

Factors Influence Satisfaction Mediated by Perceived Service Quality on Platform E-Commerce Agri-Food in Jakarta Area

Sylvia Samuel¹, Sarfilianty Anggiani², Robert Kristaung³ and Farida Jasfar⁴

Corresponding Author: Email: syl_samuel@yahoo.com (Sylvia Samuel)
¹²³⁴ Faculty of Business and Economics, Universitas Trisakti, Jakarta, Indonesia

ABSTRACT: The main objective of the study is to investigate the effect of e-platform aesthetic (AS), responsiveness (RES), ease of use (EU) and information quality (IQ) on perceived service quality (PSQ), and the effect of perceived service quality (PSQ) on customer satisfaction (SAT) in a platform e-commerce agri-food. The methodology and construction for the model proposed was examined by means of structural equation modelling (SEM). The data were collected from a purposive sampling of 272 individuals that have shopped a fresh product through the platform e-commerce of agri-food at least more than three times. The finding of the pilot study revealed that e-platform aesthetic is proven to have a positive and significant effect on platform e-commerce perceived service quality, information quality is proven to have a positive and significant effect on platform e-commerce perceived service quality, perceived platform service quality is proven to have a positive and significant effect on satisfaction, ease of use is proven to have a positive and significant effect on satisfaction. Nevertheless, responsiveness is proven to have a negative but insignificant effect on perceived platform service quality, responsiveness is proven to have a negative but insignificant effect on satisfaction, and information quality is proven to have a negative but insignificant effect on satisfaction. Instantly, the findings have practical implications for platform e-commerce agri-food providers to increase online responsiveness, improve ease of use of the platform and build satisfaction of customers through perceived service quality. In addition, for researcher theoretical implications who are interested in the topic of e-commerce agri-food of perceived service quality and satisfaction. Thus, the model suggested is extensively an integrated model that comprehends the variables presented all together within one new research model. There is also limited study discovered about the effect of platform e-commerce in the agri-food industry.

KEY WORD: Agri-food, Aesthetic, Customer Satisfaction, Ease of Use, Information Quality, Perceived Service Quality, Responsiveness

Date of Submission: 04-11-2021

Date of Acceptance: 18-11-2021

I. INTRODUCTION

The Internet has benefited many people around the globe in all aspects of life. It makes life easier and the world flat without boundaries (Hollensen, 2020). Digital revolution and the advancement of information technology have significantly minimized communication costs. Industry 4.0 is part of the technology framework that adapts to the principle of cyber integration from physical action towards manufacturing, logistics, sales and marketing in this era of globalization. There have been various views from other scholars about how digitalization and data analytics can be manifested into future projection and identified within a real time (Fragapane et al., 2020; Ghadge et al., 2020; Ivanov & Dolgui, 2020; Tang & Veelenturf, 2019). Therefore, digital transformation spreads rapidly in the society's daily life and usage of technology in the digital era (Purba et al., 2021). With advanced technology and widespread use of internet, there has been a shift from traditional shopping to online shopping. The Internet is a visual computerization model that can monitor the process of an online transaction from registration, order placement, payment to delivery. Moreover, digital transformation has altered the company's way of selling its products and services, delivery system, e-commerce logistics and 24/7 customer interactions across internet networking with the use of social media including twitter, TikTok, Instagram live, blog and other cross section virtual platforms (Purba et al., 2021). Furthermore, the adoption of e-commerce among users around the globe reached 76.8 percent, while Indonesia reached about 87.1 percent (ECOMMERCE ADOPTION, 2021), spiking the growth of e-commerce revenue to an estimated US\$ 38.195 million in 2021.

In addition, industry sectors such as the agricultural industry in Indonesia, India and Thailand strive to position and expand themselves in the market. Agriculture has significant influence on gross domestic product (GDP) for each country. Indonesia has increased significantly in the agricultural sector based on GDP, reaching

Rp. 15.434,2 trillion and Rp. 56.900.000 per capita (BPS, 2021). The growth of the agricultural industry per year can be observed based on the year 2020, from an estimated 0.01 percent for the first quarter to 2.59 percent for the fourth quarter despite the COVID-19 outbreak. Indonesia's first online shop, KASKUS, was established in the year 1999. Subsequently, in the year 2009, Tokopedia started as a startup company and gained popularity in the e-commerce marketplace. Society enjoyed the convenience of online shopping and many startup companies started their journey in Indonesia. During the COVID-19 outbreak, many industries adopted online shopping, as governments around the globe imposed restrictions on social movements in order to mitigate the risk of infection by the coronavirus. Indonesian government imposed regulations to work from home, study from home, minimize activity out of the house and maintain social distancing, affecting restaurants and shopping centres, thus causing the need for businesses to transform their stores into a virtual one. These regulations have also intensely affected the society to turn to online shopping for various kinds of industries including shopping for perishable products which includes meat, fish, eggs and fruits.

