Performance Analysis of the Small and Medium Enterprises Based on Green product Management

Ladda Hirunyava[1], Apinya Wisessing[2], Sittichai Thammasane[3], Duangsamorn Rungsawanpho[4]

[1]*Suan Sunandha Rajabhat University, Thailand*
ladda.hi@ssru.ac.th
[2]*Suan Sunandha Rajabhat University, Thailand*
apinya.wi@ssru.ac.th
[3]*Suan Sunandha Rajabhat University, Thailand*
sittichai.th@ssru.ac.th
[4]*Suan Sunandha Rajabhat University, Thailand*
duangsamorn.ru@ssru.ac.th

Abstract

Satisfactory business performance in a competitive market is a major challenge for small and medium-sized enterprises (SMEs). This study proposed that it can be achieved through green product development (GPD). Therefore, this study aims to investigate the role of GPD in business performance among SMEs. Consequently, this study proposed a relationship between GPD, customer attraction, brand image, environmental quality and business performance. This relationship is tested by following the cross-sectional research design through the quantitative research approach. Data collection is made by using a survey questionnaire. Data were collected from the employees working in SMEs located in Thailand. After data analysis, it is observed that GPD is most important element to enhance business performance in a competitive business market. It is proved that GPD has a positive effect on attracting customers, which further leads to environmental quality and business performance. Additionally, customer attraction also causes to promote brand image which increases the business performance.

Keywords. Green product development, customer attraction, brand image, environmental quality, business performance.

1. Introduction

Business performance is one of the influential aspects among the business organization (López-Arceiz, del Río, & Bellostas, 2022) which is needed to ensure to survive in the market. Similar to other organizations SMEs is also required to achieve a certain level of business performance to survive in the market. Business performance is also important for SMEs because a significant performance of SMEs has a major role to contribute to various other aspects. The SMEs working in Thailand has a major contribution to the economy of Thailand. These SMEs are producing a number of jobs for the people; therefore, it is providing income-generating opportunities for the people in the shape of business as well as jobs. This sector is most beneficial for the economy of

Thailand because it is producing a significant amount of revenue for the economy. Therefore, SMEs are the major sectors in Thailand (Chaithanapat, Punnakitikashem, Oo, & Rakthin, 2022) which is influential in terms of a nation's economy. These organizations also have a key influence to enhance the gross domestic product of Thailand. SMEs are on the growing stage and the businesses are growing day by day.

SMEs include service SMEs as well as manufacturing SMEs (Raymond, St-Pierre, Uwizeyemungu, & Le Dinh, 2014). Both are contributing to the industry with the help of significant business performance. However, in the last two years the performance of these SMEs is limited. There is a decline in the performance of SMEs. Decrease in the performance has overall negative effect on the

industry and it also has negative effect on various other businesses. The stakeholders of SMEs are also influenced negatively due to the decline in performance. Therefore, it is needed to ensure the performance at a higher level. It is required to develop significant strategies to promote of business activities. The sector wise Thailand SMEs performance is highlighted in Figure 1 for the year of 2020. According to the statistics, the performance of various sectors is decreased in 2020. Statistics shows that service industry is on the top with 68.9% performance. The agriculture sector is on a second position with 55.9% performance. The production sector

is on third position with 55% performance. Finally, the retail sector is lower than all sectors with 54.5% performance in the year of 2021. There is a decline in the performance of all sectors including services, agricultural, production and retail in the year of 2021. This is one of the threatening positions to the SMEs business performance which is needed to address by the practitioners as well as researchers and strategies should be propose to promote business performance (Cesarec, Mikac, & Spevec, 2020; Costa et al., 2020; Kennedy, Schmitz, & DeLong, 2020).
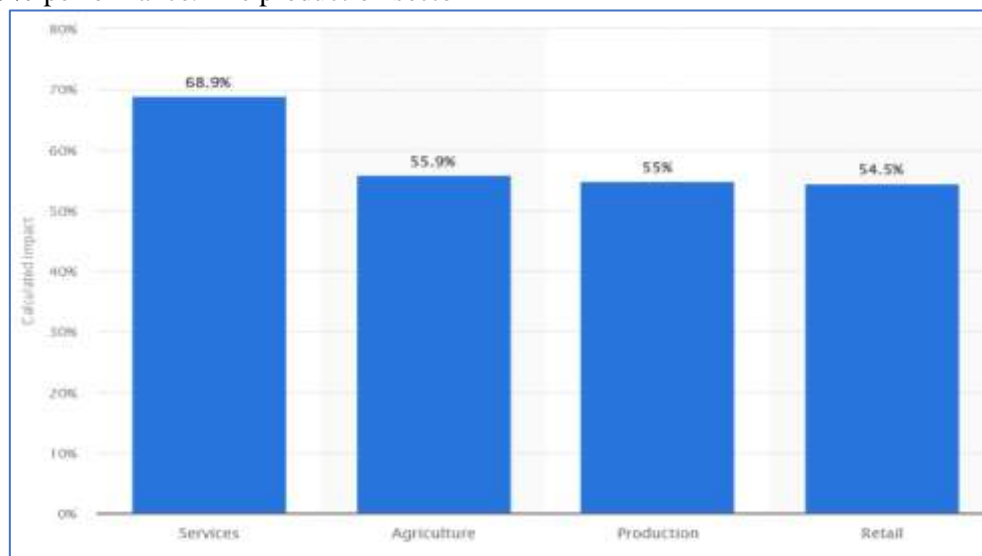

Figure 1. SMEs Performance of Thailand in 2021

Source: Statista

The current study proposed that SMEs orientation towards a green product development (GPD) can promote business performance (Y.-S. Chen, Lin, Lin, & Chang, 2015; Ma et al., 2018; Wang, Li, Li, & Wang, 2021). As green innovation lead to the better organizational performance (Alhadid & As' ad, 2014). Previous studies highlighted that green product has significant effect on business performance. The green product has the potential to influence customer attraction which may have a positive role to promote performance. Similarly, environmental quality along with brand image also has the ability to enhance business performance with the help of customer attraction. Therefore, this study proposes that green product along with the brand image, customer attraction and environmental quality are the major elements which can

promote business performance among the SMEs of Thailand (Delbianco & Dabús, 2020; Erdil-Moody & Thompson, 2020; Kengatharan, 2020).

