recycling, to recovery.	0.937	0.929	0.836
	Tupperware in its manufacturing process meets environmental legal standards as proven by meeting the provisions of international food regulatory agencies such as the FDA, EFSA, and FS	0.905		
	Tupperware always updates its product manufacturing operations to protect each product from hazardous materials	0.893		
	Tupperware always updates equipment in the product manufacturing process as a form of support for energy saving efforts	0.922		

Eco-Product Innovation	Tupperware develops products whose materials can be easily recycled using eco+ raw materials	0.911	0.917	0.799
	Tupperware develops products that produce the least amount of waste	0.862		
	Tupperware develops reusable products to reduce the damage caused by plastic waste as much as possible	0.888		
	Tupperware needs to develop environmentally friendly products using natural ingredients such as bio-based raw materials	0.914		
Eco-Organizational Innovation	Tupperware needs to collect information about environmentally friendly trends	0.919	0.926	0.801
	Tupperware needs to be actively involved in environmentally friendly innovation activities	0.881		
	Tupperware needs to communicate experiences among the various departments involved in green innovation	0.862		
	Tupperware invests a high level of research and development in an effort to support environmentally friendly innovation activities	0.917		
Sustainable Business Performance	Tupperware's sustainable business activities can reduce overall costs	0.934	0.947	0.866
	Sustainable business activities carried out by Tupperware can improve product quality/manufacturing processes	0.925		
	Sustainable business activities can improve the reputation of the Tupperware company	0.933		
	Tupperware's sustainable business activities can develop community economic activities	0.926		
	Tupperware's sustainable business activities can improve the overall environmental situation	0.937		
Market Turbulence	In the Tupperware business, customer product preferences often change over time	0.948	0.972	0.875
	Tupperware customers tend to look for new products all the time	0.934		
	New customers tend to have different product-related needs than existing Tupperware customers	0.932		
	Marketing practices for Tupperware products continue to change	0.939		
	It is very difficult to predict customer demand for Tupperware products	0.923		
	There have been many diverse technological events impacting Tupperware's business operations	0.937		
	There are many diverse market events impacting Tupperware's business operations	0.939		
	There are many diverse competitor events impacting Tupperware's business operations	0.892		
	It is very difficult to predict any changes regarding who Tupperware's competitors might be in the future	0.939		

Table 3 is the result of testing the validity and reliability of the model as a whole. The Standardized Loading Factor (SLF) value for all indicator variables in the full model is above 0.50. This means that all indicators are declared valid and are believed to be able to measure the construct of the entire model being built. The reliability test results present relevant results. All instruments were declared reliable and had the ability to measure the constructs of all models built consistently. This is shown by the Variance Extracted (AVE) value for all instrument indicators which obtained a value of ≥ 0.50 , and the Construct Reliability (CR) value obtained a value of ≥ 0.70 .

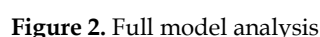


Table 4. Hypothesis testing

Based on table 4 shows the results of AMOS processing, the t value obtained for eco-process innovation to sustainable business performance amounting to 4.212 which shows a greater gain than the t table value of 1.96. Likewise, the p value, namely 0.001, indicates a value less than 0.05 ($\alpha = 0.05$). This means that the first hypothesis is about eco-process innovation positive and significant effect on sustainable business performance. For the second hypothesis, the t-value for the variable eco-product innovation to sustainable business performance obtained a value of 2.901 and a p-value of 0.004. This proves that the hypothesis built is eco-product innovation has a positive and significant effect on sustainable business performance. The third hypothesis obtains the calculated t value of the variable eco-organizational innovation to the sustainable business performance of 3.251 and the p value is 0.001. This shows eco-organizational innovation has a positive and significant effect on sustainable business performance.

Fourth hypothesis explains the results of testing the moderation effect of market turbulence on eco-process innovation and sustainable business performance. It is known that the t value is -4.515 and the p value is 0.001, which is less than 0.05, which means it is significant. This shows that the role of market turbulence as a moderator has a negative and significant effect. It means market turbulence can weaken the relationship between eco-process innovation and sustainable business performance. The fifth hypothesis is to test the moderating effect between market turbulence to eco-product innovation and sustainable business performance. The calculated t value shows -5.038 and the p-value is 0.001. This also proves that market turbulence has a negative and significant effect, which means market turbulence can weaken the relationship between eco-product innovation and sustainable business performance. As for the sixth hypothesis, namely testing the role of market turbulence as moderation against eco-organizational innovation and sustainable business performance. The calculated t value is -3.375 and the p-value is 0.001. This also shows that there is a negative and significant influence between market turbulence to eco-organizational innovation and sustainable business performance, It means market turbulence can weaken the relationship between eco-organizational innovation and sustainable business performance.

