

Analysis of Customer Satisfaction of Fresh Products E-Commerce Company in Indonesia using NPS

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Abstract

Business has increasingly become more competitive impacted by the development of information technology. The buying and selling process has now expanded to online platforms with the help of the internet. This shift significantly makes e-commerce growth even faster. Due to COVID-19, there is some decrease in sales at offline stores, therefore, e-commerce has the opportunity to continue to grow. But many customers in Indonesia still choose to shop offline for groceries item and only 59% have already tried to shop through e-commerce. The reasons for this include delivery time, shipping prices, quality concerns, unreachable delivery areas, and complicated systems. This paper highlights the importance of e-commerce service quality that reflects on customer satisfaction using NPS (Net Promotor Score). A case study is implemented on an e-commerce fresh product company. Quality criteria were first determined through questionnaires by four experts. There are 14 accepted criteria used for NPS questionnaires to customers as an assessment of the service quality. The NPS score collected from 237 respondents resulting in 6 criteria below the average of the company's score. From these findings, the company can further develop and prioritized said criteria for improving e-commerce fresh product service quality.

Keywords

E-commerce, Fresh Product, Customer Satisfaction, Service Quality, Net Promotor Score

1. Introduction

Electronic commerce is a term that describes the process done by electronic methods to do commercial activities (Qin et al. 2014). According to Turban et al. (2017), e-commerce activities include buying, selling, transporting, or trading data, goods, or services. Nowadays, e-commerce has been common ground in Indonesia. The growth in the value of electronic commerce (e-commerce) in Indonesia reached 78%, occupying the highest position in the world (Indonesian Ministry of Communication and Information 2021).

One of the most important scopes of e-commerce is retail. Not only because groceries with staple goods such as fresh fruits, vegetables, red meat, and seafood products are the life support for the community because it needs to be fulfilled daily with great concern for time, quality, and quantity. In Indonesia, offline retail for fresh products has experienced decreased income of up to 26% from 2020 to 2021. With the decrease in offline shopping due to COVID-19, e-commerce can be the solution for fulfilling grocery needs.

According to a survey conducted by Snapcart (2020) on Online Shopping Habits for Groceries, 59% of shoppers in Indonesia have used e-commerce platforms to shop for their grocery needs. Based on the survey, the reasons customers do not use e-commerce because they want to see products in person, uncertain delivery times, expensive shipping prices, concerns about freshness and cleanliness, no payment options on the spot, difficulty to get the needed goods, the delivery area is not reached, the system is complicated, and the price is more expensive.

For those reasons above, e-commerce companies, especially those that sell fresh product needs to give great service and product quality to their customers to be able to achieve competitiveness. Slack et al. (2013) stated that quality is consistent in conformity with customer expectations, in which customer expectations and perceptions are influenced by several factors, some of which cannot be controlled by operations and some of which, to some extent, can be managed. According to Sun (2021), service quality is positively related to customer satisfaction and depends on

product or service expectations. For this reason, quality needs to be understood from the customer's point of view because, for the customer, the quality of a particular service or product is what the customer feels.

Several studies have been conducted on service quality and customer satisfaction in e-commerce groceries companies. Research by Abidin and Triono (2020) explains that promotion, product quality, price, and trust affect shopping interest and decisions to make transactions, as well as customer satisfaction. The results of the research by Cang and Wang (2021) also show that product quality and logistics are significant in determining shopping intentions. Lin et al. (2021) suggest that companies should focus on product characteristics and platform characteristics to increase consumers' perceived value, thereby increasing their sustainable purchase intentions.

Of many methods used, one of the popular assessments claimed to be accurate by various companies is the Net Promotor Score (NPS). NPS is a straightforward method to assess companies' performance with a 0-10 scale that differentiates customers by their perception of a company's services. Kumar and Metre (2019) use NPS to find out what variables affect the customer's shopping experience. Eger and Mičik (2017) conducted a study to investigate the level of communication services to customers in the retail industry using NPS. However, in the research for NPS itself, there has been no specific study for e-commerce fresh products.

In this paper, a case study is conducted in an e-commerce fresh product company, Company X. Since there is only a little research on e-commerce fresh products, this research will explore the use of NPS to improve customer satisfaction. The objectives of this research include identifying the quality criteria for products and services in the company so that companies can understand the quality criteria that are of concern to customers, getting the value of customer satisfaction on the criteria for the quality of products and services at the company using NPS, so that companies can understand customer satisfaction, and determine what can be prioritized to improve customer satisfaction.

