Managing Risks and Enhancing Resilience: Exploring the Role of Product Quality and Risk Tolerance in Consumer Satisfaction within the MSME Sector of Yogyakarta amidst Global Disruptions

Agatha Mayasari[1], Bartolomeus Galih Visnhu Pradana[2]

{agatha.mayasari@uajy.ac.id[1], bartolomeus.galih@uajy.ac.id[2]}

Atma Jaya University, Yogyakarta[1,2]

Abstract. The global pandemic has transformed business landscapes, emphasizing risk management and resilience. Particularly, the Micro, Small, and Medium Enterprises (MSMEs) in the Special Region of Yogyakarta (DIY) are vital for the economy, but their sustainability in disruptive settings is often questioned. This study explores how product quality affects consumer satisfaction among MSMEs in DIY and how this relationship is influenced by risk tolerance. Using a quantitative SEM-PLS approach, the research considered product quality as the independent variable, customer satisfaction as the dependent, and risk tolerance as the moderating variable. Results are expected to guide policymakers and MSME owners in devising strategies, emphasizing product quality improvement, and understanding the role of consumers' risk tolerance in product satisfaction. This study also adds to the literature by highlighting the interplay between product quality, customer satisfaction, and risk tolerance during global uncertainties.

Keywords: Product Quality, Customer Satisfaction, Risk Tolerance, MSMEs, Business

1 Introduction

In the era of globalization filled with uncertainties, the world of business and economics must be adaptive to constantly changing challenges. One of the latest challenges shaking the economy is the global pandemic. This phenomenon not only shifted the business paradigm but also emphasized the importance of adaptability and resilience in every economic aspect [1], [2]. In confronting these significant changes, operations management, as one of the primary pillars in conducting business, plays a strategic role [3].

The Yogyakarta Special Region (DIY), known as the cultural and educational center of Indonesia, has its unique dynamics in this framework. Micro, Small, and Medium Enterprises (MSMEs) in DIY play a crucial role, not just as the backbone of the local economy but also as the main pillar of GDP growth and employment provision [4], [5]. According to the DIY Government report in 2020, the MSME sector contributes up to 65% of the region's total economy. However, as reported by Kompas in 2021, many MSMEs in DIY were strained by the pandemic, causing some to halt operations or temporarily lay off workers. In dealing with

this situation, operational efficiency, resource optimization, and work process innovation become key to ensuring business continuity [6].

The significance of the MSMEs sector to the DIY economy and the challenges posed by the pandemic make a deep understanding of factors influencing customer satisfaction vital. This isn't just about maintaining business existence, but how to adjust business strategies to remain relevant in consumers' eyes. Business literature indicates that product quality is a vital factor influencing customer satisfaction [7], [8]. Yet, in the current climate of uncertainty, the relevance of consumer risk tolerance becomes increasingly critical. Some research suggests that consumer risk tolerance can modify their perception of products, especially amidst uncertain situations [9]–[11].

Interestingly, variations in prior research on these variables offer diverse perspectives. For instance, previous research extensively explored how product quality directly affects customer satisfaction, showing that high-quality products tend to receive positive feedback from consumers [7]. Conversely, other research highlighted how consumer risk tolerance, a relatively new concept in customer satisfaction literature, affects product perceptions, particularly when faced with uncertainty [9]. This understanding expanded the assessment of how risk tolerance can act as a moderating variable between product quality and customer satisfaction [10]. Furthermore, the impact of risk tolerance in uncertain situations proves the finding that consumers with high-risk tolerance tend to be more flexible in assessing product quality [11].

In this context, product quality and risk tolerance emerge as two interacting key elements. Factors like product quality, risk tolerance, and customer satisfaction, previously discussed, closely align with operations management principles [12]. Enhancing product quality may require improvements in production processes, quality control, and the right raw material selection [13]. Meanwhile, understanding consumer risk tolerance can assist businesses in setting inventory strategies, predicting demand, and designing effective marketing strategies [14].

This study, fundamentally a research on marketing strategy, aims to bridge the literature gap by exploring the relationship between affordability, consumer behavior, and purchasing power, particularly in the MSME sector in DIY. With a deeper insight into these areas, this research intends to assist stakeholders, including MSME owners and policymakers, in crafting more adaptive and resilient business strategies to navigate the complex global dynamics. By focusing on marketing strategies, the study seeks to underline how good and adaptive operations management can not only help MSMEs in DIY address current challenges but also strengthen their positioning for a future that is unpredictable and ever-changing [15].