Thus, the purpose of this study is to investigate the role of GPD in business performance among SMEs which is achieved by examining the relationship between GPD, customer attraction, brand image, environmental quality and business performance. Literature has investigated the business performance of SMEs (GbolagadeAdewale & Oyewale, 2013; Menne et al., 2022) among several aspect, however, SMEs business performance in relation to the customer attraction is very rare. Especially, the business performance in relation to the customer attraction in Thailand is ignored by previous studies. The mediating role of customer

attraction between GPD and business performance is not addressed. Consequently, the study addressed the relationship between green products and business performance among SMEs with mediating role of customer attraction.

2. Literature Review

A significant level of performance achievement is always challenging for businesses. There is always a significant effort as well as strategies are required to promote business performance. Because in a competitive environment, number of forces affecting on the businesses and it is not easy for a business to control these forces. There are several internal as well as external factors effects on business performance. Similar with other organizations, the SMEs are also facing

several internal and external factors which can influence the business performance. In this way, it is important to address these factors and manage accordingly to promote business performance. This study proposed that green products among the organizations has influential role on business performance. Furthermore, this study proposes that brand image and environmental quality are also the factors affecting businesses. Additionally, these factors influencing customer attraction which may lead to the positive and negative effect towards business performance. Hence, the current study proposed four factors affecting business performance which include development of green product, brand image, environmental quality and customer attraction. The relationship between these factors is highlighted in Figure 2 as theoretical framework of the study.
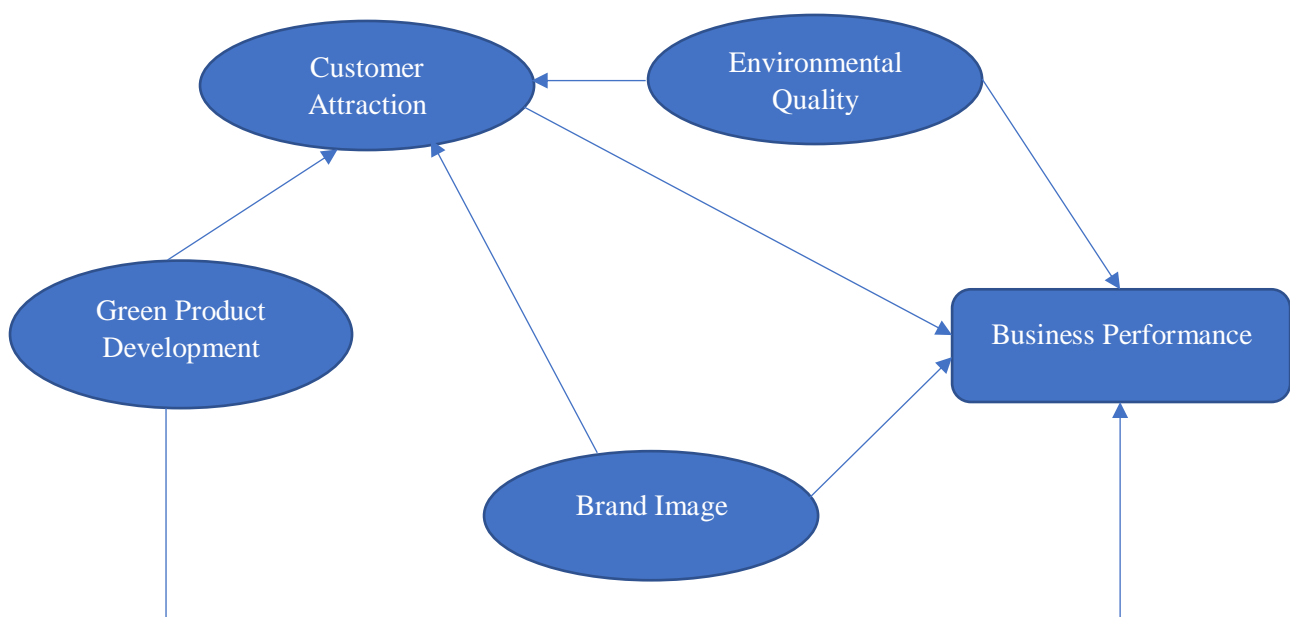

Figure 2. Theoretical framework of the study

The purpose of the development of green products is to promote environment friendly products to enhance environmental sustainability (Awan, Arnold, & Gölgeci, 2021). Green products involve those products which do not have harm to the environment. The products which lead to the better environmental health by providing various other benefits to the people are called the green product. Generally, the green products involve ecological, recycling and

energy saving products. In the recent populated environment, the pollution is increasing significantly therefore, companies are focusing to promote green products to reduce the effect on environment. Similarly, SMEs are also trying to promote green products to reduce the effect on environment (Ajah, Dinne, & Salami, 2020; Fischer & Noble, 2020; Fitriani, Zubaidah, Susilo, & Al Muhdhar, 2020; Ojogiwa, 2021). Generally, the green product activities involve

green procurement, green manufacturing as well as other green operations which do not have any effect on the environment. The production of green products led to the better performance of business because in the business environment, it is the social responsibility of business to produce green products and the orientation of the people is also leading towards the use of green products which causes to increase the performance. The green products orientation of the people leads them to purchase the green products which has significant influence on the performance. Therefore, the green products have influence on the business performance which is also evident from previous study (Li, Jayaraman, Paulraj, & Shang, 2016; Wang et al., 2021).

Hypothesis 1. GPD has positive effect on business performance.

Environmental quality is an important and general term which is varied in different contexts. Environmental quality is based on the quality of air, quality of water and the level of pollution as well as noise. Therefore, environmental quality can be described as it is the set of properties as well as characteristics of the environment which has influence on living organisms. Currently the environment quality is the focus point of various researchers and practitioners (Longhini et al., 2022)because it has direct effect on human health. Most of the business organizations are trying to promote environmental quality with the help of various strategies and product development. Number of SMEs are also involved in environmental protection activities. Various manufacturing and services SMEs are also trying to promote environmental health with the help of different products and reducing the effect of their activities on the environment. The protection of environment is always in the favor of business performance as highlighted and mentioned by previous studies that business performance is also connected with environmental quality (Ali, Yusop, Kaliappan, & Chin, 2020). There is a relationship between environmental quality and business performance (Fernando, Jabbour, & Wah, 2019).

Hypothesis 2. Environmental quality has positive effect on business performance.

Brand image is the perception of brand in the minds of people, particularly, it is the perception in the minds of customer of a specific product.

