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Consumer Green Purchases in the New Normal Condition of the Covid-19 Pandemic

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Abstract

After the COVID-19 pandemic, more consumers were concerned about their health and the environment. This condition also positively affects the environmental awareness of consumers and can be a significant factor influencing customers to purchase green products. This study identified potential factors affecting green products purchase as consumer actual behavior. The main predictors are the impact of the COVID-19 Pandemic, environmental attitude, and environmental awareness and moderated by green product literacy to predict actual behaviour by purchasing the green product in the new normal era. In this way, it will help policymakers and managers for formulating and implement to encourage green purchasing and comprehension of green consumerism, especially in the Asian market. This study conducted with survey with purposive sampling method and analyzed data by SEM PLS for the hypotheses test. The number of valid observations for the data analysis is 100. The result of algorithm testing found the data was valid and reliable, as well as the framework accurate (Model Fit). Based on direct hypothesis testing, it was found that the impact of the pandemic is a significant factor in predicting environmental awareness (H1). Meanwhile the impact of the pandemic not significantly predicts green product purchases (H2). Furthermore, environmental awareness finding as a significant factor influence green product purchases (H3). The other direct hypotheses also show environmental attitude as a significant factor to identify green product purchase (H5) while green product literacy was not supported as a significant factor in green product purchase (H6). On the other hand, specific indirect effect testing shows that environmental awareness successfully mediates the impact of pandemic on green product purchases (H4). For moderate testing, green product literacy moderates the relationship of environmental attitude to green product purchase (H7). The outcomes contribute and offer valuable information for future public policy and marketing campaigns regarding green product purchases.

Keywords
impact of pandemic covid-19; environmental awareness; environmental attitude; green product literacy; green product purchase

I. Introduction

Since the environment and health are critical issues, sustainable consumption become a trending topic and a new lifestyle. As a response, many companies switch to the sustainability business concept and become greener by producing green products. This condition is aggravated by the COVID-19pandemic that affected all human life, including the changing consumer lifestyles; public hygiene behaviors, especially consumer consumption patterns (Muresan et al., 2021). Similarly, the pandemic resulted in the emergence of a "new normal" society and the business context. The changing of lifestyle and business practices to prevent infections, the new normal context mainly concerns individuals' health and wellbeing regarding changes in attitudes and product purchase decisions (Latip et al., 2020). The outbreak of this virus has an impact of a nation and Globally (Ningrum et al, 2020). The

presence of Covid-19 as a pandemic certainly has an economic, social and psychological impact on society (Saleh and Mujahiddin, 2020). Covid 19 pandemic caused all efforts not to be as maximal as expected (Sihombing and Nasib, 2020).

(Sajid et al., 2022) studies revealed that the fear of the pandemic is one of the predictors that play a substantial role in adopting green purchase behaviour. In addition, customers that buy green items are more conscious of environmental issues (Delafrooz et al., 2014), and purchasing green products is influenced by green product literacy and environmental attitude (Chen et al., 2022). Moreover, most recent researchers have just started to explore the factors that help to explain green consumption behaviours, and many studies only focused on the purchase intention (Hanss et al., 2016). Meanwhile, when exploring green purchase behaviour, many studies have reported a gap between consumers' expressed favourable attitudes and actual purchasing practices (Tanner and Kast, 2003; Vermeir and Verbeke, 2006; Vermeir and Verbeke, 2008; Joshi & Rahman, 2015). Many consumers showed a positive attitude towards purchases of green products (67%), but only a small number of consumers (4%) purchased those products (Hughner, 2007; Joshi & Rahman, 2015) Additionally, 30% of the consumers in the UK have reported their concern towards the environment but rarely translated their concern into a green purchase (Defra, 2016; Joshi & Rahman, 2015).

Even though the number of green products is expected to increase, especially in the COVID-19pandemic, it is still difficult to predict consumer reactions and their actual behaviour toward purchasing the green product, especially the fact there are differences in perception, attitude, and values of every region on previous studies. With consideration of this issue, this research will emphasize the change of behaviour of individual attitudes and the actual behaviour with situational factors (triggered by diseases outbreak of COVID-19pandemic). In the new normal COVID-19Pandemic, the consumer might be stimulus by the psychological and physical impact that triggers them to do extra protection for their health and their body by adopting an extra healthy lifestyle and purchasing the green product as a solution.

II. Review of Literature

2.1 Theory of Behavioral Change

The theory of Behavior Change Model by Ramsey & Rickson (1976) explains that the change of consumer behaviour by the knowledge and attitude of consumers itself, the consistency of attitude will show the new behaviour from consumers. Based to Hawkins (2010) that the behaviour of a consumer is not a constant object, but behaviour formed by constant attitude, and it can change with "stimulus". The stimulus might be internal or external. An internal stimulus such as knowledge, memories, and emotion. On the other hand, external might be marketing activity, culture, family, or group reference. All these stimuli can influence the lifestyle and attitude of consumers, and the consistency of their actions or attitude will encourage them to show the behaviour.