2 Literature Study

In the current era of globalization, a profound understanding of the three main variables, namely product quality, risk tolerance, and customer satisfaction, is crucial for success in operations management [16]. Product quality is the alignment between consumer expectations of a product and its actual performance [17]. It is not merely about meeting expectations but, in many instances, surpassing them. As evidence, previous research found that product quality has a direct influence on customer satisfaction. However, achieving high product quality requires special attention to production processes, quality control, and the appropriate

selection of raw materials [13]. It is noteworthy that product quality is not the sole factor influencing business success.

Risk tolerance, on the other hand, refers to the extent to which consumers are willing to face uncertainty [18]. This means that it is necessary to understand consumer tendencies to take risks when buying products [9]. Some consumers are adventurous and open to trying new things, while others are more conservative and select products based on their familiarity. Interestingly, a consumer risk tolerance can affect their perception of product quality [7]. Additionally, consumer perceptions of products are influenced by the extent to which they are willing to take risks.

Customer satisfaction is an individual response after consuming a product or service [19]. It reflects how well a product or service meets the consumer expectations. Interestingly, customer satisfaction is not only influenced by product quality but also by other factors [20]. While product quality and risk tolerance influence consumer decisions, another significant factor in business success is customer satisfaction.

By recognizing the importance of product quality, risk tolerance, and customer satisfaction, companies can devise more effective strategies. For instance, products tailored for consumers with low-risk tolerance should emphasize quality and reliability. Conversely, for riskier consumers, a more innovative approach can be adopted [21]. Understanding the importance of product quality, risk tolerance, and customer satisfaction, companies can now craft a more holistic strategy. In conclusion, for MSMEs in the Special Region of Yogyakarta and other businesses, a holistic approach that combines product quality, risk tolerance, and customer satisfaction in their strategies is the key to sustainability and growth.

Hypothesis Development

Product quality has long been considered one of the primary factors influencing customer satisfaction. Over the past decade, numerous studies have confirmed a positive relationship between these two variables. For example, superior product quality is associated with an enhanced perception of value by customers, ultimately boosting their satisfaction [22]. In the same context, found that high-quality products tend to foster customer loyalty through heightened satisfaction [23]. Furthermore, other research emphasized that product quality directly affects customer expectations and how these expectations are met or even exceeded [24]. The firms investing in improving their product quality witness a significant surge in customer satisfaction [25]. Finally, it was confirmed that there is a positive linear relationship between product quality and customer satisfaction, affirming that enhancements in product quality contribute to increased customer satisfaction [26]. Considering the empirical evidence gleaned from recent literature, there is a strong convergence toward the understanding that product quality plays a pivotal role in determining customer satisfaction levels. Therefore, based on the reviewed literature, the following hypothesis is proposed:

H1: Product Quality has a positive effect on Customer Satisfaction.

In an era of increasingly discerning and dynamic consumers, understanding the determinants of customer satisfaction becomes imperative. The product quality holds a pivotal role in gauging customer satisfaction [27]. However, the complexity of this relationship might be augmented when considering consumer attributions, where an individual interpretation of a product can influence their satisfaction [28]. Furthermore, it emphasizes the importance of value co-creation, indicating that consumer interactions with brands can influence their perceptions of product quality [29]. Individual consumer characteristics, including risk tolerance also influence how customers respond to product quality and their resulting

satisfaction levels [11]. In addition, in the digital era, product information via social media plays an important role in shaping consumer perceptions, with risk tolerance moderating how this information is processed [30]. Based on this comprehensive literature overview, it is evident that while product quality remains a dominant factor, an individual's risk tolerance affects the relationship between product quality and customer satisfaction. Therefore, based on the reviewed literature, the following hypothesis is proposed:

H2: Risk Tolerance affects the relationship between Product Quality and Customer Satisfaction.

3 Research Methodology

This study is designed using a quantitative approach to understand the influence of product quality and risk tolerance on customer satisfaction in the MSME sector of the Special Region of Yogyakarta (DIY). Given the significance of the MSME sector in the DIY economy, this approach will sample various MSME sectors within that region. The methodology involves the use of a specially designed questionnaire to measure the variables of product quality, risk tolerance, and customer satisfaction.