Brand image is begun with the analysis that how the brand will perceive in the market and how the customer will behave towards a specific brand. Brand images also based on the impression of the brand perception of the people and association of the brand with the customer. This perception of the brand has significant relationship with the business performance. As it is reported in the literature that brand image is one of the major determinants of business performance in several industries (Huang, Li, & Yen, 2016; Zameer, Wang, & Yasmeen, 2020). Therefore, along with other industries brand image also has an influence on the SMEs performance.

Hypothesis 3. Brand image has positive effect on business performance.

The above discussion shows that green product, brand image and environmental quality has a significant influence on business performance. This section shows that these elements also have a relationship with the customer attraction. The customer attraction is most important for any business activity as the customers are the basic element which has effect on the improvements of the performance. This study proposes that development of green products attract the customer. And the attraction of customers towards the business lead to the business performance. As there is a relationship between customer satisfaction and green products (Herath & Herath, 2019; Lam, Lau, & Cheung, 2016). Green products always lead to the satisfaction of the customer which causes to the repurchase intention of the customer and help to enhance business performance. Furthermore, the development of better brand image also causes to affect customer attraction level. Better the image of brand in the minds of customers better will be the customer attraction. As there is a significant relationship between brand image and customer satisfaction (A. Mohammed & Rashid, 2018; Waluya, Iqbal, & Indradewa, 2019). Additionally, there is a relationship between environmental quality and customer attraction. Due to the increase in pollution in the environment, customers are also leading to purchase green products which has effect on customer attraction. Therefore, the companies which are trying to promote environmental quality with the help of green products, the customers are also attracted towards these companies. These elements promote customer

attraction and finally customer attraction shows positive role to enhance business performance. The current study proposed that customer attraction is playing a mediating role between these three elements and business performance (Dlalisa & Govender, 2020; Karjo & Ng, 2020; Marcel Heimar Ribeiro Utiyama, 2020; Sgammini & Muzindutsi, 2020).

Hypothesis 4. GPD has positive effect on customer attraction.

Hypothesis 5. Brand image has positive effect on customer attraction.

Hypothesis 6. Environmental quality has positive effect on customer attraction.

Hypothesis 7. Customer attraction has positive effect on business performance.

Hypothesis 8. Customer attraction mediates the relationship between GPD and business performance.

Hypothesis 9. Customer attraction mediates the relationship between brand image and business performance.

Hypothesis 10. Customer attraction mediates the relationship between environmental quality and business performance.

3. Research Methodology

The selection of suitable research methodology is important to get original results. Similarly, in the current study, to examine the effect of green product development, brand image, environmental quality and customer attraction on business performance require a suitable research methodology. It is observed that the previous studies on business performance and green product development are based on quantitative research (Y. S. Chen et al., 2020;

Leal-Rodríguez, Ariza-Montes, Morales-Fernández, & Albort-Morant, 2018). Several studies identified the relationship with the help of quantitative research. Therefore, this study observed that the suitable methodology in this study is quantitative research. While selecting quantitative research, this study collected data with the help of questionnaire survey.

A questionnaire survey is designed to examine the relationship between variables. The questionnaire is developed with the help of adopting research questions from previous studies. In this study, the business performance is considered through profitability, return on assets, return on equity and return on sales. The green product is measured by focusing on the product developed by the SMEs based on environmental protection. Customer attraction is measured with the help of various items related to the customer attraction for the products of the company. Moreover, brand image is measured with the help of perceived image in the minds of customers in relation to the specific product. Finally, environmental quality is measured with the help of various measures taken by the SMEs to promote environmental protection. Finally, comprehensive questionnaire design and used to collect primary data from SMEs (Ershadi, Jefferies, Davis, & Mojtahedi, 2020; Hamdan, Qarem, Ab Yajid, Ariffin, & Azam, 2021; Mahonge, Nsenga, Itani, & Kurosaki, 2021; Ruixia & Junbo, 2020; Salavrakos, 2020).

The SMEs working in Thailand are considered as the population of the study. The staff working in these SMEs is considered as respondents of the current study. Therefore, the designed questionnaire is distributed among the staff of SMEs in Thailand. This study preferred 400 survey questionnaires to collect data. From distributed questionnaires, this study collected 190 responses for data analysis. The data statistics are provided in Table 1.

Table 1. Data Statistics

	No.	Missing	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
GPM1	1	0	4.011	4	1	5	0.962	0.408	-0.877
GPM2	2	0	3.823	4	1	5	1.073	-0.257	-0.676
GPM3	3	0	3.703	4	1	5	1.153	-0.718	-0.527
GPM4	4	0	4.131	4	1	5	0.986	1.022	-1.171

GPM5	5	0	4.217	4	1	5	0.861	2.008	-1.249
GPM6	6	0	3.954	4	1	5	1.063	-0.033	-0.859
EQ1	7	0	3.851	4	1	5	1.229	-0.511	-0.776
EQ2	8	0	3.754	4	1	5	1.127	-0.798	-0.492
EQ3	9	0	3.8	4	1	5	1.141	-0.546	-0.623
EQ4	10	0	3.88	4	1	5	1.043	-0.692	-0.518
EQ5	11	0	3.863	4	1	5	1.044	-0.118	-0.664
CA1	12	0	3.983	4	1	5	0.916	1.391	-1.089
CA2	13	0	4.034	4	1	5	1.03	-0.031	-0.859
CA3	14	0	4.154	4	1	5	1.022	0.555	-1.092
CA4	15	0	4.029	4	1	5	1.028	0.302	-0.95
CA5	16	0	4.029	4	1	5	1.005	0.42	-0.943
BI1	17	0	3.686	4	1	5	1.036	-0.307	-0.491
BI2	18	0	3.829	4	1	5	1.028	-0.149	-0.669
BI3	19	0	3.857	4	1	5	1.083	-0.562	-0.636
BI4	20	0	3.783	4	1	5	1.121	-0.412	-0.668
BI5	21	0	3.926	4	1	5	1.014	0.886	-1.01
BP1	22	0	3.874	4	1	5	1.018	0.324	-0.86
BP2	23	0	3.914	4	1	5	0.906	0.202	-0.666
BP3	24	0	3.914	4	1	5	0.881	0.653	-0.692
BP4	25	0	3.783	4	1	5	1.264	-0.673	-0.679
BP5	26	0	3.714	4	1	5	1.269	-1.042	-0.481