2. Literature Review

2.1 E-Commerce

Electronic commerce (e-commerce) is the process where people use electronic means to do business or to do other economic activities (Qin et al. 2014). Electronic methods refer to electronic technologies, tools, equipment, and systems, such as telephone, e-mail, websites, electronic money, etc. Electronic commerce can be widely applied to financial transactions in the provision of banking, insurance, investments, speculative operations in currencies and securities; other service markets: hotel, tourism, education, consulting, utility payments, advertising, and others; between businesses, the public, the public and other institutions, legal entities and individuals, households and individuals (Išoraitė and Miniutienė 2018).

Buy-side e-commerce refers to transactions to procure resources needed by an organization from its suppliers, while sell-side e-commerce refers to transactions involved with selling products to an organization's customers. According to Turban et al. (2017), the general classification of e-commerce is based on the type of transaction and the members who transact, which include Business-to-business (B2B) refers to transactions between and between organizations, business-to-consumer (B2C) including retail transactions of products or services from businesses to individual buyers. In consumer-to-business (C2B), people use the Internet to sell products or services to individuals and organizations.

2.2 Customer Satisfaction

Satisfaction is a consumer's fulfillment response. It is an assessment that a product or service feature, or the product or service itself, provides (or provides) a level of satisfaction related to pleasurable consumption, including a level of under or over fulfillment (Gajewska et al. 2020). Customer satisfaction is how customers perceive an organization's products or services based on their experience with the organization.

The assessment of customer satisfaction is one of the most important issues regarding business organizations of all types. For this reason, customer satisfaction must be measured and translated into several measurable parameters (Grigoroudis, and Siskos 2010). For this reason, customer satisfaction must be measured and translated into several measurable parameters. Customer satisfaction measurement is now considered the most reliable feedback, taking into account that it provides customer preferences and expectations in an effective, direct, meaningful, and objective manner. In this way, customer satisfaction is the basic standard of performance and possible standard of excellence

for any business organization (Gerson 1993). However, it is nearly impossible to keep entire companies permanently motivated by an abstract and intangible notion such as customer satisfaction. Therefore, customer satisfaction must be translated into several measurable parameters that are directly related to people's work, namely factors that people can understand and influence (Deschamps and Nayak 1995).

Satisfaction measurement systems can generally be distinguished based on the source of information (Woodruff and Gardial 1996), namely direct measurement systems, where this system is based on data that comes directly from a collection of customers, such as customer satisfaction surveys, customer complaint systems, interviews, and indirect measurement systems, where the system is based on data that reflects customer satisfaction results/results, such as sales levels and market share.

For electronic commerce fresh products, customer satisfaction may differ from other e-commerce because the product in fresh produce is more sensitive. According to Mofokeng (2021), for online retailers, customer satisfaction is influenced by product delivery, perceived security, information quality, and product variety. Sinha et al (2021), also stated that app design, service quality, have significant positive relationships with customer satisfaction for food delivery service. Islam and Balqiah (2021) have found that online grocery store's security, privacy, and ease of use are determining customer satisfaction and trust in the store. Xin and Jiaying (2020) in their research found that taste, freshness, quality, security, delivery, logistics, packaging, description, appearance, weight, customer service, and after-sales have a significant influence on customer satisfaction.

2.3 Net Promotor Score

Net Promoter Score (NPS) is a metric developed by Fred Reichheld that proposes a simple and practical way to categorize customers based on their answers to one question: On a scale of 0 to 10, how likely are you to recommend us (or this product/service/brand) to a friend, family, or colleagues? These answers will cluster customers into three groups, each with a different pattern of behavior, which are promoter, passive, and detractor (Reichheld 2011).

Promoters are the people who gave a score of 9 or 10. Promoters promote the company to friends and colleagues, usually making repeat purchases, and provide constructive feedback and suggestions to companies. Passive, are people who gave a score of 7 or 8. They are passively satisfied customers that are more likely to refer to unenthusiastic impressions. This group can easily turn to competitors caused of cheaper pricing or advertising attractiveness. Finally, detractors are respondents who gave a score of 6 and below. This indicates that detractors are dissatisfied or disappointed with the way they are treated, and share bad ratings with friends and colleagues (Freed 2013).