2.2 Impact of COVID-19 Pandemic (Fear of Pandemic)

In the context of COVID-19, although it causes negative impacts specifically on the psychological and physical, more consumers have switched to healthier and sustainable products. (Vaishali & Hemanathan, 2020) showed that the pandemic significantly affected the purchase of the green product because the pandemic encouraged people to be in healthy behavior, whether related to the environment or their health. Similarly, the latest study from (Ben Hassen et al., 2021) reported that the COVID-19pandemic could shift consumer behaviourin a more sustainable and healthier direction and increase the consumption of local food products because of food safety concerns. Moreover, Qi et al., (2020) research showed that the COVID-19 crisis impacted green purchases whereas the intention behavior gap widens

as a result of issues of unavailability, price, and panic. El Zowalaty et al. (2020) positive environmental effects are likely to be temporary, it can serve as an example of changes in society. In this scenario (Sarkis et al., 2020; Severo et al., 2021) present a new existing link in which a window of opportunity opens up to accelerate environmental awareness after the COVID-19 Pandemic toward broader sustainability transitions. From those previous studies, pandemic might be a new significant factor to predict the increase in environmental awareness and encourage consumers to purchase green products, including Indonesian consumers. Thus, the following hypotheses were proposed:

H1: Impact of pandemic COVID-19 significantly affects environmental awareness

H2: Impact of pandemic COVID-19 significantly affects green product purchase

2.3 Environmental Awareness

Consumers' sustainable and green values are driven by growing concern and awareness about environmental issues (Khare & Kautish, 2022). Environmental awareness or green awareness is known as the knowledge that is recognized by consumers for products based on the performance of eco-friendly products (Mourad & Ahmed, 2012). Consumers with environmental awareness are defined as consumers who tend to consider the environmental impact of the products they choose to consume or tend to use their power as consumers to make changes to the environment (Barbarossa & Pastore, 2015) The study shows that consumers with stronger environmental awareness are more likely to purchase products as a result of their environmental claims and social responsibility (Song et al., 2019). On the other hand, Değirmenci et al.(2022) researched the effect of pandemic phobia on environmental awareness resulted in COVID-19phobia was found to have a positive and significant effect on environmental awareness and stress, depression, and anxiety, while environmental awareness was found not to affect stress, depression, and anxiety. Finally, environmental awareness was found to play a mediating role between COVID-19phobia and stress, depression, and anxiety.

H3: Environmental awareness significantly affects green product purchase

H4: Environmental awareness mediates the impact the pandemic on green product purchase

2.4 Environmental Attitude

Attitude reflects a person based on the belief and self-confidence in objects, persons, or issues that eventually affect feelings and deeds. Thus, individual Attitudes or judgments would contribute to positive or negative behaviour, and it refers to the degree to which an individual has a judgment of products and services (Ajzen, 1991). The attitude of a consumer represents whether or not the consumer likes it (Suki, 2016). In the environmental context, attitude will reflect the positive act of protecting the environment. Previous studies from Ogiemwonyi et al., (2020) indicated that a green attitude has a significant influence on green product consumption behaviour. Similarly, Chen et al., (2022) indicated that consumer green product purchase attitudes mediate the effect of green product literacy, green product orientation, and social influence on behavioural intention. Although it predicts behavioural intention, it might also be a successful factor in predicting actual behaviour by purchasing the green product. Thus, the following hypothesis proposes:

H5: Environmental attitude significantly affects green product purchase

2.5 Green Product Literacy

Green product knowledge or literacy could help to develop the foundation of belief about a particular issue related to green products and services (Chen et al., 2022; Kim & Stepchenkova, 2020). Based on Biswas (2020) stated that green product literacy could reflect consumers attitude toward purchasing green products. The other previous studies identify the association between knowledge and attitude toward green product purchasing behavior

(Liobikiene & Poškus, 2019). In addition, consumers with a high level of knowledge about environmental protection would have a high consumption of their own or their family (Huang et al., 2014). In line with these studies, the following hypothesis:

H6: Green Product Literacy significantly affects green product purchases

H7: Green Product Literacy moderating the influence between environmental Attitudes and Green Product Purchase

2.6 Green Product Purchase

A green product is referred to as naturally produced, bio-degradable non-toxic, non-experimental on creatures, contamination-free, and nominally packed with natural and permitted constituents (Ottman, n.d.; Siddique & Hossain, 2018). Green purchase refers to activities conducted by consumers to save resources and protect the environment. It means that green product purchase is the actual action of environmental behavior. People who are concerned about environmental safety, follow green buying behavior, and consume green products are considered green consumers (Kar & Rashad, 2014). Buying green products, insulating home with new equipment, and buying environment-friendly and energy-efficient cars are green purchase behaviors (Shabani et al., 2013). Consumers who concern more about environmental issues have a more possibility to purchase green products (Y. Kim & Choi, 2005).

Based on a study of the theory of theimpact ofa pandemic, environmental awareness, environmental attitudes, green product literacy, and green product purchase of consumer behavior, we have analyzed and found hypothetical designs. The design is examined through a model illustrated in Fig. 1.