Note: GPD = Green Product Development; EQ = Environmental Quality; BI = Brand Image; CA = Customer Attraction; BP = Business Performance

4. Findings

This study followed Structural Equation Modeling (SEM) a most suitable approach to analyze the data. SEM can be employed through AMOS and SPSS, however, this study selected Smart PLS 3 to analyze data through SEM. Thus, PLS-SEM is employed in this study. According to previous studies on PLS-SEM (Hair, Hult, Ringle, Sarstedt, & Thiele, 2017; Hair et al., 2019; Khan et al., 2019), it is most significant to examine the relationship and test the hypotheses based on primary data. PLS measurement model is used to check the reliability with the help of factor loadings. It is given in Figure 2; green product development is measured by using six scale items and all the items have factor loadings above 0.5. Furthermore, five items are used for environmental quality, brand image, customer attraction and business performance. All items have factor loadings above 0.5. Additionally, composite reliability (CR) is also above 0.7 and average variance extracted (AVE) is above 0.5 for green product development, customer attraction, brand image, environmental quality and business performance. The achievement of CR and AVE confirmed the convergent validity.

All these results are given in Table 2. Finally, discriminant validity (Afthanorhan, 2013; Astrachan, Patel, & Wanzenried, 2014) is achieved with the help of HTMT0.9 as shown in Table 3.
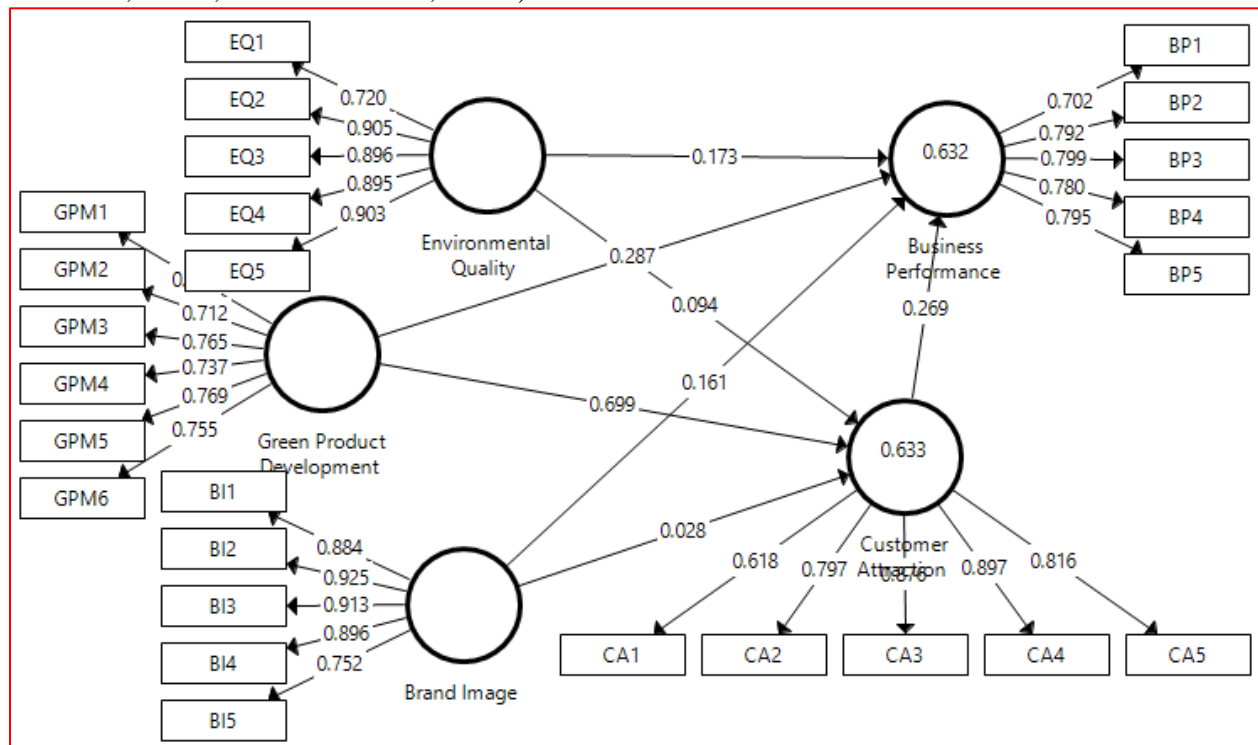
Note: GPD = Green Product Development; EQ = Environmental Quality; BI = Brand Image; CA = Customer Attraction; BP = Business Performance

Figure 3. Measurement Model

Table 2. Factor Loadings, Reliability and Convergent Validity

Variables	Items	Loadings	Alpha	CR	AVE
Brand Image	BI1	0.884	0.923	0.943	0.768
	BI2	0.925			
	BI3	0.913			
	BI4	0.896			
	BI5	0.752			
Business Performance	BP1	0.702	0.836	0.882	0.6
	BP2	0.792			
	BP3	0.799			
	BP4	0.78			
	BP5	0.795			
Customer Attraction	CA1	0.618	0.861	0.902	0.651
	CA2	0.797			

	CA3	0.876			
	CA4	0.897			
	CA5	0.816			
Environmental Quality	EQ1	0.72	0.915	0.937	0.751
	EQ2	0.905			
	EQ3	0.896			
	EQ4	0.895			
	EQ5	0.903			
Green Product Development	GPM1	0.749	0.873	0.884	0.56
	GPM2	0.712			
	GPM3	0.765			
	GPM4	0.737			
	GPM5	0.769			
	GPM6	0.755			