NPS is determined simply by subtracting the percentage of detractors from the percentage of promoters, a score which could theoretically range from -100 to +100. Reichheld's research confirms that, across most industries, companies with the highest promoter-to-detractor ratios in their sector typically enjoy strong profits and healthy growth. According to Blasberg et al. (2008), measuring a company's NPS provides some insight into the rational and emotional side of consumer behavior. This happens because NPS can indicate future consumer behavior.

3. Methods

This study focuses on assessing customer satisfaction by taking a case study of an e-commerce fresh product company in Indonesia, Company X. The criteria of service quality that will be assessed are developed from a literature study and further obtained using the Delphi method by giving questionnaires to experts. The results of the selected criteria will be used to develop an NPS questionnaire. NPS questionnaire will be distributed to customers of Company X with minimum respondents determined by interpolation of several studies in NPS.

3.1 Identification of Quality Criteria and Sub-Criteria

The first step in data collection is to identify quality criteria and sub-criteria that will be assessed by customers by studying the literature of previous studies. Due to the absence of research devoted to finding customer satisfaction with NPS from fresh product e-commerce companies, the list of reference-quality attributes of this study was taken from various literature reviews contained in Table 1.

Table 1. Quality Criteria Reference

Criteria	Sub-criteria	References
Application	Apps ease of use	Santos (2003), Collier and Bienstock (2006), Ladhari (2010), Yoo and Donthu (2001), Ho and Lee (2007), Jun and Cai (2001)
	App appearance	Santos (2003), Lee and Lin (2005), Collier and Bienstock (2006), Cristobal et al (2007), Aladwani and Palvia (2002), Wolfinbarger and Gilly (2003)
Product selection	Product availability	Kumar and Metre (2010), Faltejsková, et al (2016)
	Product variety	Kumar and Metre (2010), Mofokeng (2021)
	Product price	Faltejsková, et al (2016), Kumar and Metre (2010)
Payment	Security of payment	Santos (2003), Ladhari (2010), Yoo and Donthu (2001), Wolfinbarger and Gilly, Madu and Madu (2002), Francis and White (2002)
	Ease of payment	Yoo and Donthu (2001), Aladwani and Palvia (2002), Ho and Lee (2007), Jun et al (2004), Janda et al (2002), Madu and Madu (2002)
Delivery	Delivery coverage	Kumar and Metre (2010), Gulc (2020)
	Delivery time	Ziethaml et al (2000), Collier and Bienstock (2006), Cristobal et al (2007), Sohn and Tadisina (2008), Surjadaja et al. (2003)
	Courier attitude	Gulc (2020), Fakfare (2021)
Order reliability	Fulfillment	Ziethaml et al (2000), Collier and Bienstock (2006), Cristobal et al (2007), Li and Suomi (2009), Sahadev and Purani (2008), Parasuraman et al (2005)
	Product quality	Kumar and Metre (2010), Faltejsková, et al (2016)
After-sales	Problem-solving ability	Santos (2003), Ziethaml et al (2000), Cristobal et al (2007), Gounaris and Dimitriadis (2003), Wolfinbarger and Gilly (2003), Francis and White (2002)
	Customer benefits program	Ziethaml et al (2000), Yang and Jun (2002), Ladhari (2010), Gounaris and Dimitriadis (2003), Parasuraman et al (2005),

3.2 Determination of Criteria and Sub-Criteria by Experts

After identifying the criteria and sub-criteria by studying the literature, the selection of the quality variables that are suitable for fresh product e-commerce companies is carried out. There are 4 experts who have experience in groceries, FMCG, or fresh product e-commerce companies who have more than 5 years of experience in these fields.

Determination of criteria, especially sub-criteria by experts is carried out through questionnaires, where the experts weigh the quality criteria that have been identified, based on their importance and relation to customer satisfaction using a scale of 1-5. Delphi statistics are commonly used to measure central tendency (mean, median, and mode), and degrees of dispersion such as standard deviation and interquartile to provide information from collective judgments (Ma'sum et al. 2015).