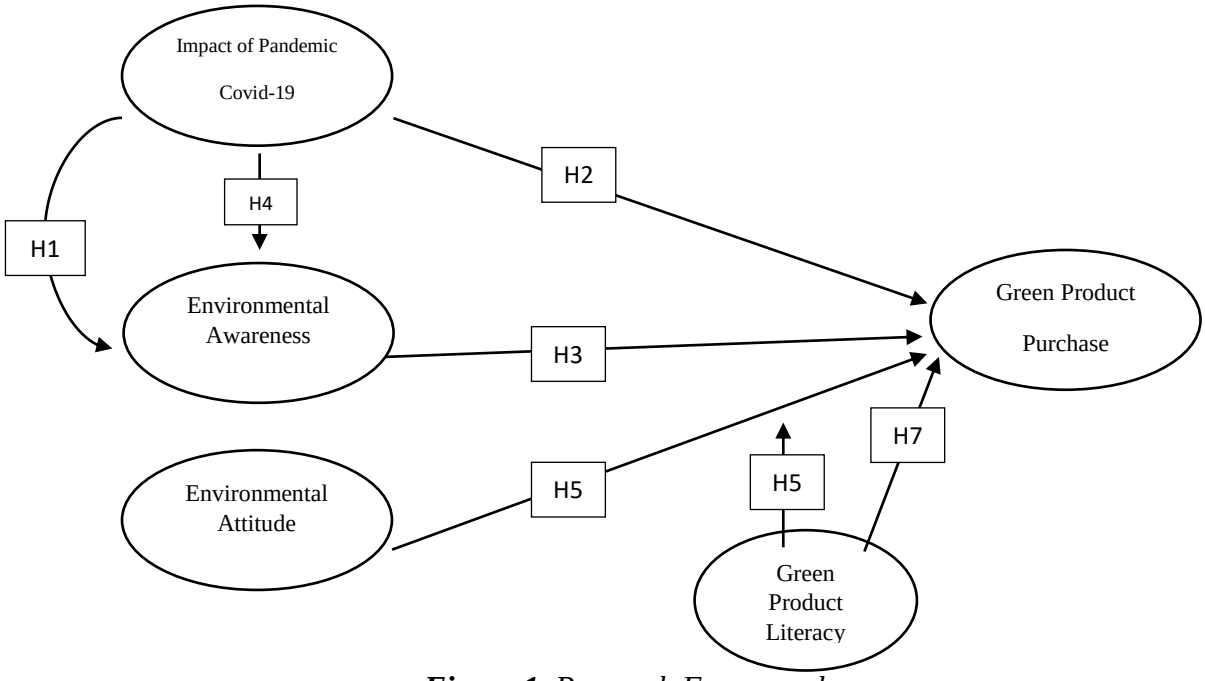

Figure 1. *Research Framework*

III. Research Method

This quantitative research has been conducted with a survey applying a purposive sampling method to the consumers who already have experience with green products in Indonesia (purchased green products in the last 6 months) and consumers aged 17-55 decionfor themselves their consumption choices. This study contains five variables, including theimpact ofa pandemic, environmental awareness, environmental attitude, green product literacy, and green product purchase. All of the construct testing for validity and reliability test to ensure the

size of each variable is outlined in the questionnaire with a Likert Scale approach of the value of one for “strongly disagree” "and five for “strongly agree”. Furthermore, data were processed through Structural Equation Model -Partial Least Square (SEM-PLS) approach using SmartPLS apps. For using the SEM-PLS technique, the size of the sample and suggest easing minimum of 100 samples. Thus, this research will use 100 consumers in 2022. The data received is then tested through hypothesis testing, following the design of the research model (Fig. 1).

IV. Result and Discussion

The survey in this study uses a questionnaire which is divided into 2 parts, the first part contains questions to determine the demographic profile of the respondents (gender, age, occupation, education level, category of green products purchased in the last 6 months). Then, the second part contains questions to find out their preferences in buying green products during the new normal COVID-19pandemic based on the indicators of each variable in this study. The following are the results obtained from this study.

4.1 Demographic Profile of Respondents

Socio-demographic characteristics of respondents (gender, age, Education, and income) are reported in Table 1.

Table 1. Socio-demographic characteristics of respondents (N = 100)

Demographic Profile		Frequency	%
Gender	Male	65	65%
	Female	35	35%
Age (years old)	13-19 y.o	6	6%
	20-29 y.o	83	83%
	30-39 y.o	7	7%
	40-49 y.o	2	2%
	50-55 y.o	2	2%
Occupation	Student	48	48%
	Entrepreneur	12	12%
	Managerial	6	6%
	Operational	16	16%
	Professional	17	17%
Education Level	Doctorate or equivalent	0	0%
	Master’s	37	37%
	Bachelor’s	29	29%
	Short-cycle tertiary education	1	1%
	Senior High School or equivalent	33	33%

The demographic information of the survey shows the number of participants was 100 whereas there are 65% females and 35% males. For the age information, 83% of the respondents were 20-29 years old, 10% were 13-19 years old, and 7% were 30-39 years old. 48% of the respondents were students, while 17% of them were professionals, 16% were operational, 12% were entrepreneurs, and 6% were in managerial positions. This indicates that most participants are employed. Concerning the number of observations for the level of

education, the number of observations for bachelor's degree was 29%, while master's degree was 37% and none of them higher than that while for senior high school was 33% out of all respondents and also none of them lower than then senior high school level. Last, the survey also monitored the category of green products from respondents purchased in the last 6 months and showed most of them purchase food & beverage category, was 60% of respondents and 20% chose self-care products, 9% on household goods, 4% on fashion, 3% on electronic, 2% on environmentally friendly services, and 1% on automotive category.