Growth of agricultural e-commerce in Indonesia has increased unexpectedly, especially during the pandemic. The Ministry of Agriculture in Indonesia collaborated with three startup companies which includes Tani Supply Indonesia, Etanee and Sayurbox, in hope to supply fresh products such as meat, fish, eggs, vegetables and fruits to the society (Kementan, 2020). Moreover, with digitalization and advanced technology evolving in the society, agriculture and fisheries sectors must adopt new systems that directly connect farmers and customers through e-commerce platforms with reasonable price. The Internet is a key factor for agri-food development and e-commerce adoption. If one area do not have a good network infrastructure to support both the consumers and farmers, then both parties will have limited access to perform any transactions. Therefore, high speed internet is really important in order to connect consumers and farmers directly, specifically for product innovation and harvest products (Miranville, 2020). Agri-food ecommerce platforms in Indonesia has started since 2012 by 8villages, 2014 by RegoPantes, HappyFresh and Kecipir, followed by Sayurbox in 2016 and Etanee in 2017. Interestingly, since the COVID-19 pandemic, the society's shopping behaviour has transformed traditional purchase into online shopping, especially for perishable products such as meat, fish, eggs and vegetables from various agri-food e-commerce platforms that are available in Jakarta.

The analysis presented by Mime Asia shows that one of the agri-food e-commerce in Jakarta known as Sayurbox, reported a 30% increase in sales year-on-year for the first quarter of 2021. Since Indonesian government limited the society's activity out of the house due to COVID-19, agri-food e-commerce has rapidly increased in the marketplace specifically fresh products. Therefore, this pilot study is essential to explore electronic service quality (ESQ) in terms of aesthetics, responsiveness, ease of use, information quality, perceived service quality and satisfaction, specifically for agri-food e-commerce platforms. The research gap for the pilot study is to find out whether aesthetics, responsiveness, ease of use and information quality extensively affect perceived service quality in order to achieve satisfaction in agri-food e-commerce platforms. The paper contributes on how ESQ like aesthetics, responsiveness, ease of use and information quality play a role in perceived service quality and the maximization of satisfaction in online shopping mainly agri-food. The paper is arranged as follows: First, literature review and hypothesis development. Second, methodology and findings. Third, discussion of theoretical and managerial implications. Last, a conclusion with limitations and direction for further research.

II. LITERATURE REVIEW AND HYPOTHESIS

Aesthetic

Site and platform of e-commerce as communication facilities to facilitate an information exchange between service provider and buyers or buyers and sellers also known as customers and company (Casaló et al., 2008). Some scholars showing websites with good quality of design will increase consumers interest to make a purchase include landing page, navigation bar and personalisation recommendations (Cai et al., 2018; Thiebaut, 2019). According to Cai et al., (2018) mentioned about excellent design and features of platform e-commerce has greater impacted on delivery of the information, easy to navigate, quality of product and service, and brand image of the service providers for customers. Recently, website and platform of e-commerce have mitigated communication barriers and acted as a robust channel distribution for agri-food. During global pandemic of COVID-19, the agriculture sector become the fastest industry to adapt to the technology in a variety of activities. Society started to do online transactions through the internet. As a result, it will cut the supply chain distribution of product between customers and farmers, increase profit, revenue and extent market share.

Design of website and platform e-commerce became an important factor during online transaction for both customers and service providers. Instantly, a company must give extra attention to the design quality of the web, offer excellent perceived service quality, in order to satisfy the customers. In addition, Díaz & Koutra, (2013) stated platform e-commerce should focus on function and strongly support a product with clear image and color in order to attract customers to shop from a platform e-commerce. In fact, aesthetic refers to the element of customer experience related with the use of platform which include visual appeal, personalization,

convenience and ease to access the site (Agrawal et al., 2021). Agrawal et al., (2021) emphasized platform of e-commerce aesthetic can be access in multilingual language and match with font size, color, multimedia background, graphic, video with clear sound, speed to access the platform, clarity of the content has significantly influenced stakeholder satisfaction and increased platform e-commerce aesthetic. Therefore, service provider must integrate platform aesthetic in order to gain customer trust to company brand image, perceived service quality and satisfaction.

H1: *E-platform aesthetic has positively impacted on Perceived Service Quality Variable*

H6: *E-platform aesthetic has positive impact on Satisfaction Variable*

Responsiveness

Responsiveness focus on quick response and availability of service for customers (Pearson et al., 2012). According to Zeithaml et al., (2000) responsiveness can be developed as respond and feedback provided by customer service both online and offline in order to solve a problem, answer a question within time limits that allow by customers. In general, response times during online transaction is a critical issue provided by service providers whether customer service can fulfil stakeholders expectation during pre-transaction, finalized transaction and post transaction (Huang et al., 2019). Some scholars found out responsiveness as timely and speedily provide respond for customer during online transaction (Ho & Lee, 2007). Moreover, respond in time is one of the technical characteristics of platform e-commerce dealt with loading time over consumers platform and time needed to finish the transactions.