Note: GPD = Green Product Development; EQ = Environmental Quality; BI = Brand Image; CA = Customer Attraction; BP = Business Performance
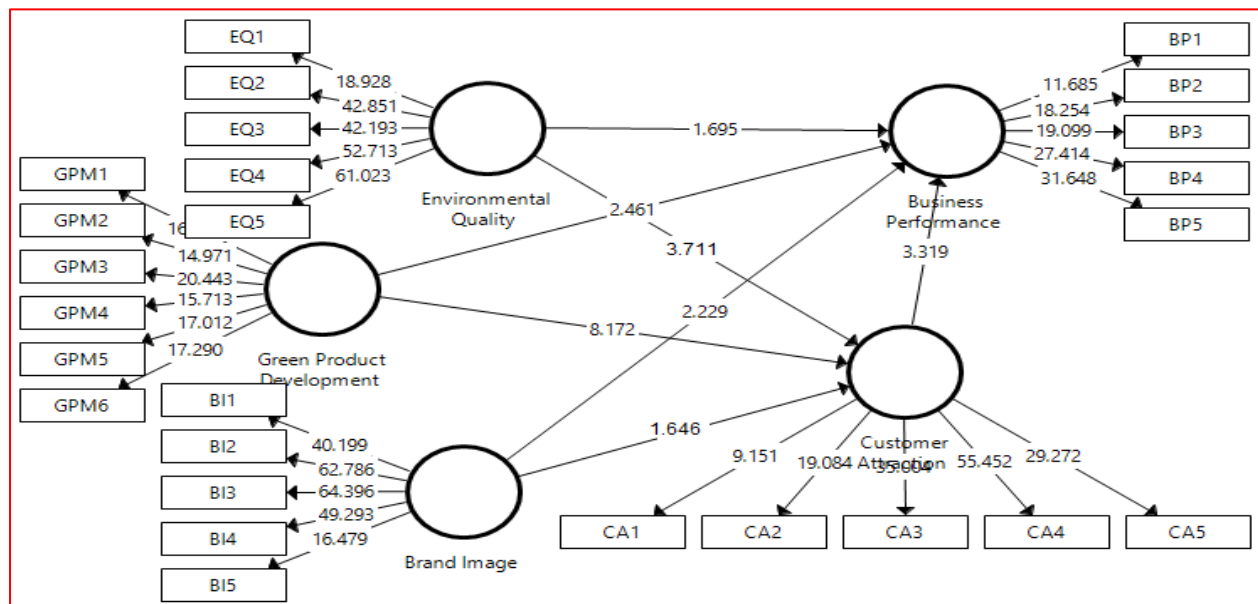
Table 3. HTMT$_{0.9}$

	Brand Image	Business Performance	Customer Attraction	Environmental Quality	Green Product Development
Brand Image					
Business Performance	0.726				
Customer Attraction	0.684	0.819			
Environmental Quality	0.76	0.766	0.742		
Green Product Development	0.843	0.876	0.809	0.892	

The assessment of PLS structural model (Chairatana, 2021; M. Mohammed et al., 2022) is based on to examine the relationship between green product, customer attraction, brand image, environmental quality and business performance. In this process, the effect of green product is examined on customer attraction. The effect of customer attraction is examined on brand image along with environmental quality.

The role of environmental quality is examined in relation to the business performance. Total seven direct effect are considered in this study and results are given in Table 4. Results shows that GPD has significant effect on business performance with t-value 2.461. It also has significant effect on customer attraction with t-value 8.172. Environmental quality has positive influence on business performance and

customer attraction with t-value 1.695 and 3.711, respectively. Brand image has significant effect on business performance with t-value 2.229. Additionally, brand image has significant effect on customer attraction with t-value 1.646. Finally, directly effect shows that customer attraction has positive role to influence business performance with t-value 3.319.

Note: GPD = Green Product Development; EQ = Environmental Quality; BI = Brand Image; CA = Customer Attraction; BP = Business Performance

Figure 4. Structural Model

Table 4. Direct Effect Results

	Beta	M	SD	T Statistics	P Values
Brand Image -> Business Performance	0.161	0.161	0.072	2.229	0.013
Brand Image -> Customer Attraction	0.028	0.02	0.028	1.646	0.049
Customer Attraction -> Business Performance	0.269	0.264	0.081	3.319	0
Environmental Quality -> Business Performance	0.173	0.17	0.102	1.695	0.045
Environmental Quality -> Customer Attraction	0.094	0.094	0.025	3.711	0
Green Product Development -> Business Performance	0.287	0.297	0.117	2.461	0.007
Green Product Development -> Customer Attraction	0.699	0.707	0.086	8.172	0

Mediation effect of customer attraction is presented in Table 5. According to the mediation results, two mediation effect are not supported and one mediation effect is supported. The mediation effect of customer attraction is examined between brand image and business performance. Mediation effect of customer attraction is examined between environmental quality and business performance. Furthermore, the mediation effect of customer attraction is reported between GPD and business performance. The mediation effect between brand image and business performance is not supported with t-value 0.321. The mediation

effect between environmental quality and business performance is also not supported with t-value 0.175. Finally, the mediation effect between GPD and business performance is significant with t-value 3.328. The mediation

effect of customer attraction between GPD and business performance is also highlighted in Figure 4.

Table 5. Indirect Effect Results

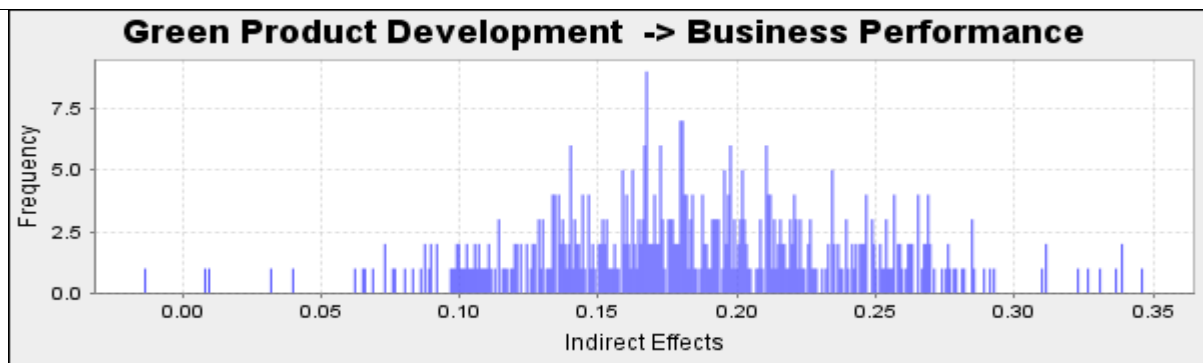|	Beta	M	SD	T Statistics	P Values
Brand Image -> Customer Attraction -> Business Performance	0.007	0.005	0.023	0.321	0.374
Environmental Quality -> Customer Attraction -> Business Performance	0.025	0.026	0.027	0.936	0.175
Green Product Development -> Customer Attraction -> Business Performance	0.188	0.185	0.056	3.328	0

Figure 1. Mediation effect histogram between green product development and business performance

5. Discussion and Conclusion

To examine the relationship between green product development, environmental quality, brand image, customer attraction and business performance, this study proposed several direct effect hypotheses and indirect effect hypotheses. The direct effect hypotheses show the effect of green product, brand image and environmental quality on customer attraction and business performance. The indirect effect hypotheses are based on the indirect effect of customer attraction.