The population of this study is the consumers of MSME sector in DIY. Considering the number and diversity of MSME sector in DIY, a stratified random sampling technique will be adopted to ensure an even representation of various types of MSMEs, such as food, handicrafts, clothing, and so on. An adequate sample size will be determined based on statistical guidelines to ensure the reliability and validity of the findings.

For data analysis, the Structural Equation Modeling (SEM) method with a Partial Least Squares (PLS) approach will be used. PLS-SEM is a multivariate analysis tool suitable for complex conceptual models, like the one in this study. This tool not only allows for the testing of direct relationships between variables but also indirect relationships and moderating effects. Based on prior literature, the initial hypothesis proposed is that product quality has a positive effect on customer satisfaction. PLS-SEM will be used to test this relationship and the potential moderating effect of risk tolerance. There are three main variables in this study:

- Product Quality: Measured based on the alignment between consumer expectations and the actual performance of the product with adopting research items by Saidani and Arifin, which consists of 4 items [31]. Measured with a Likert Scale, 1 to 5.
- Risk Tolerance: Refers to the extent to which consumers are willing to face uncertainty when buying or using a product with adopting research from Budiarto and Susanti, and Adiputra which consists of 4 items [32], [33]. Measured with a Likert Scale, 1 to 5.
- Customer Satisfaction: Measured based on an individual's response after consuming the product, reflecting how well the consumer expectations were met with adopting research from Tjiptono which consists of 3 items [34]. Measured with a Likert Scale, 1 to 5.

With this approach, this research hopes to provide in-depth insights into the dynamics between product quality, risk tolerance, and customer satisfaction in the DIY MSME sector, as well as offer recommendations for stakeholders in addressing business challenges in the era of globalization.

4 Results and Discussion

The sample in the study consisted of 136 respondents from the is the consumers of MSME sector in DIY. The following are the characteristics of the respondents from the data obtained:

Table 1. Characteristics of Respondents

No	Characteristics		Respondents	%
1	Gender	Male	44	32,35
		Female	92	67,65
2	MSMEs business sector	Tourism and culture	20	14,70
		Culinary	45	33,08
		Trade and services	16	11,76
		Crafts and creative industries	28	20,58
		Agriculture and plantations	8	5,90
		Education and training	11	8,08
		Technology and digital	8	5,90
		Tourism and culture	20	14,70
3	Income Customers	1 – 2 million	40	29,41
		3 – 5 million	68	50
		>5 million	28	20,59

Source: Processed data

The eight MSME industry sectors are chosen for their affordability and alignment with consumer behavior and purchasing power. These sectors are Tourism and Culture, Culinary, Trade and Services, Crafts and Creative Industries, Agriculture and Plantations, Education and Training, Technology and Digital, and Tourism and Culture (emphasized twice for its dual importance). Each sector offers unique, cost-effective opportunities that cater to diverse consumer needs and contribute significantly to the economy, while also supporting local culture and skills development. Researchers conducted validity tests and reliability tests to test whether the research instruments used could measure exactly what they wanted to study [35]. Researchers use convergent validity and discriminant validity. The results of the convergent validity test are said to be valid if the standard value of the factor loading is at least between 0.4 and better if ≥ 0.70 and is significant at the 1% level, then practically these measurement items meet the convergent validity criteria [36]. **Table 2** presents the results of the convergent validity test in detail processed with the SmartPLS 3 statistical tool.

Table 2. The Result of the Convergent Validity Test

Variable	Indicator	Factor Loading	Explanation
Product Quality	PQ1	0,856	Valid
(PQ)	PQ2	0,865	Valid
	PQ3	0,830	Valid
	PQ4	0,830	Valid
Customer Satisfaction	CS1	0,961	Valid
(CS)	CS2	0,942	Valid
	CS3	0,918	Valid
Risk Tolerance	RT1	0,550	Valid
(RT)	RT2	0,879	Valid
	RT3	0,941	Valid
	RT4	0,896	Valid

Product Quality	PQ1	0,856	Valid
(PQ)	PQ2	0,865	Valid

Source: Processed data

Table 2 shows the results of the convergent validity test to show that the indicators or items in each variable have fulfilled the convergent and significant validity requirements. Furthermore, the researcher also conducted a discriminant validity test. Discriminant validity testing was assessed based on comparing the Average Variance Extracted (AVE) and Cross Loading on each research variable. The purpose of testing discriminant validity is to confirm the existence of a correlation between research variables in the research model. The research model can be said to be valid if the AVE value for each variable is equal to or above 0.5 and the Cross Loading value is > 0.7 [36]. The results of the discriminant validity test can be seen in **Table 3**.