The results of the expert assessment questionnaire were concluded with a geometric average (geomean), where variables that had values below the geometry were not used for assessing customer satisfaction (Yolanda 2018). Criteria that have a geomean value of more than 3.5 will be accepted. Based on the results of the geomean assessment for 4 experts, all 14 criteria were accepted. The results of the expert assessment and the average geomean assessment of the importance of the criteria are presented in Table 2.

3.3 Customer Satisfaction Assessment

In this study, the results of the quality variable received from the expert assessment will be the variable for the NPS questionnaire. The NPS Questionnaire will be given to the customer via electronic form. Respondents to the questionnaire consisted of customers who had shopped for fresh products at Company X. After interpolating several previous studies from the number of criteria and the number of samples, it was found that for 14 criteria, an average of 210 samples of respondents were needed to answer the NPS questionnaire.

4. Results and Discussion

From the results of distributing the NPS questionnaire, there were 237 respondents. NPS is calculated by subtracting the percentage of promoters that give the company a score of 9 or 10, with detractors that give the company a score of 6 and under. Customers that rate the criteria 7 or 8 is considered passive and will not be included in the NPS

calculation, but can only make a gap. The validity and reliability test is conducted before the calculation of NPS, the results are shown in Table 2, Table 3 and Table 4.

Table 2. Assessment and Calculation of Criteria Importance

Criteria	Expert 1	Expert 2	Expert 3	Expert 4	Geomean
Apps ease of use	5	5	5	4	4.73
Apps appearance	5	4	4	4	4.23
Product availability	4	5	4	5	4.47
Product variety	3	5	4	5	4.16
Product price	3	4	5	3	3.66
Security of payment	5	5	5	5	5.00
Ease of payment	5	4	5	5	4.73
Delivery coverage	3	4	4	4	3.72
Delivery time	3	4	4	4	3.72
Courier attitude	3	4	3	5	3.66
Fulfillment	4	4	4	5	4.23
Product quality	5	5	5	3	4.40
Problem-solving ability	4	5	5	3	4.16
Customer benefits program	4	4	4	3	3.72

Table 3. Validity test

Criteria	R count	R table	Results
Apps ease of use	0.528	0.129	Valid
Apps appearance	0.511	0.129	Valid
Product availability	0.657	0.129	Valid
Product variety	0.645	0.129	Valid
Product price	0.673	0.129	Valid
Security of payment	0.537	0.129	Valid
Ease of payment	0.606	0.129	Valid
Delivery coverage	0.727	0.129	Valid
Delivery time	0.677	0.129	Valid
Courier attitude	0.558	0.129	Valid
Fulfillment	0.705	0.129	Valid
Product quality	0.642	0.129	Valid
Problem-solving ability	0.673	0.129	Valid
Customer benefits program	0.660	0.129	Valid

Table 4. Reliability test

Cronbach's Alpha	n criteria
0.882	14

Based on the validity and reliability statistics test, all of the responses from 14 criteria are valid and reliable. Unlike traditional NPS, in this study, all 14 criteria are assessed by asking the customer about their satisfaction and willingness to promote. The average NPS for 14 criteria of Company X is 39%. Net Promoter Score star users such as Apple, Amazon, Costco, has NPS efficiency ratings from 60 to more than 80 percent. But the other average firm has an NPS efficiency of only 10 to 20 percent (Reichheld 2011). This makes Company X above average, but still below star company performance. Kumar and Metre (2019) also stated that if the NPS is positive, the company is still rated as good, and an NPS of more than 50 is considered to be excellent. The NPS score can be seen in Figure 1.