4.2 Reliability and Validity Analysis

This study conducted model measurement and fitness analyses to ensure a reliable and valid finding. Convergent validity of constructs was assessed with factor loadings, average variance extracted (AVE), and composite reliability. The validity count by factor loading with ≥ 0.70 for each construct. For reliability, Cronbach's Alpha exceeds the recommended threshold value of 0.60 (Churchill & Surprenant, 1982) and composite reliability (CR) is higher than the cut-off value of 0.70 (Fornell & Larcker, 1981). The following factor loading, Cronbach's Alpha, Average Variance Extracted (AVE), and Composite Reliability (CR) were present in the following Table 2.

Table 2. Factor loadings, Cronbach's alpha, average variance extracted (AVE), and composite reliability (CR

Construct		Factor Loadings	Cronbach Alpha	AVE	Composite Reliability
Impact of Pandemic Covid-19	IOP1	0.828	0.706	0.768	0.868
	IOP2	0.921			
Environmental Awareness	EWS1	0.867	0.819	0.734	0.892
	EWS2	0.843			
	EWS3	0.859			
Environmental Attitudes	EAT1	0.843	0.825	0.740	0.895
	EAT2	0.867			
	EAT3	0.871			
Green Product Purchase	GPP1	0.837	0.769	0.685	0.867
	GPP2	0.784			
	GPP3	0.860			
Green Product Literacy	GPL1	0.791	0.833	0.751	0.900
	GPL2	0.922			
	GPL3	0.822			

According to Table 2, the factor loadings values for 14 constructs in this study all factor loadings are higher than 0.50, showing convergent validity among each construct's accepted (Hair et al., 2010). However, for the Model Fit test, the crimeware was fit by using the value SRMR, a value less than 0.10 or 0.08 (Hu and Bentler, 1999) are considered a good fit. Henseler et al. (2014) introduce the SRMR as a goodness of fit measure for PLS-SEM that can be used to avoid model misspecification. The showdown the model fit with SMSR value 0.08 for saturated model and 0.09 for estimated model.

4.3 Results of Hypotheses Testing

This study calculates 7 hypotheses, 5 direct and 2 indirect effects. To explain the hypotheses, result of this research, see the following Table 3 for Direct Effects and Table 4 for Indirect Effects.

Table 3. Direct Effect

H	Relationship Test	Original Sample (O)	Standard Deviation	T-Statistic	P-Values
1	IOP → EWS	0.386	0.096	4.012	0.005
2	IOP → GPP	0.091	0.094	0.969	0.166
3	EWS → GPP	0.257	0.125	2.061	0.000
5	EAT → GPP	0.341	0.132	2.575	0.005
6	GPL → GPP	0.083	0.088	0.939	0.174

Table 3 illustrates the results of the SEM-PLS. The dependent variable is environmental awareness. Based on the summarised result in Table 3, the impact of pandemic was found to be positively significant on environmental awareness (t-value = 4.012; p = 0.005). When theimpact ofthe pandemic increased by one standard deviation, the environmental awareness of consumers raised by 0.386 and **supported H1**. Meanwhile, when the impact of pandemic increased by one standard deviation, green product purchase raised by 0.091 (t-value =0.696; p = 0.166) and **not supported H2**. Environmental awareness was found to be statistically significant toward green product purchase in a 'new normal conformal context (t-value= 2.061; p = 0.000). When environmental awareness increased by one standard deviation, green product purchase raised by 0.125 and **supported H3.** Similarly, **H5 was statistically supported** (t-value = 2.575 ; p = 0.005). When Environmental attitude increased by one standard deviation, green product purchases raised by 0.132 in a 'new normal setting. In addition, green product literacy is non-significant and affects green product purchases (t-value =0.939; p = 0.174) when green product literacy increases by one standard deviation, green product literacy raised 0.088 and is **not supported H6** (see Figure 2).

Table 4. Specific Indirect Effect

H	Relationship Test	Original Sample (O)	Standard Deviation	t- values	P-values
4	IOP → EWS→ GPP	0.099	0.054	1.837	0.033
7	Moderating Effect Green Product Literacy	0.192	0.074	2.604	0.005

According to table 4, the result of the specific indirect effect hypothesizes 4 and 7 show environmental awareness statistically mediates the relationship between theimpact ofthe pandemic on green product purchase (t-value = 1.837; p = 0.033) thus, **hypotheses 4 was supported.** Lastly, green product literacy statistically also moderates the relationship between environmental attitudes toward green product purchases in new normal life (t-value = 02.604 ; p = 0.005) and **supported hypothesizes 7** in this study.