Table 3. The Result of the Discriminant Validity Test

Variable	Indicator	Cross Loading	Factor Loading	Explanation
Product Quality	PQ1	0,856	0,856	Valid
(PQ)	PQ2	0,856	0,865	Valid
	PQ3	0,830	0,830	Valid
	PQ4	0,830	0,830	Valid
Customer	CS1	0,961	0,961	Valid
Satisfaction	CS2	0,942	0,942	Valid
(CS)	CS3	0,918	0,918	Valid
Risk Tolerance	RT1	0,550	0,550	Valid
(RT)	RT2	0,879	0,879	Valid
	RT3	0,941	0,941	Valid
	RT4	0,896	0,896	Valid

Source: Processed data

Table 3 shows that all variables in this study have met the criteria for the discriminant validity test, which is based on the AVE value which reaches a value of > 0.5, namely the product quality variable of 0.715, customer satisfaction obtains a value of 0.884 and on the risk tolerance variable, the AVE value is 0.691. The cross-loading value for each item also shows the results of fulfilling the requirements in the discriminant validity test of > 0.7. For example, for the product quality variable, there are four indicators that meet the minimum value, namely PQ1 of 0.856, PQ2 of 0.865, PQ3 of 0.830, and PQ4 of 0.830. The detailed results of the cross-loading test can refer to **Table 4**.

Table 4. The Result of the Cross-Loading Test

Indicator	PQ	CS	RT
PQ1	0,856	0,600	-0,197
PQ2	0,865	0,540	-0,269
PQ3	0,830	0,359	-0,075
PQ4	0,830	0,359	-0,075
CS1	0,540	0,961	-0,113
CS2	0,519	0,942	-0,083
CS3	0,565	0,918	-0,119
RT1	-0,051	-0,081	0,550
RT2	-0,164	-0,038	0,879
RT3	-0,236	-0,130	0,941

RT4	-0,160	-0,041	0,896

Source: Processed data

In the next stage, the researcher conducted a reliability test to test whether the research variables used in this study met the reliability requirements. To evaluate the reliability of the questionnaire, you can look at the value of Cronbach's alpha and composite reliability. The criteria for fulfilling the reliability of the questionnaire instrument are by looking at Cronbach's alpha value greater than 0.6 and the composite reliability value greater than 0.7 [36]. The following **Table 5** is the result of the reliability calculation:

Table 5. The Result of the Reliability Test

Variable	Cronbach's Alpha	Composite Reliability	Explanation
PQ	0.874	0.909	Reliable
CS	0.943	0.958	Reliable
RT	0.837	0.896	Reliable

Source: Processed data

Table 5 shows that Cronbach's Alpha values range from at least 0.6 or more and Composite Reliability values range from 0.7 or more [36]. The PQ variable obtained a Cronbach's Alpha value of 0.874 and Composite Reliability of 0.909, while the variable CS obtained a value of 0.943 and 0.958, then the RT variable obtained a value of 0.837 and 0.896. Thus, each measurement item can consistently and reliably measure each research variable. In the next stage, the researcher conducted the Inner Model test as a procedural step in testing the research hypothesis. The results of testing the Inner Model in this study can be referred to in **Table 6**.

Table 6. The Result of the Inner Model

Variable	R-Square	R-Square Adjusted
CS	0.333	0.318

Source: Processed data

Referring to the results of the Inner Model test presented in **Table 6**, it can be seen that the R-Square value for the CS variable obtains a value of 0.333 which interprets that the magnitude of the influence of the PQ variable and the RT variable is 33.3%, while the remaining 66.7% is explained by other variables who were not involved in this study.

After testing the Inner Model, the researcher tested the research hypothesis. There are two hypotheses in this research. If the value of P <0.01, it is significant at the 1% level, P <0.05, it is significant at the 5% level, P <0.1, it is significant at the 10% level. And if the T-statistic value is higher than the T-table value with the condition that the confidence level is 95% (5 percent alpha) then the T-table value for the hypothesis (two-tailed) is ≥ 1.96.