While considering the direct effect, first of all the current study examined the effect of green product on customer attraction. The relationship between green product and customer attraction found significant and positive. It shows that green product increases the customer attraction. The focus of company is towards the green product production has the ability to enhance the

customer attraction towards the product. Therefore, it is recommended to the managers of SMEs to promote green products to enhance customer attraction. Furthermore, the effect of environmental quality is examined on customer attraction which is also positive and significant. According to these results, environmental quality protection among the SMEs also influences positively on the customers and customer attraction towards the specific company products increased significantly. It is evident that quality focused by the companies towards environment always lead towards positive outcomes. Furthermore, the effect of brand image also found positive on customer attraction. It shows that increase in brand image increases the customer attraction among SMEs. The role of environmental quality products and image of brand is also considered in relation to the business performance. In this process, it is found that green product has positive effect on

business performance. Increase in the production of green products can increase the business performance. Nevertheless, environmental quality also has positive relationship with business performance. It shows that increase in environmental quality can increase the business performance of SMEs. Similarly, brand image also shows positive role to enhance business performance among SMEs in Thailand. Hence, it is proved that environmental quality, green product and brand image increases the business performance along with the increase in customer attraction. Finally, while considering the direct effect of variables on dependent variable, this study also examined the effect of customer attraction on business performance. The relationship between customer attraction and business performance is also significant and positive which shows that increase in customer attraction among the SMEs can increase the business performance. These results are consistent with the literature because previous studies also shows that customer attraction has positive role in business activities (Narayanaswamy & Heiens, 2022). Furthermore, it is also evident that previous studies also proved the positive role of green product in business performance (Buswari, Setiawan, & Khusniyah, 2021; Ma et al., 2018) which shows that the results in this study are validating the results of the previous studies. Similarly, other studies are also shows that brand image has positive role to enhance business performance which is also in line with the current study. Nevertheless, environmental protection or environmental quality by the businesses also leading to better business performance as approved by previous studies (Fernando et al., 2019). Thus, the results of this study are in line with other researchers on the same area of research. In addition to the direct effect hypothesis, the current study considered three indirect effect. The indirect effect is based on the mediation effect of customer attraction. The mediation effect of customer attraction is considered between brand image and business performance which is not significant. Secondly, the customer attraction as mediating variable is examined between environmental quality and business performance which is also not significant. Finally, this study examined the mediation effect of customer attraction between product development and business performance which is significant and it shows that customer attraction transfers the positive effect on product

development on business performance among SMEs. Finally, the results of the study shows that environmental quality, green product development and brand image are the most important elements which can lead to the business performance through customer attraction among SMEs of Thailand (Khoma & Vdovychyn, 2020).

5.1 Theoretical Implications

The current study has found theoretical insights because this study considered several relationships which was rarely considered by previous studies. Although numerous studies considered performance of business activity among SMEs in Thailand but various relationship which are considered in this study are not address by the previous studies. For example, in Thai SMEs the role of environmental quality in relation to the customer attraction is not considered in previous studies. Although several studies examined customer satisfaction, but customer attraction is rarely considered by literature. The effect of brand image on customer attraction is also less studied by previous studies. Additionally, the relationship between customer attraction and green product is not addressed by the literature. More importantly, the current study considered the mediation effect of customer attraction which is very rare among previous studies. In this direction, the current study proved that customer attraction is a mediating variable between green products and business performance. This indirect effect is first time proved by the current study in the literature. Therefore, this study tested the important relationship between customer attraction, bread image, green product, environmental quality and business performance based on several literature gaps. Hence, the current study has important insights for the literature to contribute to business performance of SMEs.

5.2 Practical Implications

Practically, the current study has several recommendations for the practitioners. Because this study considered the vital relationship which has several practical implications for the management. For example, the current study proved that the green product has an influential role in business performance. Therefore, the management of various SMEs should promote green product development to promote business

performance. Study highlighted that environmental quality and brand image can influence the customer attraction positively. In this way the management of SMEs should promote brand image and environmental quality to enhance customer attraction. Moreover, the study highlighted that customer attraction has major effect on business performance. Practically this study is important and supported the strategies of practitioners to enhance customer attraction strategies which may lead to the business performance. Hence, this study recommended to the management as well as practitioners to promote environmental quality, brand image, green product and customer attraction to enhance the firm performance among SMEs in Thailand.

References

[1] Afthanorhan, W. (2013). A comparison of partial least square structural equation modeling (PLS-SEM) and covariance based structural equation modeling (CB-SEM) for confirmatory factor analysis. *International Journal of Engineering Science and Innovative Technology, 2*(5), 198-205.

[2] Ajah, B. O., Dinne, C. E., & Salami, K. K. (2020). Terrorism in contemporary Nigerian society: Conquest of Boko-Haram, myth or reality. *International Journal of Criminal Justice Sciences, 15*(2), 312-324.

[3] Alhadid, A. Y., & As' ad, H. A.-R. (2014). The Impact of green innovation on organizational performance, environmental management behavior as a moderate variable: An analytical study on Nuqul group in Jordan. *International Journal of Business and Management, 9*(7), 51. doi:https://doi.org/10.5539/ijbm.v9n7p51

[4] Ali, S., Yusop, Z., Kaliappan, S. R., & Chin, L. (2020). Dynamic common correlated effects of trade openness, FDI, and institutional performance on environmental quality: evidence from OIC countries. *Environmental Science and Pollution Research*, 1-12. doi:https://doi.org/10.1007/s11356-020-07768-7

[5] Astrachan, C. B., Patel, V. K., & Wanzenried, G. (2014). A comparative study of CB-SEM and PLS-SEM for theory development in family firm research. *Journal of Family Business Strategy, 5*(1), 116-128. doi:https://doi.org/10.1016/j.jfbs.2013.12.002

[6] Awan, U., Arnold, M. G., & Gölgeci, I. (2021). Enhancing green product and process innovation: Towards an integrative framework of knowledge acquisition and environmental investment. *Business Strategy and the Environment, 30*(2), 1283-1295. doi:https://doi.org/10.1002/bse.2684

[7] Buswari, M., Setiawan, M., & Khusniyah, N. (2021). THE EFFECT BETWEEN GREEN PRODUCT INNOVATION AND GREEN MARKETING ON COMPETITIVE ADVANTAGE AND BUSINESS PERFORMANCE. *PalArch's Journal of Archaeology of Egypt/Egyptology, 18*(2), 47-63.