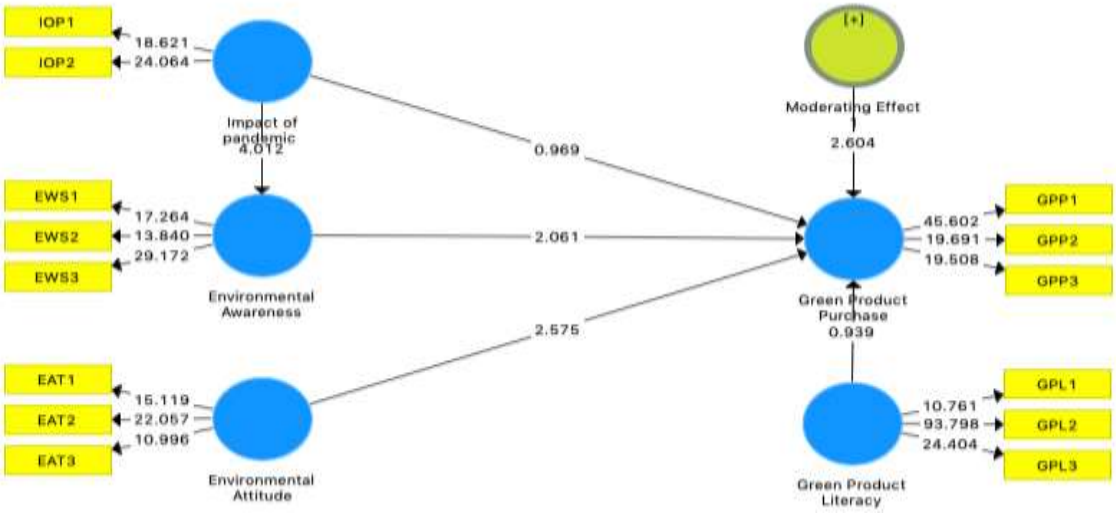

***Figure 2**. Framework Hypotheses Result*

4.4 Research Discussion

The behavioural change of consumers might occur in many ways. The stimulus includes personal, economic, psychological, contextual, and social factors. However, the COVID-19 pandemic condition has a more significant impact on consumer behaviour. Its dramatic condition and the potential disruption of social lives, threatening individuals' health, have been proven to lead to important behavioural changes. An example is panic buying, a phenomenon occurring when fear and panic affect behaviour, leading people to buy more things than usual (Di Crosta et al., 2021)

The result analysis and related previous studies supported that the impact of pandemic COVID-19 was a significant factor that influences the environmental awareness of consumers and implies how consumers reshape their needs in this new normal life. These results in lt also related to the previous study from Severo et al., (2021) which conducted COVID-19 pandemic on environmental awareness, sustainable consumption and social responsibility and the result of this research indicate that the COVID-19 Pandemic is an essential vector in people's behavioural change, which reflects on environmental sustainability and social responsibility. It is noteworthy that the impact of the COVID-19 pandemic had a greater influence on sustainable consumption, followed by environmental awareness. Purchasing and consuming green products during the pandemic was a coping mechanism that reduced their stress, fear, and anxiety about death (Scarpa & Thiene, 2011). Meanwhile, the direct relationship between the impact of the pandemic COVID-19 and green product purchases is insignificant. Still, when it is mediated by environmental awareness, the impact of the pandemic significantly affects green product purchases. It emphasises environmental awareness as an essential role in encouraging the actual behaviour of consumers toward green product purchases.

Additionally, environmental awareness positively influences green product purchase, which means consumers with environmental awareness tend to implement actual green behaviour by purchasing green products. For instance, (Lee, 2014) found that environmental concern positively affects the green purchase and green citizenship intentional behaviours. Other studies suggested that consumers concerned about the natural environment not only prefer to purchase products less harmful to the environment but also are willing to pay more to do so (Laroche et al., 2001).

Moreover, based on the research result, the environmental attitude also positively and significantly influence green product purchase in a new normal setting among Indonesian consumers. Substantial empirical studies mentioned affecting consumers' choices towards environmentally friendly products. Previous research emphasises a strong positive correlation

between attitude and purchase intention towards organic food as a green product (Al-Swidi et al., 2014). This study result shows the environmental attitude ultimately showing positive and significant relationship not only intended to purchase the green product but in actual behaviour by purchase green product because a pro-environmental perspective of consumer leading positive green practice such purchasing the green product, especially in new normal condition as stimuli of consumer buying behaviour. In addition, the attitudes found as an attribute to identified sustainable food behaviour during the COVID-19pandemic mainly influenced by age and education level (Muresan et al., 2021).

Interestingly, this study found that even though green product literacy non-significantly affects green product purchase, it successfully moderates the relationship between environmental attitude and green product purchase. Higher green product literacy among consumers strengthens pro-environmental attitudes through green product purchases. Consumers with a higher level of green product literacy will easily recognise labels or signs from green products. They also knew about the benefit of the green product itself. Meanwhile, the result of direct testing between green product literacy on green product purchase showed positive non-significant. It might occur considering that in developing countries, including Indonesia, consumers are still in a relatively early stage of a green lifestyle and have low green product literacy. Thus, for Indonesian consumers, green product literacy is not a significant factor in leading them to purchase green products. Still, a pro-environmental attitude did. When it comes to green product literacy, it will encourage the consumer to buy green products because green product literacy is a reflection of environmental attitude.

4.5 Research Implication

Based on this research, we found that the impact the COVID-19pandemic was a significant factor in increasing consumer environmental awareness, motivating, and encouraging their attitude toward pro-environment by purchasing green products. According to McKinsey report of Indonesian Consumer Sensitivity, there is a shake-up in the hierarchy of needs, health, hygiene, and sustainability polarization; the changes in behavior will reshape consumer decision journeys (Dahiya, Kapil & Potia, 2020). Thus, makes companies need to adapt faster. Indonesian consumers are considered in the early stage; adapting green lifestyle but the consumer awareness according to the environmental issues continuously growth.