Discussion

This research aims to test a conceptual model of the influence of eco-process innovation, eco-product innovation, and eco-organizational on sustainable business performance which is moderated by market turbulence. Based on the results of this research, the first hypothesis has a positive and significant effect, indicating that eco-process innovation can influence sustainable business performance. This is in line with previous research (Barriga Medina et al., 2022). Furthermore, the second hypothesis has a positive and significant effect, which means that eco-product innovation can also influence sustainable business performance. This is supported by previous research (Zulkifli et al., 2022). Then, the third hypothesis has a positive and significant effect, which shows that eco-organizational innovation can influence sustainable business performance. The results of this hypothesis are in line with previous research (Al-Hanakta et al., 2023). Meanwhile, the other three hypotheses produce a negative and significant effect, which means that the moderating role of market turbulence can weaken the relationship between eco-process innovation, eco-product innovation, and eco-organizational innovation on sustainable business performance. This is not in line with research conducted by (Ch'ng et al., 2020), which stated that the only positive and significant moderating effect of market turbulence is eco-organizational innovation towards one of the dimensions of sustainable business performance which is social performance. Meanwhile, there is a relationship between eco-process innovation and eco-product innovation on sustainable business performance has an insignificant impact on market turbulence as its moderation.

The results of this study indicate that it is important to understand how factors such as eco-process innovation, eco-product innovation, and eco-organizational interact with each other to form sustainable business performance. With a better understanding of these relationships, companies can design more effective corporate business continuity strategies for various segments. Regarding negative and significant moderation results with market turbulence as moderation, it will provide a comprehensive picture of the challenges faced by modern companies and the importance of adopting strategies that are adaptive and responsive to changing market dynamics.

CONCLUSION

Research shows that eco-process innovation has a positive and significant influence on Tupperware's sustainable business performance in Indonesia. The company's actions in adopting environmentally friendly and efficient production processes have made a significant contribution

to sustainable business performance, including reducing long-term operational costs and increasing the efficiency of resource use. Eco-product innovation has also been proven to have a positive and significant impact on sustainable business performance. Through the development of environmentally friendly products, Tupperware has been able to increase its competitiveness and brand image, meet the demands of consumers who are increasingly concerned about environmental issues, and in turn strengthen the company's financial performance and reputation. Eco-organizational innovation also has a significant influence on sustainable business performance. By integrating sustainable practices into organizational structure and culture, companies have been able to create sustainable competitive advantages, strengthen corporate reputations, and meet increasingly stringent compliance standards regarding environmental issues. The research results also indicate that market turbulence acts as a moderating factor that weakens the relationship between eco-innovation and sustainable business performance. These results indicate that market fluctuations and instability can significantly hinder the effectiveness of eco-innovation and sustainable business performance. The Tupperware company needs to develop better adaptability to changing dynamic market conditions. This can include developing backup strategies, more careful market monitoring, and increasing operational flexibility to reduce the negative impact of market turbulence on eco-innovation and sustainable business performance.

This research contributes to existing knowledge by providing insight into the specific case of Tupperware Indonesia, which has never been explored in the literature before. This adds to the literature on eco-innovation and sustainable business performance, especially in the context of developing countries like Indonesia. These findings have practical implications for Tupperware Indonesia and other companies in similar contexts. This study shows that Tupperware Indonesia can improve sustainable business performance by increasing eco-innovation capabilities, especially in facing market turbulence. This can result in better environmental and financial outcomes for companies. This study may have policy implications for the Indonesian government and other relevant stakeholders. This can contribute to the country's overall economic growth and environmental sustainability.

This research has limitations in variables and data coverage. This research on independent variables only focuses on three types of eco-innovation variables (eco-process, eco-product, eco-organizational) even though there are many other variables that can influence sustainable business performance. Future research could consider additional independent variables such as information technology implementation, circular economy, and cleaner production. In the moderating variable of this research, market turbulence has a negative and significant influence on sustainable business performance, which means that market turbulence can weaken the relationship between eco-innovation and sustainable business performance. Future research can replace the moderating variable with results that can strengthen the relationship between eco-innovation and sustainable business performance. Another constraint on this study is the brief duration of the data available. Future research can conduct research over a longer period of time.

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