Broadly view from Parasuraman et al., (2005) posit responsiveness as solve a problem and effective refund process through platform e-commerce. Continuously, responsiveness refers to a timely manner to handle customer complaints and rapidly respond to customer question such as email, phone, live chat accurately and consistently to provide various solution for stakeholders (Agrawal et al., 2021). At the same time, society has started to adapt to online shopping transaction, therefore service providers must intensely escalate staff skills and knowledge to equip and offer 24/7 responsiveness to online customer service in order to handle and solve customer problems especially in e-commerce agri-food. Thus, responsiveness plays an important role to influence perceived service quality and build up satisfaction.

H2: *E-platform responsiveness has positively impact on Perceived Service Quality Variable*

H7: *E-platform responsiveness has positively impact on Satisfaction Variable*

Ease of Use

Technology innovative evolves in agriculture sector for online agri-food transactions. In general, terms of ease of use for online e-commerce consists of customer participation and ease of use (McCloskey, 2006). Ease of use is when customers feel confident to use online services easily and does not require much effort to learn (Kim et al., 2015). Ease of use generated by gathering internal aspect include computer, mobile phone and external aspects like facilitating condition into digital service (Kesharwani & Bisht, 2012; Venkatesh et al., 2000).

Ease of use of platform e-commerce is the primary element that formed the selection by customers (Abbad, 2013). Specifically, ease of use can be defined as readiness of society to adopt technology and services in agriculture sector (Thakur & Srivastava, 2014). As Agrawal et al., (2021) reviewed about ease of use, it refers to an essential dimension in service quality and information quality, because ease of use can determine individual customer behavior to operate the platform.

Based on the broad view of definition, ease of use can be explored to the extent where customers feel ease to try out the use of online service transaction as the learning process to use platform e-commerce. Since customers widely accept the use of internet over other services, perhaps, there is no more difficulty to use platform e-commerce especially for fresh product. Ji-Eun & Minsoo, (2011) declared readiness of technology and special knowledge will influence ease of use. Other studies stated ease of use as easy to operate from networking system (Lai et al., 2013). Summing up, ease of use has contributed heavily in perceived service quality and satisfaction especially in platform e-commerce agri-food.

H3: *E-platform ease of use has positively impact on Perceived Service Quality Variable*

H8: *E-platform ease of use has positively impact on Satisfaction Variable*

Information Quality

Recently, traditional shopping behavior transformed into online transaction, because internet makes the world flat. During the pandemic of COVID-19, government has imposed regulations to minimize society activity out of the house to mitigate the spread of virus between each other. In general, online transactions rely on information quality that is provided by service providers. The availability of information quality over the web can be determinant as an essential element whether the platform of e-commerce can be trusted by customer (Maia et al., 2018). Information quality related with relevant information, accuracy, comprehensive information

and advantage of information were provided by online platform. Service providers prepare reliable, detail, up to date information, so it will motivate customers to trust and do transactions over the platform (Kim et al., 2016).

Based on Rasli et al., (2018) analyzed about information quality in terms of accuracy of information quality that will accelerate high value of customer satisfaction. In fact, this study employs previous research about information quality based on system information terms as quality results of system that can be measured in some category include, easy to understand, functionality, completeness, relevance, precise and up to trend (DeLone & McLean, 2003). Consequently, platform e-commerce of agri-food must supply precise quality of information, since platform offer fresh product to customers. In the meantime, some customers still in the process of adjusting and accepting online purchasing for fresh product, therefore service providers must prioritize and put extra care by providing precise information of quality over the website. As a result, service providers must ensure high quality of information quality that will impact perceived service quality and satisfaction.

H4: *E-platform information quality has positively impact on Perceived Service Quality Variable*

H9: *E-platform information quality has positively impact on Satisfaction Variable*

Perceived Service Quality

In general, perceived platform e-commerce service quality played an important role in the online transaction. Customers make an evaluation for the service that they received and make decision whether they have future intention to purchase over the site. Perceived service quality is a general evaluation or attitude that relates to superiority of service that is received by consumers (Jeon & Jeong, 2017). Moreover, previous researchers defined perceived service quality as an overall judgement from excellency and electronic service quality that offered by platform of e-commerce without any customers face to face interaction (Kassim & Asiah Abdullah, 2010; Santos, 2003). During online transactions, especially for fresh product, customers perceived service quality is really important to determine whether customers will make a future purchase from the platform e-commerce.

According to Ejdys & Gulc, (2020) developed perceived service quality by consumers is a critical element in the activity of design sustainable service, permitting service providers to take into consideration about clients expectations and needs in order to escalate them. The techniques of sustainable service incorporate all stakeholders in the procedure of service formation. Initially, Forbes, (2008) evaluated service quality has increased gradually in a timely manner, then it will minimize failure to providing service, client complaint, and finally accelerated clients satisfaction. In fact, when clients are satisfied with a product and service, they will have an intention to repurchase the product or service, so that it will enhance the company brand image and financial performance. Service providers must identify whether the product and service provided satisfy customers and improve satisfaction in general. Thus, perceived service quality intensely concerns about the output of consumer evaluation process towards the service that customers received and improved customer satisfaction.