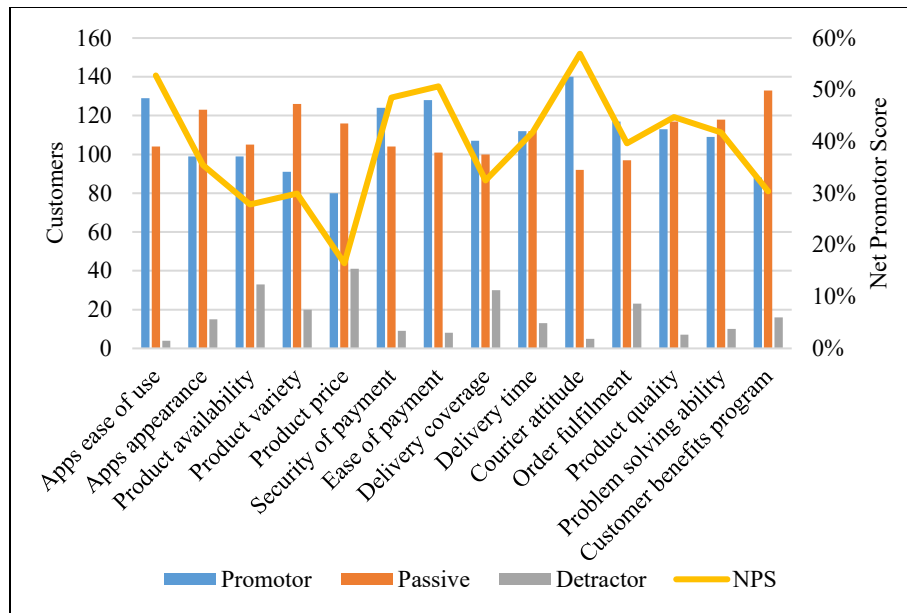


Figure 1. Net Promoter Score of Company X

In Indonesia, there is no study that conducted NPS as customer satisfaction for e-commerce fresh products specifically, but there are some studies for online shopping platforms that provide a marketplace for many sellers to sell their products. Jakpat (2021) collected from their study that Shopee has a 42% score, Tokopedia has a 49% score, Lazada has a 32% score, Bukalapak has a 32% score, JD.id has a 30% score, and Blibli has a 26% score. This shows that Company X has a greater net promotor scale than other online shopping platforms in Indonesia. But these online shopping platforms can't be a direct benchmark because of the company size, products sold, and location of customers. The comparison between Company X to online shopping platforms can be seen in Figure 2.

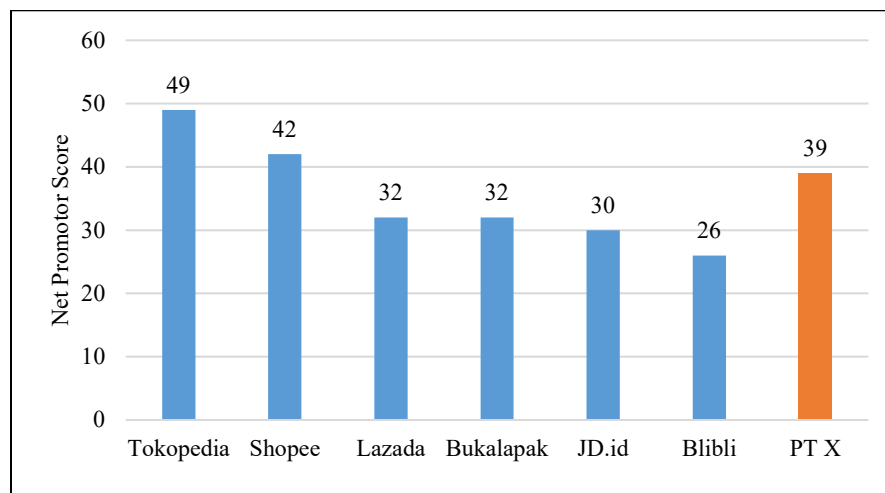


Figure 2. Net Promoter Score of Online Shopping Platforms in Indonesia

For the specific 14 criteria in Company X, the result shows that app ease of use generates 53% NPS, app appearance generates 35%, product availability generates 28%, product variety generates 30%, product price generates 16%, security of payment generate 49%, ease of payment generate 51%, delivery coverage generates 32%, delivery time generate 42%, courier attitude generates 57%, order fulfillment generates 40%, product quality generates 45%, problem-solving ability generates 42%, and customer benefits program generate 30% of NPS. From these scores, there are 6 of the criteria that still have NPS below the average NPS of Company X, which is 39%.

The lowest NPS for Company X is product price criteria (16%). This can be seen that customers of Company X are not satisfied with the pricing policy, most likely that fresh produce and groceries are common items, and customers are price sensitive over these items. If they are not satisfied, they can look for other e-commerce fresh products to make a purchase. When investigated, Company X has on average 8% more expensive products than the average competitor price. To show this, we can see some of Company X's items and compare them with those other competitors. This comparison will be shown in Figure 3.