Besides strict health protocol, sustainable innovation and green marketing might be best practices for adapting the changes in behaviour and capturing green consumers, especially in new normal situations. To increase the green product literacy of Indonesian consumers, the company could develop a green marketing strategy through advertising as a marketing communication with consumers. First, the company can apply marketing education: the information related to the environmental issue and sustainable consumption and its benefit. An education campaign also booster consumer awareness about environmental issues and how the company supports the sustainable living concept to adapt to green consumer needs. Applying campaign activities to programs raising ecological issues will firm their image as a green and sustainable company. In real implication, the company can implement a collaborative strategy by engaging with the community or events to educate consumers about applying green habits. For example, as a green coffee shop, Starbucks collaborates with music events to purchase tickets with a tumbler (bundling strategy). The tumbler can buy any drink in any beverage tenants at the event. Starbucks can get awareness by supporting events, spreading green habits and selling their tumbler simultaneously. Collaborating strategy can also implement by joining with community service activities such as sustainable forums or webinars and sharing session events that aim to increase public understanding of the environmental issue. In Indonesia, Syarief et al. (2022) have conducted community service collaborating with Octopus Indonesia, one of the startups that applies the circular economy to their business models, engaging in solving the plastic waste problem in Indonesia. The event aims to introduce the concept of a

circular economy, which has been the answer to the waste problem globally. From this event, Octopus also get a chance to raise awareness of their business to the market.

Second, the company can do green innovation from the product or the company operational process (e.g., environmentally friendly packaging or green resource and applying modern bulk stores to reduce waste and protect the environment). Third, marketers in the Indonesian green product sector should expand the supply channels of green products. The company should cooperate with an online platform (e.g., Shopee, Tokopedia, app, etc.) despite the increase in online shopping, especially during the pandemic and new normal life.

Lastly, to follow the trend of social media, a marketing education strategy is also possible to implement through a massive digital marketing strategy through reels Instagram. According to (Sucipto & Yahya, 2022), to adapting the new normal situation, food and beverage companies like Subway still implement health protocols and are required to wear masks for their visitor. To increase awareness of consumers, a marketing strategy dominated by Instagram reels to influence and remind the target market, give information and attract consumer attention.

4.6 Study Limitation and Future Research

Several limitations were encountered in this study. First, the study only measured specific variables: food safety knowledge, personal attitude, perceived social pressure, perceived autonomy, and trust in organic food safety. Additionally, the pandemic influenced organic food purchase intentions in 'normal' life. Other potential factors influencing green product purchases were not covered in this study. This research was done only with a specified number of consumers, only 100 respondents, and time was also a major limitation of this research.

However, why consumers in pandemic COVID-19 and higher green product literacy did not purchase green products in the future must be identified. Several studies indicate some factors might be the reasons why green consumers do not purchase green products, first availability of green products itself in all regions is not the same such in the east of Indonesia, the consumer still needs more effort to find green products and the fact green product having higher price compare to the conventional products. A previous study conducted by (Barbarossa & Pastore, 2015) indicates that environmentally conscious consumers focus on price and availability when purchasing low-involvement, frequently purchased items, such as tissue paper products. Additionally, green consumers perceive green products as more expensive than conventional products, which prevents these consumers from purchasing green alternatives. These barriers cause even environmentally conscious consumers to perceive the purchase of green products as a stressful, expensive, and time-wasting activity. In the new normal context, consumers might have a high environmental attitude reflecting high green product literacy and suggest purchasing the green product. However, they still consider another factor that significantly strengthens their pro-environmental attitude to actual behaviour. High prices of green food, unavailability issues, mistrust issues, and limited knowledge triggered the gap between green food purchase intentions and behaviours (Qi et al., 2020). In the marketing context, the stimuli such as our marketing activity (e.g., promotion or product discount) and willingness to pay more might change consumers' price sensitivity. (Paetz et al., 2012) have suggested that consumers' consumption activities will not change unless this is easy and convenient for them. Future research could better collect the data by considering another potential factor that affects the environmental attitude to green product purchases, such as the willingness to pay more for the green product or marketing activity.

V. Conclusion

Based on direct hypothesis testing, it was found that the impact of the pandemic is a significant factor in predicting environmental awareness (H1). Meanwhile the impact of the pandemic not significantly predicts green product purchases (H2). Furthermore, environmental awareness finding as a significant factor influence green product purchases (H3). The other direct hypotheses also show environmental attitude as a significant factor to identify green product purchase (H5) while green product literacy was not supported as a significant factor in green product purchase (H6). On the other hand, specific indirect effect testing shows that environmental awareness successfully mediates the impact of pandemic on green product purchases (H4). For moderate testing, green product literacy moderates the relationship of environmental attitude to green product purchase (H7). The outcomes contribute and offer valuable information for future public policy and marketing campaigns regarding green product purchases.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Al-Swidi, A., Huque, S. M. R., Hafeez, M. H., & Shariff, M. N. M. (2014). The role of subjective norms in theory of planned behavior in the context of organic food consumption. *British Food Journal*, *116*(10), 1561–1580. https://doi.org/10.1108/BFJ-05-2013-0105

Barbarossa, C., & Pastore, A. (2015). Why environmentally conscious consumers do not purchase green products: A cognitive mapping approach. *Qualitative Market Research*, *18*(2), 188–209. https://doi.org/10.1108/QMR-06-2012-0030