[8] Cesarec, I., Mikac, R., & Spevec, D. (2020). The Concept of Human Security as a Basis for the Application of Big Data Concept in Establishment of Early Warning System for Crisis Management in the Republic of Croatia. *Croatian International Relations Review, 26*(86), 72-95. doi:https://doi.org/10.37173/cirr.26.86.3

[9] Chairatana, P. (2021). The image of historical tourism in the area of the Ayutthaya Historical Park affecting the decision to visit of Thai tourists in Phra Nakhon Si Ayutthaya. *Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12*(8), 2414-2419.

[10] Chaithanapat, P., Punnakitikashem, P., Oo, N. C. K. K., & Rakthin, S. (2022). Relationships among knowledge-oriented leadership, customer knowledge management, innovation quality and firm performance in SMEs. *Journal of Innovation & Knowledge, 7*(1), 100162. doi:https://doi.org/10.1016/j.jik.2022.100162

[11] Chen, Y.-S., Lin, Y.-H., Lin, C.-Y., & Chang, C.-W. (2015). Enhancing green

absorptive capacity, green dynamic capacities and green service innovation to improve firm performance: An analysis of structural equation modeling (SEM). *Sustainability, 7*(11), 15674-15692. doi:https://doi.org/10.3390/su71115674

[12] Chen, Y. S., Lin, S. H., Lin, C. Y., Hung, S. T., Chang, C. W., & Huang, C. W. (2020). Improving green product development performance from green vision and organizational culture perspectives. *Corporate Social Responsibility and Environmental Management, 27*(1), 222-231. doi:https://doi.org/10.1002/csr.1794

[13] Costa, C. R., Sassi, R. A. M., Timbola, V. d. S., Lazzari, T. R., Reis, A. J., & Goncalves, C. V. (2020). Prevalence and associated factors with depression and anxiety in prisoners in South of Brazil. *Archives of Clinical Psychiatry (São Paulo), 47*, 89-94. doi:https://doi.org/10.1590/0101-60830000000239

[14] Delbianco, F., & Dabús, C. (2020). Is there Convergence in Emerging Countries? Evidence from Latin America. *Cuadernos de Economía, 43*(121), 79-90.

[15] Dlalisa, S. F., & Govender, D. W. (2020). Challenges of acceptance and usage of a learning management system amongst academics. *International Journal Of Ebusiness And Egovernment Studies, 12*(1), 63-78.

[16] Erdil-Moody, Z., & Thompson, A. S. (2020). Exploring motivational strategies in higher education: Student and instructor perceptions. *Eurasian Journal of Applied Linguistics, 6*(3), 387-413. doi:https://doi.org/10.32601/ejal.834670

[17] Ershadi, M., Jefferies, M., Davis, P., & Mojtahedi, M. (2020). Towards successful establishment of a project portfolio management system: business process management approach. *The Journal of Modern Project Management, 8*(1), 21-34.

[18] Fernando, Y., Jabbour, C. J. C., & Wah, W.-X. (2019). Pursuing green growth in technology firms through the connections between environmental innovation and sustainable business performance: does service capability matter? *Resources, Conservation and Recycling, 141*, 8-20. doi:https://doi.org/10.1016/j.resconrec.2018.09.031

[19] Fischer, O., & Noble, I. (2020). How Discernment between Good and Evil shapes the Dynamics of the Human Journey: Introduction. *European journal for philosophy of religion, 12*(4), 1-7. doi:https://doi.org/10.24204/ejpr.v9i4.2022

[20] Fitriani, A., Zubaidah, S., Susilo, H., & Al Muhdhar, M. H. I. (2020). The effects of integrated problem-based learning, predict, observe, explain on problem-solving skills and self-efficacy. *Eurasian Journal of Educational Research, 20*(85), 45-64. doi:https://doi.org/10.14689/ejer.2020.85.3

[21] GbolagadeAdewale, A., & Oyewale, I. (2013). Impact of marketing strategy on business performance a study of selected small and medium enterprises (Smes) In Oluyole Local Government, Ibadan, Nigeria. *Ibadan, Nigeria, 11*(4), 59-66. doi:https://doi.org/10.9790/487X-1145966

[22] Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the academy of marketing science, 45*(5), 616-632. doi:https://doi.org/10.1007/s11747-017-0517-x

[23] Hair, J. F., Ringle, C. M., Gudergan, S. P., Fischer, A., Nitzl, C., & Menictas, C. (2019). Partial least squares structural equation modeling-based discrete choice modeling: an illustration in modeling retailer choice. *Business Research, 12*(1), 115-142. doi:https://doi.org/10.1007/s40685-018-0072-4

[24] Hamdan, Y., Qarem, T., Ab Yajid, M. S., Ariffin, I. A., & Azam, S. M. F. (2021). Determinants Of Economic Geography Of Malaysia: Moderating Effect Of Geographic Diversity And

Geographical Leadership. *PalArch's Journal of Vertebrate Palaeontology, 18*(2), 61-79.

[25] Herath, H., & Herath, H. (2019). Impact of Green banking initiatives on customer satisfaction: A conceptual model of customer satisfaction on green banking. *J. Bus. Manag, 21*, 24-35.

[26] Huang, J.-W., Li, Y.-H., & Yen, M.-T. (2016). The relationship between green innovation and business performance-the mediating effect of Brand image. *Xing Xiao Ping Lun, 13*(1), 89.

[27] Karjo, C. H., & Ng, A. (2020). Hate Speech Propaganda from and against Muslims in Facebook Posts. *International Journal of Cyber Criminology, 14*(2), 400-416.

[28] Kengatharan, N. (2020). The Effects of Teacher Autonomy, Student Behavior and Student Engagement on Teacher Job Satisfaction. *Educational Sciences: Theory & Practice, 20*(4), 1-15.

[29] Kennedy, P. L., Schmitz, A., & DeLong, K. L. (2020). Biotechnology and demand concerns: the case of genetically modified US sugar beets. *AgBioForum, 23*(2), 27-36.