H5: *Perceived service quality has significantly impact on Satisfaction Variable*

Satisfaction

Customer is an essential asset for a company. Company needs to fulfill customer expectation in order to reach customer satisfaction. On the other hand, company give special consideration into internal and external parts to provide unique customer value, therefore marketers may establish relationship with client and escalate customer satisfaction. According to Solomon, (2009), satisfaction can be determinant as a big part of trust and output results related with customers experience to product and service. Other scholars pointed out satisfaction is a collection of perception, evaluation and psychology reaction towards client experience when they consume both product or service provided by service providers (George & Kumar, 2014). In addition, other researchers analyzed satisfaction or dissatisfaction as an evaluation output of product or service deliver by company whether meet client expectations (Arguelles & Busquet, 2016).

Furthermore, satisfaction is about evaluation of platform e-commerce based on functionality, trying to understand consumers perception, accelerate efficiency and service quality, availability of information that accommodate for platform e-commerce agri-food, in order to fulfill customer satisfaction (Saha et al., 2012). Next, Agrawal et al., (2021), expressed regarding satisfaction is service providers offered ease in terms of payment, safety in transaction, exchange of information and simple registration process over the platform of e-commerce. Conversely, there are some factors including information quality and product delivery service that are hard to distinguish especially in the contexts of supply chain of agri-food. Summing up, to satisfy client satisfaction, then service providers must offer supply chain agri-food with modern service system and platform interface that can direct customers to do transaction with high effective and efficiency results.

Figure.1. Research Model Framework, platform e-commerce agri-food has influenced by aesthetic, responsiveness, ease of use, information quality. This framework, perceived service quality mediated satisfaction and the other variables.

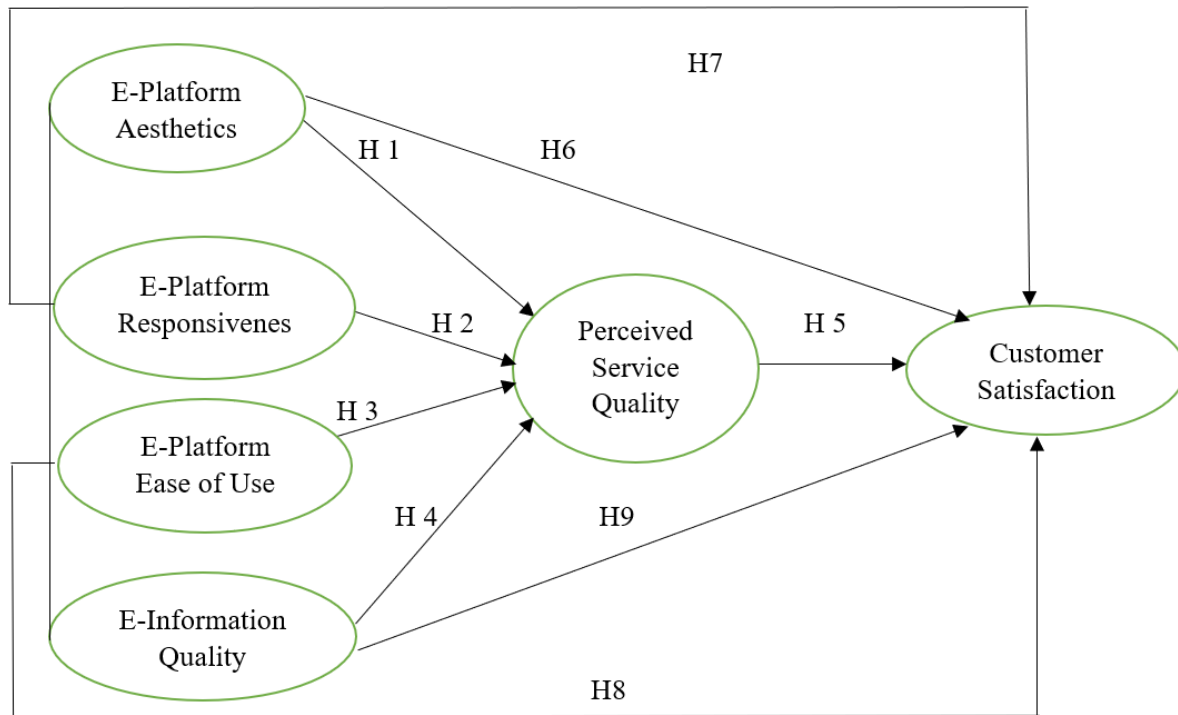


Figure 1. Research Framework

III. METHODOLOGY

Data

The pilot study model was used to find out the use of electronic service quality including aesthetic, responsiveness, ease of use, information quality by society since COVID-19 in JABODETABEK area. In determining the topic of pilot study, the authors have wide options to choose participants who regularly access internet of things (IOT), website, platform e-commerce during online purchase especially for fresh product. Majority of respondents regularly do online transaction who live in Jakarta, Depok, Bogor, Tangerang and Bekasi. The output of respondent results has matched the requirements. The method of pilot study used a quantitative approach.