Table 7. Mean, STDEV, T-Values, P-Values

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
PQ -> CS	0,571	0,572	0,059	9,735	0,000
Moderating Effect 1 -> CS	0,019	0,021	0,063	0,309	0,758

Source: Processed data

Based on the results in **Table 7**, the first hypothesis shows that product quality has a positive and significant effect on organizational performance based on the T-statistic value which is 9.735 which is greater than the T-table value of 1.96 and the p-value is 0.000 <0.05. With these results, it can be concluded that the first hypothesis is supported. This study results align with the previous research that higher product quality typically leads to higher customer satisfaction [37]. When products meet or exceed customer expectations, they are more likely to be satisfied and have a positive experience. Furthermore, product quality perceptions are thus created when customers use product performance, as well as the degree to which the product conforms to manufacturing standards and product-specific attributes [37]. The findings of this study further explain consumer perceptions of product quality from the MSME sector in DIY able to provide customer satisfaction needed and desired. Thus, products from various MSME sector in DIY can be declared of high quality and meet customer expectations.

The second hypothesis shows that risk tolerance is a moderating variable with a T-statistic value of 0.309 which is less than 1.96 and the p-value is 0.758 > 0.05 which means that risk tolerance is positive but not significant, meaning that risk tolerance does not moderate the effect of product quality on customer satisfaction. The findings of this study explain that risk tolerance, no matter how large, will not affect customer satisfaction in making purchases of the MSME sector in DIY products. Moreover, this research was conducted after the Covid-19 pandemic, which means that consumers changed their behavior in buying a product by paying attention to product quality and as little as possible not giving room for risk tolerance [38]. The product of MSMEs that are purchased must have clear quality attributes. So, it can be concluded that the level of risk tolerance has no effect on forming product quality on customer satisfaction in using products from MSME sector in DIY. Consumers are increasingly aware that product quality will meet customer satisfaction.

5 Conclusion

In conclusion, the findings of this study support and prove the results of previous research that product quality has a positive and significant impact on customer satisfaction and confirms the effect of risk tolerance does not moderate the relationship between product quality and customer satisfaction. The contribution of this research is aimed at various literature related to how product quality affects consumer satisfaction among MSME sector and how this relationship is affected by risk tolerance. As for the practical implications, this research can specifically identify changes in consumer behavior in buying a product, especially after the Covid-19 pandemic. In addition, this study still has limitations that must be corrected in further research. First, the number of respondents to this study was limited to 136 respondents, which may not necessarily represent the number of residents of the Special Region of Yogyakarta. Future research is expected to involve more and more diverse respondents as research samples, not only residents of the Special Region of Yogyakarta. Second, the collection of research data was through a survey with a questionnaire, the answers were based on the perceptions of the respondents so that exploration of the respondent's information was limited. Future research is expected to further explore information from respondents through mixed methods by adding in-depth interviews to respondents so that research bias can be minimized.

References

[1]   S. Fischer, "Globalization and Its Challenges," *The American Economic Review*, Vol. 93, No. 2, Pp. 1–30, 2003, Doi: 10.1257/000282803321946750.

[2]   Mariana, Hariyati, S. Handayani, E. Wuryani, I. Putikadea, and A. Binti Abdullah, "Business Resilience During The Pandemic in Indonesia," *International Journal of Economics, Business and Management Research,* Vol. 07, No. 01, Pp. 139–156, 2023, Doi: 10.51505/Ijebmr.2023.7112.

[3]   M. Galli, "Operations Management in Today's Business World", BUSI 3010 : Operations Management, Walden University, October, 2020.

[4]   R. M. Sugiarto and D. A. Iskandar, "Technology Improvement and Micro, Small, and Medium Enterprises (MSMEs) on Regional Development in Special Region of Yogyakarta," *Optimum: Jurnal Ekonomi dan Pembangangan*, Vol. 13, No. 1, Pp. 1–13, 2023, Doi: 10.12928/Optimum.V13i1.3829.

[5]   E. F. Nurmaghfiroh and M. E. Atmojo, "Analysis of The Preparedness of The Sibakul Jogja Program as a Post-Covid-19 Economic Strengthening Effort for Micro , Small , and Medium Enterprises in The Special Region Of Yogyakarta," *JSIP: Jurnal Studi Ilmu Pemerintahan,* Vol. 04, No. 02, Pp. 37–50, 2023.

[6]   A. Yanti, "Micro, Small And Medium Enterprises Strategies To Survive The Covid-19 Pandemic Conditions in Indonesia," *Enrichment: Journal Management.*, Vol. 12, No. 2, Pp. 1287–1290, 2022.