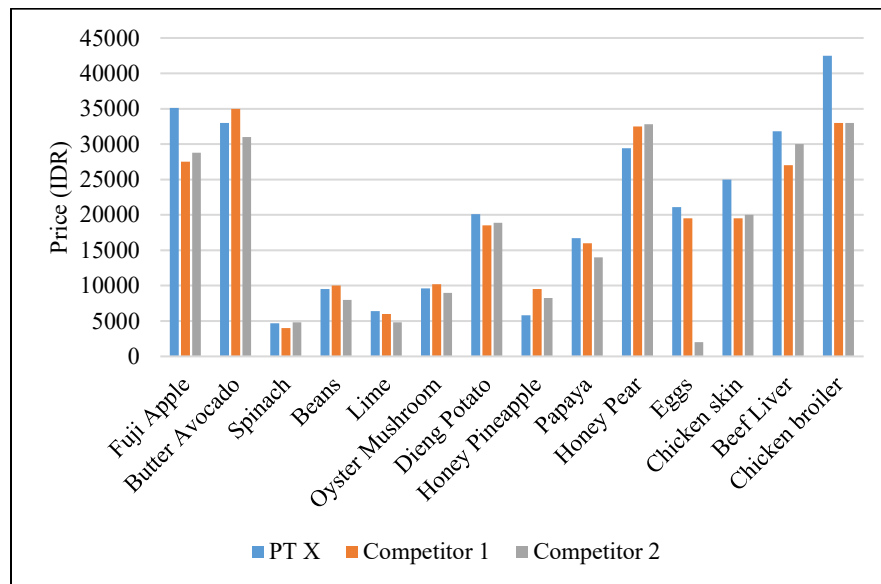


Figure 3. Fresh Product Price Comparisons

Figure 3 shows that Company X has always had prices above its competitors. But on several products, Company X can already reduce the selling price. In Company X itself, the pricing will always dynamically change due to cost component or purchase prices from suppliers. This pricing uncompetitiveness can also be impacted by the quality of the product, in which Company X has to maintain a great quality of their product, shown by the NPS of product quality of 45%. Since the customer rate pricing of 16% score, Company X needs to focus to reduce more of its final price with such alternative strategies as giving deeper promo on best-selling items, maintaining great supplier relationships to gain best cost supplies, considering bulk buying, and benchmarking on competitors to maintain competitiveness.

Product availability in Company X also generates NPS below average (28%). This shows that poor product availability is one of the reasons customers decide not to shop. Figure 4 shows the product availability from August 2021 to March 2022. It can be seen that the trend line of availability percentage keeps declining throughout the days. This phenomenon can be related to SKU number growth that keeps increasing, but Company X did not maintain the availability well for those SKUs. Product availability is also related to product variety. While product availability highlights the presence of products to be ordered, product variety highlights the presence of options of several brands or sizes of the fresh products. Company X gained an NPS score for product variety of 30%. Figure 5 shows the SKU count for every product variant, for example, milk variance has 309 active SKUs, citrus has 121 SKUs, and apples has 72 SKUs. But there are still many that have smaller variance numbers such as dragon fruit with 14 variances including its organic form, imperfect, frozen, yellow, red, white, and weights.

From the data collected, the customer benefit program is one of the criteria that have high passive, which generates 30% of NPS. This shows that the company is not able to make the customer satisfied with the benefit program available, which are some points collected after some purchases that can be redeemed for vouchers for the next purchase. The company can directly ask customers what loyalty program they want, such as more quota for discounted items, freebies for new products, etc.

Delivery coverage also generates lower than average NPS of Company X. This means the reach of Company X is not entirely available to the customer's location. Customers may order and send products anywhere, it can be a gift or they are just traveling out of town (Figure 4 and figure 5). But when the options are limited, they will move to other e-commerce that provides that delivery coverage. Until now, Company X has delivery coverage only to 7 cities, due to their warehouse location placed in 3 cities. This is one of the issues that need to be tackled to improve customer satisfaction.