The exploration data were gathered using an online survey questionnaire. The population in our study consisted clients who understand and know how to utilize website and platform e-commerce agri-food developed by service providers include sayurbox, etenee, kecipir, happy fresh and other similar online platform in Jakarta. The method of choosing respondent selection of clients who ñ utilize various platform e-commerce agri-food, so that users will give right answer to the questions that have been created in advance. According to Hair et al., (2019) the establishment of the sample is mandatory in terms of confirming that the facts of data collected by the researcher is authentic, reliable and represent special characteristic of the communities. In consistent with this, Sekaran & Bougie, (2016); Sugiyono, (2018), suggested that respondents is an essential part in exploration and is the whole process of observation that will be explored.

Analyze procedure

This pilot study implemented a quantitative approach. The study data were gathered utilizing an online survey with purposive sampling technique. Specified research on platform e-commerce agri-food is still bounded, focus only those who have been purchasing online using the website or platform e-commerce were participate in the pilot study. Based on previous study, it's suggested that online respondents can only give the data needed for further research from society with particular characteristics (Ghozali, 2018). The respondents dominantly are those who categorized in millennial generations with ages between 21 years old – 41 years old. A total of 300 people completed questionnaires collected between January 2021 until June 2021. Therefore, only 272 respondents returned the questionnaires and the data were valid and utilized in the pilot study. Hence, the valid responses rate of this pilot study is about 90 percent.

IV. ANALYSIS AND RESULTS

This part displayed the result of pilot study. The interpretation acquired descriptive statistics for the pilot study. Descriptive statistic exploration was implemented by examining into the figure of correlation and covariance between the variable. The data analyzed was done by Lisrel Programmed. The data has already passed the reliability and validity test, and each unit of the indicators achieved valid output. In addition, all variables were reliable.

Table 1

Model	R Square
Perceived Service Quality	0.78

Source: Data processed by Lisrel

Coefficient Determination Value - Dependent Variable of Perceived Service Quality

$$PSQ = 0.37*AS - 0.0056*RES + 0.044*EU + 0.52*IQ,$$

The structural equation displays R². R² (R Square) refers total variation of the predicted variable of perceived service quality, which can be showed by all individual variable including aesthetic, responsiveness, ease of use and information quality. The pilot study data is 78 percent, while the other 22 percent is predicted by other variables which are ruled out from the pilot study. Based on structural equations, it can be seen from path coefficient of aesthetic (AS) variable to perceived service quality (PSQ) is 0.37, responsiveness (RES) to perceived service quality (PSQ) is -0.0056, ease of use (EU) to perceived service quality (PSQ) is 0.044, and information quality (IQ) to perceived service quality (PSQ) is 0.52.

Table 2

Model	R Square
Satisfaction	0.79

Source: Data processed by Lisrel

Coefficient Determination Value - Dependent Variable of Satisfaction

$$SAT = 0.66*PSQ + 0.070*AS - 0.15*RES + 0.54*EU - 0.23*IQ,$$

The structural equation presents R². R² (R Square) determine total variation of the predicted variable of satisfaction, which can be described by all individual variable including aesthetic, responsiveness, ease of use and information quality. The pilot study data is 79 percent, while the rest of 21 percent is estimated by other variables which are ruled out from the pilot study. Based on structural equations can be seen from path coefficient of perceived service quality (PSQ) to satisfaction (SAT) is 0.66, aesthetic (AS) variable to satisfaction (SAT) is 0.70, responsiveness (RES) to satisfaction (SAT) is -0.15, ease of use (EU) to satisfaction (SAT) is 0.54, and information quality (IQ) to satisfaction (SAT) is -0.23.

Table 3. Reliability Test Result

Variable	Construct Reliability (CR)	Average Variance Extracted (AVE)	Decision
Aesthetic	0.84	0.53	Reliable
Responsiveness	0.84	0.57	Reliable
Ease of Use	0.83	0.55	Reliable
Information Quality	0.87	0.58	Reliable
Perceived Service Quality	0.84	0.64	Reliable
Satisfaction	0.86	0.50	Reliable

Source: Data processed by Lisrel

Variable is reliable if it meets the measurement standard requirements. The latent variable of construct refer reliable with minimum value of construct reliability (CR) is ≥ 0.70 and variance extracted (AVE) is ≥ 0.70. The results from table 3 displayed that all variable reliable because the construct reliability (CR) value is greater than 0.70 and average variance extracted (AVE) is larger than 0.50. Variable of aesthetic is 0.84 and AVE is 0.53, both of the results are reliable because it is greater than minimum requirements of 0.70 and 0.50. Variable of responsiveness showed reliable since the result is 0.84 and 0.57. In addition, variable of ease of use presented reliable as the results 0.83 and 0.55. Next, variable of information quality in this pilot study stated reliable as the results is 0.87 and 0.58, and variable of perceived service quality shared valid results as 0.84 and 0.64. Lastly, variable of satisfaction has shown reliable result as 0.86 and 0.50.