Ben Hassen, T., El Bilali, H., & Allahyari, M. S. (2021). Journal of Retailing and Consumer Services Do social media platforms develop consumer panic buying during the fear of Covid-19 pandemic. *Journal of Retailing and Consumer Services*, *9*(17), 1–18. https://doi.org/10.1016/j.jretconser.2020.102226%0Ahttps://en.wikipedia.org/wiki/Panic_buying

Biswas, A. (2020). A nexus between environmental literacy, environmental attitude and healthy living. *Environmental Science and Pollution Research*, *27*(6), 5922–5931. https://doi.org/10.1007/s11356-019-07290-5

Chen, X., Rahman, M. K., Rana, M. S., Gazi, M. A. I., Rahaman, M. A., & Nawi, N. C. (2022). Predicting Consumer Green Product Purchase Attitudes and Behavioral Intention During COVID-19 Pandemic. *Frontiers in Psychology*, *12*(January), 1–10. https://doi.org/10.3389/fpsyg.2021.760051

Dahiya, Kapil & Potia, A. (2020). Generous : COVID-19 ' s Impact on Indonesian Consumer Sentiment. *McKinsey and Company*, *April*.

Değirmenci, B., Durmaz, Y., Fidanoğlu, A., & Değirmenci, S. (2022). Psychological effects of COVID-19 phobia on industrial consumers: a case study in Turkey. *Journal of Business and Industrial Marketing*, *March*. https://doi.org/10.1108/JBIM-04-2021-0221

Delafrooz, N., Taleghani, M., & Nouri, B. (2014). Effect of green marketing on consumer purchase behavior. *QScience Connect*, *2014*(1). https://doi.org/10.5339/connect.2014.5

Di Crosta, A., Ceccato, I., Marchetti, D., la Malva, P., Maiella, R., Cannito, L., Cipi, M., Mammarella, N., Palumbo, R., Verrocchio, M. C., Palumbo, R., & Domenico, A. Di. (2021). Psychological factors and consumer behavior during the COVID-19 pandemic. *PLoS ONE*, *16*(8 August), 1–23. https://doi.org/10.1371/journal.pone.0256095

El Zowalaty, M. E., Young, S. G., & Järhult, J. D. (2020). Environmental impact of the COVID-19 pandemic–a lesson for the future. *Infection Ecology and Epidemiology*, *10*(1). https://doi.org/10.1080/20008686.2020.1768023

Hair, J., Anderson, R., Babin, B., & Black, W. (2010). Multivariate Data Analysis.pdf. In *Australia : Cengage: Vol. 8 edition* (p. 758).

Hanss, D., Böhm, G., Doran, R., & Homburg, A. (2016). Sustainable Consumption of Groceries: the Importance of Believing that One Can Contribute to Sustainable Development. *Sustainable Development*, *24*(6), 357–370. https://doi.org/10.1002/sd.1615

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management and Data Systems*, *116*(1), 2–20. https://doi.org/10.1108/IMDS-09-2015-0382

Hu L.T., & M., B. P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(July 2012), 1–55.

Huang, Y. C., Yang, M., & Wang, Y. C. (2014). Effects of green brand on green purchase intention. *Marketing Intelligence and Planning*, *32*(3), 250–268. https://doi.org/10.1108/MIP-10-2012-0105

Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. In *International Strategic Management Review* (Vol. 3, Issues 1–2). Holy Spirit University of Kaslik. https://doi.org/10.1016/j.ism.2015.04.001

Kar, Y. Y., & Rashad, Y. (2014). The concept of green marketing and green product development on consumer buying approach. *Global Journal of Commerce & Management Perspective*, *3*(2), 33–38. https://d1wqtxts1xzle7.cloudfront.net/35290569/The_Concept_of_Green_Marketing_and_Green_Product_Development_on_Consumer_Buying_Approach.pdf?1414380887=&response-content-disposition=inline%3B+filename%3DThe_Concept_of_Green_Marketing_and_Green.pdf&Expires=

Khare, A., & Kautish, P. (2022). Antecedents to green apparel purchase behavior of Indian consumers. *Journal of Global Scholars of Marketing Science*, *32*(2), 222–251. https://doi.org/10.1080/21639159.2021.1885301

Kim, M. S., & Stepchenkova, S. (2020). Altruistic values and environmental knowledge as triggers of pro-environmental behavior among tourists. *Current Issues in Tourism*, *23*(13), 1575–1580. https://doi.org/10.1080/13683500.2019.1628188

Kim, Y., & Choi, S. M. (2005). Antecedents of Green Purchase Behavior: an Examination of Collectivism, Environmental Concern, and Pce. *Advances in Consumer Research*, *32*, 592–599.

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, *18*(6), 503–520. https://doi.org/10.1108/EUM0000000006155

Latip, M. S. A., Newaz, F. T., Ramasamy, R., Tumin, S. A., & Noh, I. (2020). How do food safety knowledge and trust affect individual's green considerations during the covid-19 pandemic in malaysia? *Malaysian Journal of Consumer and Family Economics*, *24*, 261–285.