[7]   A. K. Albari, "The Influence of Product Quality, Service Quality, and Price On Customer Satisfaction and Loyalty," *Asian Journal of Entrepreneurship and Family Business,* Vol. 3, No. 1, Pp. 49–64, 2019.

[8]   N. F. Naini, Sugeng Santoso, T. S. Andriani, U. G. Claudia, And Nurfadillah, "The Effect of Product Quality, Service Quality, Customer Satisfaction on Customer Loyalty," *Journal of Consumer Sciences*, Vol. 7, No. 1, Pp. 34–50, 2022, Doi: 10.29244/Jcs.7.1.34-50.

[9]   D. Littler and D. Melanthiou, "Consumer Perceptions of Risk and Uncertainty and The Implications for Behaviour Towards Innovative Retail Services: The Case of Internet Banking," *Journal of Retailing and Consumer Services*, Vol. 13, Pp. 431–443, 2006, Doi: 10.1016/J.Jretconser.2006.02.006.

[10]   R. Casidy And W. Wymer, "A Risk Worth Taking: Perceived Risk as Moderator of Satisfaction, Loyalty, and Willingness-To-Pay Premium Price," *Journal of Retailing and Consumer Services*, Vol. 32, Pp. 189–197, 2016, Doi:10.1016/J.Jretconser.2016.06.014.

[11]   A. S. Al-Adwan And H. Yaseen, "Solving The Product Uncertainty Hurdle In Social Commerce: The Mediating Role Of Seller Uncertainty," *International Journal of Information Management Data Insights*, Vol. 3, Pp. 1-16, 2023, Doi: 10.1016/J.Jjimei.2023.100169.

[12]   R. N. Roy, *A Modern Approach To Operations Management*. New Delhi: New Age International, 2005.

[13]   C. Dutoit, P. Dehombreux, And E. Rivière Lorphèvre, "Using Quality Control in Optimizing Opportunistic Maintenance," *Science Direct: IFAC PapersOnLine* 51-24, Pp. 643–648, 2018, Doi: 10.1016/J.Ifacol.2018.09.643.

[14]   H. Okamuro, Y. Hara, And Y. Iwaki, "Impact of Consumer Awareness and Behavior on Business Exit in The Hospitality, Tourism, Entertainment, and Culture Industries under The Covid-19 Pandemic," *Administrative Sciences*, Vol. 12, No. 169, Pp. 1-19, 2022, Doi:

10.2139/Ssrn.4035238.

[15] P. Coughlan And D. Coghlan, "Action Research for Operations Management," *International Journal of Operations & Production Management*, Vol. 22, No. 2, Pp. 220–240, 2002, Doi: 10.1108/01443570210417515.

[16] I. P. Artaya, *Dasar-Dasar Manajemen Operasi Dan Produksi*, Narotama University Press, 2018.

[17] V. A. Zeithaml, "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing*, Vol. 52, No. 3, Pp. 2–22, 1988, Doi: 10.1177/002224298805200302.

[18] H. Shefrin, "Beyond Greed and Fear: Understanding Behavioral Finance and The Psychology of Investing," *Harvard Business School Press*, 2002, Doi: 10.1093/0195161211.001.0001.

[19] G. Guido, "Customer Satisfaction," *Wiley Encyclopedia of Management: John Wiley & Sons, Ltd*, 2014, Doi: 10.4337/9781800377486.

[20] P. L. Lai, H. Jang, M. Fang, And K. Peng, "Determinants of Customer Satisfaction With Parcel Locker Services in Last-Mile Logistics," *The Asian Journal of Shipping and Logistics*, Vol. 38, No. 1, Pp. 25–30, 2022, Doi: 10.1016/J.Ajsl.2021.11.002.

[21] A. Größler, "System Dynamics and Operations Management," *Encyclopedia of Complexity and Systems Science*, Pp. 1–12, 2018, Doi: 10.1007/978-3-642-27737-5_661-1.

[22] R. A. Lone and M. A. Bhat, "Impact of Product Quality on Customer Satisfaction: Evidence from Consumer Durables", *Internatonal Journal for Reseacrh Trends and Innovation,* Vol. 8, No. 4, Pp. 1014-1024, 2023.

[23] N. Ivanauskienė and J. Volungėnaitė, "Relations between Service Quality and Customer Loyalty: An Empirical Investigation of Retail Chain Store in Emerging Markets," *American Internatinal Journal of Social Science*, Vol. 3, No. 2, Pp. 113–120, 2014.