Table 4. Hypothesis Test Output

Hypothesis Test		Standardized Solution	t-value	Results
H1	Aesthetic to Perceived Service Quality	0.37	2.94	Significant
H2	Responsiveness to Perceived Service Quality	-0.01	-0.04	Rejected
H3	Ease of Use to Perceived Service Quality	0.04	0.20	Rejected
H4	Information Quality to Perceived Service Quality	0.52	3.43	Significant
H5	Perceived Service Quality to Customer Satisfaction	0.66	4.33	Significant
H6	Aesthetic to Customer Satisfaction	0.07	0.47	Rejected
H7	Responsiveness to Customer Satisfaction	-0.15	-1.06	Rejected
H8	Ease of Use to Customer Satisfaction	0.54	3.34	Significant
H9	Information Quality to Customer Satisfaction	-0.23	-1.21	Rejected

Source: Data processed by Lisrel

Significance level of Aesthetic (AS) t calculation value $2.94 > t$ table 1.967 can be discuss the variable of aesthetic has an importantly effect towards perceived service quality (PSQ). Then H1 is accepted. Significance level from Responsiveness (RES) t calculation value $-0.04 < t$ table 1.967 can be explain the variable of responsiveness has a negative effect towards perceived service quality (PSQ). To sum up, H2 is rejected. Significance level of Ease of Use (EU) t calculation value $0.20 < t$ table 1.967 can be explain the variable of ease of use has less an importantly effect towards perceived service quality (PSQ). Thus, H3 is rejected.

Information quality (IQ) significance level of t calculation value $3.43 > t$ table 1.967. It can be summed up that there is an important effect of Information quality (IQ) towards perceived service quality (PSQ). Thus, H4 is accepted. Table 4 presents significance value from perceived service quality (PSQ) with t calculation value $4.33 > t$ table 1.967. It can be defined the variable of satisfaction has an impact towards Satisfaction (SAT). Therefore, H5 is accepted. Next, significance of point level from Aesthetic (AS) with t calculation value is $0.47 < t$ table 1.967. Then, it discussed that the variable from aesthetic (AS) has low significance results towards Satisfaction (SAT). Therefore, H6 is rejected.

Moreover, significance level t calculation value from responsiveness (RES) is $-1.06 < t$ table 1.967, can be discuss the variable of responsiveness (RES) has a negative effect towards Satisfaction (SAT). To conclude, H7 is rejected. Ease of use significance level value of t calculation is $3.34 > t$ table 1.967. Therefore, it can be concluded that there is a greatly effect of ease of use (EU) towards satisfaction (SAT). Thus, H8 is accepted. Lastly, but not least, significance of point level t calculation value from information quality (IQ) is $-1.21 < t$ table 1.967. TO sum up, it explored that the variable from information quality (IQ) has negative significance result towards satisfaction (SAT). Therefore, H9 is rejected.

V. DISCUSSION

Firstly, the results of Aesthetic significantly affected on perceived service quality to do online shopping for fresh product through platform of e-commerce. The hypothesis supported with majority of respondent characteristic participate in the questionnaire collected from millennial generations, especially woman, where respondents heavily rely to beauty or aesthetic. Moreover, aesthetic of the platform consists of picture display, image resolution, image size, font size, font color which must match with background color will arouse woman emotion to shop fresh product over the platform of e-commerce. Consistently the results of the study supported by the research from Wang et al., (2010) that described aesthetic significantly affected perceived service quality

especially in online industry. Moreover, variable of aesthetic towards satisfaction has not appeared great effect on satisfaction. The results from this research inconsistent with previous research done by Douneva et al., (2014) stated variable of aesthetic significantly provide great effect in escalating satisfaction for customers. To confirm, aesthetic is an important factor in online platform, because it will arouse customers emotion to purchase from the first impression over the platform of e-commerce.

Pilot study of the results of responsiveness has negative effect on perceived service quality in online shopping. Inconsistently with prior research did by Huang et al., (2019) that showed responsiveness has positively impact on perceived service quality in online shopping. In addition, other scholars also discussed responsiveness affected significantly in perceived service quality (Díaz & Koutra, 2013). The result showed that respondent in this study dominantly by millennial generations, where they are digital native, so that they do not require fast responsiveness through platform e-commerce agri-food. Moreover, age of respondents between 21 years old until 31 years old, where their characteristics like to simplify everything, easy to feel satisfied, expect fast response within certain time limits that are set by themselves and importantly, they put more trust and believe in peer to peer comments or reviews ("The Millennial Generation Research Review," 2012). To confirm, responsiveness in the research has negative effect on perceived service quality in platform e-commerce agri-food. In addition, responsiveness has confirmed to have negative results on satisfaction. Consistently with prior researched did at Pakistan. Khan et al., (2020) pointed out responsiveness has insignificant effect towards satisfaction in online shopping. Instantly, author assumed customers from Jakarta and Pakistan have similar characteristics and they are not paying more attention towards responsiveness. Therefore, these respondents tolerant for responsiveness variable provide it by service provider.