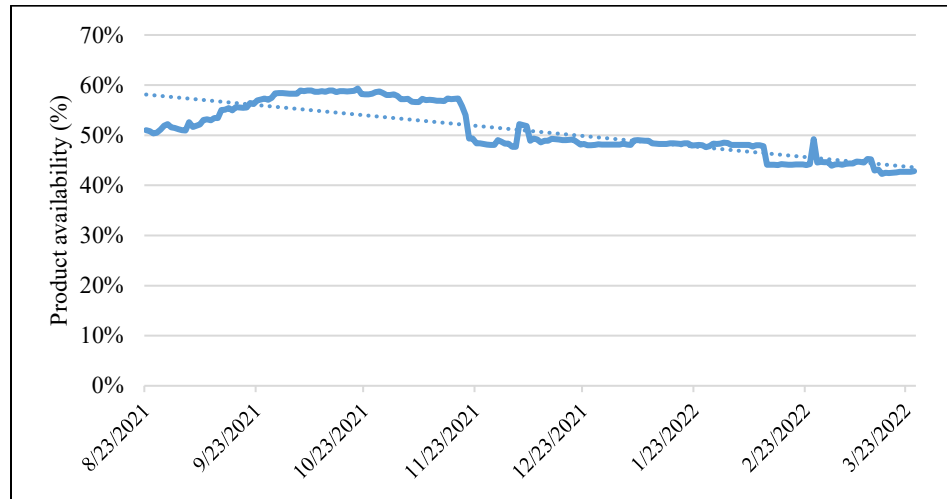


Figure 4. Product Availability Percentage

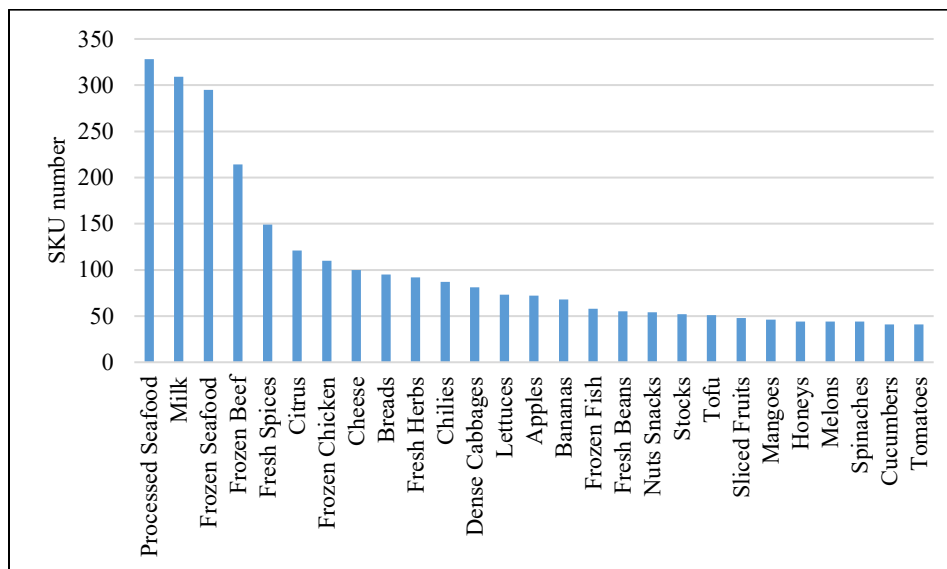


Figure 5. Product Variance

5. Conclusion

This research is conducted to identify the quality criteria for services and getting the value of customer satisfaction so that companies can understand and determine what can be prioritized to improve customer satisfaction in an e-commerce fresh product company in Indonesia, Company X. The criteria developed are apps ease of use, apps appearance, product availability, product variety, product price, security of payment, ease of payment, delivery coverage, delivery time, courier attitude, order fulfillment, product quality, problem-solving ability, and customer benefits program.

Customer satisfaction is collected by Net Promotor Score, and from 237 respondents, Company X has an average of 39% Net Promotor Score. Research for NPS in e-commerce fresh products has not been conducted, so the benchmark can be seen from offline groceries and e-commerce shops in Indonesia ranging from 5 to 34%. This shows that Company X has great positioning and opportunities in the grocery and e-commerce industry.

The company itself has several criteria that are below the average score. They are product price, product availability, and customer benefit program. Since groceries and fresh product has fluctuated in prices, customers tend to look for the best price. Also, customers expect that in an app, the availability of the product displayed is always available, and lastly customer benefit program is something that can't be underestimated because this is what grows loyalty in customers. In Indonesia, there is already so many e-commerce fresh product company. Therefore, Company X can focus on improving said criteria that have a lower score to be able to grab more attention of customers.

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