[24] E. Sambo, U. I. Sunday, A. M. Mary, and F. John, "Impact of Product Quality on Customer Satisfaction and Loyalty," *Proceedings of the 15th Annual International Conference*, Pp. 1389–1402, 2022, Doi: 10.3126/Md.V24i2.50041.

[25] N. Rane, A. Achari, and S. P. Choudhary, "Enhancing Customer Loyalty Through Quality of Service: Effective Strategies to Improve Customer Satisfaction, Experience, Relationship, and Engagement," *International Research Journal of Modernization Engineering Technology and Science*, Vol. 05, No. 05, 2023, Doi: 10.56726/Irjmets38104.

[26] F. Y. Ernawati, A. Novandalina, and D. Tsaniyah, "Analysis of Product Quality and Service Quality Factors on Consumer Satisfaction (A Case Study at The Kremes Chicken Restaurant in Purwodadi)," *International Journal of Economis, Business and Accounting Reserach (IJEBAR)*, Vol. 6, No. 4, Pp. 1914–1921, 2022.

[27] C. Homburg, D. Jozić, and C. Kuehnl, "Customer Experience Management: Toward Implementing an Evolving Marketing Concept," *Journal of Academy Marketing Science*, Vol. 45, No. 3, Pp. 377–401, 2017, Doi: 10.1007/S11747-015-0460-7.

[28] M. Tsiros, V. Mittal, and W. T. Ross, "The Role of Attributions in Customer Satisfaction: A Reexamination," *Journal of Consumer Research*, Vol. 31, No. 2, Pp. 476–483, 2004, Doi: 10.1086/422124.

[29] Y. Yi and T. Gong, "Customer Value Co-Creation Behavior: Scale Development and Validation," *Journal of Business Research*, Vol. 66, No. 9, Pp. 1279–1284, 2013, Doi: 10.1016/J.Jbusres.2012.02.026.

[30]   K. R. Ashish, R. Bezawada, R. Rishika, R. Janakiraman and P.K. Kannan, "From Social To Sale: The Effects of Firm Generated Content in Social Media on Customer Behavior," *Journal of Marketing*, Vol. 53, No. 9, Pp. 1689–1699, 2018.

[31]   B. Saidani and S. Arifin, "Pengaruh Kualitas Produk dan Kualitas Layanan Terhadap Kepuasan Konsumen dan Minat Beli pada Ranch Market," *Jurnal Riset Manajemen Sains Indonesia.*, Vol. 3, No. 1, Pp. 1–22, 2012.

[32]   Budiarto and Susanti, "Pengaruh Financial Literacy, Overconfidence, Regret Aversion Bias, dan Risk Tolerance Terhadap Keputusan Investasi (Studi Pada Investor PT. Sucorinvest Central Gani Galeri Investasi BEI Universitas Negeri Surabaya)," *Jurnal Ilmu Manajemen,* Vol. 5, No. 2, 2017.

[33]   Adiputra, "The Influence of Overconfidence, Representative Bias, and Risk Tolerance in Investment Decision Making: Evidence on Stock Investors in Indonesia.," *Journal of Hunan University National Science*, Vol. 48, No. 4, 2021.

[34]   A. Tjiptono, *Strategi Pemasaran*. Yogyakarta: Penerbit Andi, 2015.

[35]   D. R. Cooper and P. S. Schindler, *Business Research Methods*, 12th Ed. New York: Mcgraw-Hill, 2014.

[36]   J. F. Hair Jr, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*, Seventh Ed. Pearson New International Edition, 2014.

[37]   J. Beneke, R. Flynn, T. Greig, and M. Mukaiwa, "The Influence of Perceived Product Quality, Relative Price and Risk on Customer Value and Willingness To Buy: A Study of Private Label Merchandise," *Journal of Product & Brand Management*, Vol. 22, No. 3, Pp. 218–228, 2013, Doi: 10.1108/Jpbm-02-2013-0262.

[38]   A. Syafarudin, "The Effect of Product Quality on Customer Satisfaction Implications on Customer Loyalty in The Era Covid-19," *Ilomata International Journal of Tax & Accounting (IJTC)*, Vol. 2, No. 1, Pp. 71–83, 2021, Doi: 10.52728/Ijtc.V2i1.204.