Lee, K. (2014). Predictors of Sustainable Consumption among Young Educated Consumers in Hong Kong. *Journal of International Consumer Marketing*, *26*(3), 217–238. https://doi.org/10.1080/08961530.2014.900249

Liobikiene, G., & Poškus, M. S. (2019). The importance of environmental knowledge for private and public sphere pro-environmental behavior: Modifying the Value-Belief-Norm theory. *Sustainability (Switzerland)*, *11*(12). https://doi.org/10.3390/su10023324

Mourad, M., & Ahmed, Y. S. E. (2012). Perception of green brand in an emerging innovative market. *European Journal of Innovation Management*, *15*(4), 514–537. https://doi.org/10.1108/14601061211272402

Muresan, I. C., Harun, R., Arion, F. H., Brata, A. M., Chereches, I. A., Chiciudean, G. O., Dumitras, D. E., Oroian, C. F., & Tirpe, O. P. (2021). Consumers' attitude towards

sustainable food consumption during the covid-19 pandemic in Romania. *Agriculture (Switzerland)*, *11*(11), 1–15. https://doi.org/10.3390/agriculture11111050

Ogiemwonyi, O., Harun, A. Bin, Alam, M. N., & Othman, B. A. (2020). Do We Care about Going Green? Measuring the Effect of Green Environmental Awareness, Green Product Value and Environmental Attitude on Green Culture. An Insight from Nigeria. *Environmental and Climate Technologies*, *24*(1), 254–274. https://doi.org/10.2478/rtuect-2020-0015

Ottman, J. A. (1993). *Green Marketing: Opportunity for Innovation.* McGraw Hill, NT Business Books,.

Paetz, A. G., Dütschke, E., & Fichtner, W. (2012). Smart Homes as a Means to Sustainable Energy Consumption: A Study of Consumer Perceptions. *Journal of Consumer Policy*, *35*(1), 23–41. https://doi.org/10.1007/s10603-011-9177-2

Qi, X., Yu, H., & Ploeger, A. (2020). Exploring influential factors including COVID-19 on green food purchase intentions and the intention–behaviour gap: A qualitative study among consumers in a Chinese context. *International Journal of Environmental Research and Public Health*, *17*(19), 1–22. https://doi.org/10.3390/ijerph17197106

Ramsey, C. E., & Rickson, R. E. (1976). Environmental knowledge and attitudes. *Journal of Environmental Education*, *8*(1), 10–18. https://doi.org/10.1080/00958964.1976.9941552

Sajid, K. S., Hussain, S., Hussain, R. I., & Mustafa, B. (2022). The Effect of Fear of COVID-19 on Green Purchase Behavior in Pakistan: A Multi-Group Analysis Between Infected and Non-infected. *Frontiers in Psychology*, *13*(March). https://doi.org/10.3389/fpsyg.2022.826870

Sarkis, J., Cohen, M. J., Dewick, P., & Schröder, P. (2020). A brave new world: Lessons from the COVID-19 pandemic for transitioning to sustainable supply and production. *Resources, Conservation and Recycling*, *159*(January). https://doi.org/10.1016/j.resconrec.2020.104894

Scarpa, R., & Thiene, M. (2011). Organic food choices and Protection Motivation Theory: Addressing the psychological sources of heterogeneity. *Food Quality and Preference*, *22*(6), 532–541. https://doi.org/10.1016/j.foodqual.2011.03.001

Severo, E. A., De Guimarães, J. C. F., & Dellarmelin, M. L. (2021). Impact of the COVID-19 pandemic on environmental awareness, sustainable consumption and social responsibility: Evidence from generations in Brazil and Portugal. *Journal of Cleaner Production*, *286*. https://doi.org/10.1016/j.jclepro.2020.124947

Shabani, N., Ashoori, M., Taghinejad, M., Beyrami, H., & Fekri, M. N. (2013). The study of green consumers' characteristics and available green sectors in the market. *International Research Journal of Applied and Basic Sciences*, *4*(7), 1880–1883. www.irjabs.com

Siddique, M. Z. R., & Hossain, A. (2018). Sources of Consumers Awareness toward Green Products and Its Impact on Purchasing Decision in Bangladesh. *Journal of Sustainable Development*, *11*(3), 9. https://doi.org/10.5539/jsd.v11n3p9

Song, Y., Qin, Z., & Yuan, Q. (2019). The impact of eco-label on the young Chinese generation: The mediation role of environmental awareness and product attributes in green purchase. *Sustainability (Switzerland)*, *11*(4). https://doi.org/10.3390/su11040973

Sucipto, K. R. R., & Yahya, A. F. (2022). Strategi komunikasi pemasaran digital subway indonesia melalui reels instagram @subway.indonesia. *Jurnal Komunikasi Profesional*, *6*(1), 68–78. https://doi.org/10.25139/jkp.v6i1.4456

Suki, N. M. (2016). Green product purchase intention: impact of green brands, attitude, and knowledge. *British Food Journal.*, 1–7.

Syarief, R., Malik, A. J., Syahnur, K. N. F., Fitriyani, Riana, M. A., & Arifin, I. (2022). Pengenalan Konsep Ekonomi Sirkular Melalui Webinar "Ekonomi Sirkular: Solusi Masalah Persampahan di Indonesia." *Celebes Journal of Community Services*, *1*(1), 28–35.

Vaishali, M. S. R., & Hemanathan, M. (2020). Mpact of Covid 19 on Customers Attitude Towards Green Product. With Special Reference To Chennai City. *PalArch's Journal of Archaeology of …*, *17*(6), 2747–2756. http://palarch.nl/index.php/jae/article/download/1219/1263