[30] Khan, G. F., Sarstedt, M., Shiau, W.-L., Hair, J. F., Ringle, C. M., & Fritze, M. P. (2019). Methodological research on partial least squares structural equation modeling (PLS-SEM): an analysis based on social network approaches. *Internet Research.* doi:https://doi.org/10.1108/IntR-12-2017-0509

[31] Khoma, N., & Vdovychyn, I. (2020). Universal basic income as a form of social contract: assessment of the prospects of institutionalisation. *socialspacejournal. eu*, 97.

[32] Lam, A. Y., Lau, M. M., & Cheung, R. (2016). Modelling the relationship among green perceived value, green trust, satisfaction, and repurchase intention of green products. *Contemporary Management Research, 12*(1). doi:https://doi.org/10.7903/cmr.13842

[33] Leal-Rodríguez, A. L., Ariza-Montes, A. J., Morales-Fernández, E., & Albort-Morant, G. (2018). Green innovation, indeed a cornerstone in linking market requests and business performance.

Evidence from the Spanish automotive components industry. *Technological Forecasting and Social Change, 129*, 185-193. doi:https://doi.org/10.1016/j.techfore.2017.07.021

[34] Li, S., Jayaraman, V., Paulraj, A., & Shang, K.-c. (2016). Proactive environmental strategies and performance: Role of green supply chain processes and green product design in the Chinese high-tech industry. *International Journal of Production Research, 54*(7), 2136-2151. doi:https://doi.org/10.1080/00207543.2015.1111532

[35] Longhini, C. M., Rodrigues, S. K., Costa, E. S., da Silva, C. A., Cagnin, R. C., Gripp, M., . . . Hermogenes, C. d. C. M. (2022). Environmental quality assessment in a marine coastal area impacted by mining tailing using a geochemical multi-index and physical approach. *Science of The Total Environment, 803*, 149883. doi:https://doi.org/10.1016/j.scitotenv.2021.149883

[36] López-Arceiz, F. J., del Río, C., & Bellostas, A. (2022). The mediating effect of sustainability strategy between sustainability committees and business performance: can persistent assessment condition this effect? *Sustainability Accounting, Management and Policy Journal.* doi:https://doi.org/10.1108/SAMPJ-06-2021-0193

[37] Ma, Y., Yin, Q., Pan, Y., Cui, W., Xin, B., & Rao, Z. (2018). Green product innovation and firm performance: Assessing the moderating effect of novelty-centered and efficiency-centered business model design. *Sustainability, 10*(6), 1843. doi:https://doi.org/10.3390/su10061843

[38] Mahonge, C. P., Nsenga, J. V., Itani, J., & Kurosaki, R. (2021). Resource Governance Using A Hybrid Institution In Momba District Tanzania: A Process Approach. *International Journal of Social Sciences and Humanity Studies, 13*(1), 152-175.

[39] Marcel Heimar Ribeiro Utiyama, F. C. C., Dário Henrique Alliprandiniis.

(2020). Allocation of Improvement Strategies in a Flow Shop with Two Capacity Constrained Resources. *International journal of operations and quantitative management, 26*(2), 79-93. doi:https://doi.org/10.46970/2020.26.2.1

[40] Menne, F., Surya, B., Yusuf, M., Suriani, S., Ruslan, M., & Iskandar, I. (2022). Optimizing the Financial Performance of SMEs Based on Sharia Economy: Perspective of Economic Business Sustainability and Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity, 8*(1), 18. doi:https://doi.org/10.3390/joitmc8010018

[41] Mohammed, A., & Rashid, B. (2018). A conceptual model of corporate social responsibility dimensions, brand image, and customer satisfaction in Malaysian hotel industry. *Kasetsart Journal of social sciences, 39*(2), 358-364. doi:https://doi.org/10.1016/j.kjss.2018.04.001

[42] Mohammed, M., Shafiq, N., Al-Mekhlafi, A.-B. A., Rashed, E. F., Khalil, M. H., Zawawi, N. A., . . . Sadis, A. M. (2022). The Mediating Role of Policy-Related Factors in the Relationship between Practice of Waste Generation and Sustainable Construction Waste Minimisation: PLS-SEM. *Sustainability, 14*(2), 656. doi:https://doi.org/10.3390/su14020656

[43] Narayanaswamy, R., & Heiens, R. A. (2022). Finding the optimal social media marketing mix to drive customer attraction and sales performance: an exploratory study. *International Journal of Electronic Marketing and Retailing, 13*(1), 65-82. doi:https://doi.org/10.1504/IJEMR.2022.10042036

[44] Ojogiwa, O. T. (2021). The Crux Of Strategic Leadership For A Transformed Public Sector Management In Nigeria. *International Journal of Business and Management Studies, 13*(1), 83-96.

[45] Raymond, L., St-Pierre, J., Uwizeyemungu, S., & Le Dinh, T. (2014). Internationalization capabilities of SMEs: A comparative study of the manufacturing and industrial service sectors. *Journal of International Entrepreneurship, 12*(3), 230-253. doi:https://doi.org/10.1007/s10843-014-0123-7

[46] Ruixia, G., & Junbo, Z. (2020). Methods and Approaches of College Counselors to Deal with Students' Psychological Crisis. *Revista de psicología del deporte, 29*(4).

[47] Salavrakos, I.-D. (2020). A Re-Assessment of Italian Defence Production and Military Performance in the World Wars. *Res Militaris, 10*(2), 161-175.

[48] Sgammini, M., & Muzindutsi, P.-F. (2020). Effect Of Exchange Rate Movements On The Performance Of Investment Portfolios In South Africa. *INTERNATIONAL JOURNAL OF ECONOMICS AND FINANCE, 12*(2), 469-486.

[49] Waluya, A. I., Iqbal, M. A., & Indradewa, R. (2019). How product quality, brand image, and customer satisfaction affect the purchase decisions of Indonesian automotive customers. *International Journal of Services, Economics and Management, 10*(2), 177-193. doi:https://doi.org/10.1504/IJSEM.2019.100944

[50] Wang, M., Li, Y., Li, J., & Wang, Z. (2021). Green process innovation, green product innovation and its economic performance improvement paths: A survey and structural model. *Journal of Environmental Management, 297*, 113282. doi:https://doi.org/10.1016/j.jenvman.2021.113282

[51] Zameer, H., Wang, Y., & Yasmeen, H. (2020). Reinforcing green competitive advantage through green production, creativity and green brand image: implications for cleaner production in China. *Journal of cleaner production, 247*, 119119. doi:https://doi.org/10.1016/j.jclepro.2019.119119