Next variable of ease of use has not shown significantly effect towards perceived service quality. Ease of use in transportation industry of e-commerce shown positive impact to perceived service quality (Phuong & Trang, 2018). Other scholars stated ease of use affect perceived service quality in digital and hybrid online service (Vatolkina et al., 2020). Based on pilot study presented t-value 0.20 this means respondents from the study did not care with ease of use. E-commerce platform especially agri-food must fix bugs over the platform, update the platform that can be accessed from every smartphone in order to increase ease of use towards perceived service quality. Moreover, ease of use in this study showed positive relationship with satisfaction. Ease of use is a vital element which creates satisfaction in online platform. This study supported by Chong, (2013) developed that ease of use in e-commerce and online service availability has an impact to satisfaction. This pilot study, respondents felt satisfy because the platform of e-commerce agri-food is easy to use and accessible everywhere, user do not need to worry about service delivery since this is a fresh product, service providers provide time flexibility of delivery service. Thus, the results supported by previous research mentioned ease of use has shown to grow satisfaction during online transaction and it will increase return purchase intention through platform e-commerce (Rita et al., 2019).

Variable of information quality test results showed positive impact to perceived service quality. The pilot study results consistent with previous researched about information quality has greater effect to perceived service quality (Ho & Lee, 2007). Availability of information must be relevant with platform e-commerce agri-food include information about freshness of product, provide benefit for human health. Moreover, when users want to make a decision to purchase online transaction, information quality become an essential element, information must be clear enough to understand, accurate and positive perception to service quality and perceived service quality. Additionally, information quality value with t-calculation -1.21 showed negative result towards satisfaction. Recently, pilot study result inconsistent with prior researched where the research developed that information quality has positive impact to satisfaction in e-commerce travel platform (Sobihah et al., 2015).

Lastly, perceived service quality in this research appeared to have positive relationship with satisfaction. Based on pilot study with t-value 4.33 this means respondent from the study was totally reliant on perceived service quality. During online transaction, perceived service quality is a vital element, when customers feel the quality of service that they received is based on their expectation, then it will increase satisfaction. Meanwhile, service quality has direct relationship towards satisfaction (Xu et al., 2017). This study supported by one scholars stated perceived service quality has significance impact to satisfaction, the researched were done at one of the restaurant at Chittagong, Bangladesh (Hossain, 2019).

VI. CONCLUSION

The study aims to analyze electronic service quality including aesthetic, responsiveness, ease of use, information quality that has indirect effect towards satisfaction in online platform e-commerce agri-food, where perceived service quality acted as mediation in terms of strengthen or weaken relationship between independent variables and dependent variable. Instantly, during the pandemic of COVID-19, government restricted society to go out, it has pushed society to utilize the platform to do online transaction for fresh product including egg, meat, vegetable, fruit, and fish. People gradually started to believe purchase fresh product can be finalized via online

without touch, smell, and see the freshness of product with presence at the location. As long as, service providers give out real time information about the product, focus on aesthetic and perceived service quality that will affect satisfaction.

The output of the evaluation and findings of the pilot study present that aesthetic and information quality in the platform of e-commerce agri-food indicates how the platform positively affected by these elements towards perceived service quality. The other two variables include responsiveness and ease of use have shown negative effect in influencing the perceived service quality over the platform agri-food. In addition, aesthetic, responsiveness and information quality have not reached the extent of results to increase satisfaction to make online purchase for fresh product. Next, the perceived service quality variable and ease of use variable are significant in influencing satisfaction to utilize platform e-commerce agri-food for purchase fresh product. Constantly, all of the variables are experienced by the respondents in this pilot study.

Service providers consider to increase aesthetic and information quality towards satisfaction by providing real time information, image with high resolution, video animation, font color and layout match each other, content, because platform e-commerce with good aesthetic it will arouse buyer emotion to continue to search for product information and at the end users finalized the transaction over the platform. Lastly, but not least, limitation of pilot study only does in JABODETABEK area, for the next researchers can be done at java, Bali and overseas area, to analyze whether the variable results will show the differences or not between recent research. Recent research only explored variable of aesthetic, responsiveness, information quality, ease of use, perceived service quality and satisfaction. Next researchers might want to add more variables including security, online customer delight, privacy into their study especially focused on e-commerce agri-food.

In conclusion, the pilot study explored aesthetic, responsiveness, ease of use, information quality, perceived service quality and satisfaction in online platform e-commerce agri-food. Moreover, online platform of e-commerce agri-food become new business opportunities both for supply chain e-commerce logistic and farmers all over Indonesia. Farmers collaborate with digital platform of agri-food to sell their product directly to consumers with transparency of price and also cut off many tiers of supply chain for farmers distributors. Instantly, the platform e-commerce agri-food becomes a new business and service model that gives rebirth to farmers in a digital service technology innovation.

BIBLIOGRAPHY

- [1]. Abbad, M. M. (2013). E-banking in Jordan. *Behaviour and Information Technology*, 32(7), 681–694. <https://doi.org/10.1080/0144929X.2011.586725>
- [2]. Agrawal, S., Singh, V., & Upadhyay, Y. (2021). Structural model of information quality framework to e-agri supply chain. *Journal of Advances in Management Research, ahead-of-p*(ahead-of-print). <https://doi.org/10.1108/jamr-06-2020-0113>
- [3]. Arguelles, M. J. M., & Busquet, J. M. B. (2016). Perceived service quality and student loyalty in an online university. *International Review of Research in Open and Distance Learning*, 17(4), 264–279.
- [4]. Cai, L., He, X., Dai, Y., & Zhu, K. (2018). Research on B2B2C E-commerce Website Design Based on User Experience. *Journal of Physics: Conference Series*, 1087(6). <https://doi.org/10.1088/1742-6596/1087/6/062043>
- [5]. Chong, A. Y. L. (2013). Mobile commerce usage activities: The roles of demographic and motivation variables. *Technological Forecasting and Social Change*, 80(7), 1350–1359. <https://doi.org/10.1016/j.techfore.2012.12.011>
- [6]. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*, 19(4), 9–30. <https://doi.org/10.1080/07421222.2003.11045748>
- [7]. Díaz, E., & Koutra, C. (2013). Evaluation of the persuasive features of hotel chains websites: A latent class segmentation analysis. *International Journal of Hospitality Management*, 34(1), 338–347. <https://doi.org/10.1016/j.ijhm.2012.11.009>
- [8]. Douneva, M., Thielsch, M. T., & Jaron, R. (2014). Effects of website design on first impressions, aesthetic judgments, and memory performance. *Interacting with Computers*, 28(2016), 552–567.
- [9]. *ECOMMERCE ADOPTION*. (2021). We Are Social. <https://wearesocial.com/blog/2021/01/digital-2021-the-latest-insights-into-the-state-of-digital>
- [10]. Ejdys, J., & Gulc, A. (2020). Trust in courier services and its antecedents as a determinant of perceived service quality and future intention to use courier service. *Sustainability (Switzerland)*, 12(21), 1–19. <https://doi.org/10.3390/su12219088>
- [11]. Forbes, S. J. (2008). The effect of service quality and expectations on customer complaints. *Journal of Industrial Economics*, 56(1), 190–213. <https://doi.org/10.1111/j.1467-6451.2008.00338.x>
- [12]. Fracapane, G., Ivanov, D., Peron, M., Sgarbossa, F., & Strandhagen, J. O. (2020). Increasing flexibility and productivity in Industry 4.0 production networks with autonomous mobile robots and smart intralogistics. *Annals of Operations Research*. <https://doi.org/10.1007/s10479-020-03526-7>
- [13]. George, A., & Kumar, G. S. G. (2014). Impact of service quality dimensions in internet banking on customer satisfaction. *Decision*, 41(1), 73–85. <https://doi.org/10.1007/s40622-014-0028-2>
- [14]. Ghadge, A., Er Kara, M., Moradlou, H., & Goswami, M. (2020). The impact of Industry 4.0 implementation on supply chains. *Journal of Manufacturing Technology Management*, 31(4). <https://doi.org/10.1108/JMTM-10-2019-0368>
- [15]. Ghozali, I. (2018). *Aplikasi Analisa Multivariate dengan Program IBM SPSS 25*. Badan Penerbit Universitas Diponegoro.
- [16]. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (Eight Edit). Cengage.
- [17]. Ho, C. I., & Lee, Y. L. (2007). The development of an e-travel service quality scale. *Tourism Management*, 28(6), 1434–1449. <https://doi.org/10.1016/j.tourman.2006.12.002>
- [18]. Hollensen, S. (2020). Global marketing. In *Pearson Education Limited* (Vol. 113, Issue 9). <https://doi.org/10.1111/j.1478-4408.1997.tb01904.x>
- [19]. Hossain, M. . (2019). Impact of Perceived Service Quality dimensions on Customer Satisfaction in Hospitality Industry. *Global Review of Research in Tourism, Hospitality and Leisure Management (GRRTHLM)*, 5(1), 683–699.
- [20]. Hu, Z., Ding, S., Li, S., Chen, L., & Yang, S. (2019). Adoption intention of fintech services for bank users: An empirical

- examination with an extended technology acceptance model. *Symmetry*, 11(3). <https://doi.org/10.3390/sym11030340>
- [21]. Huang, Z., Luo, Y., & Wang, D. (2019). Online customer service quality of online shopping: evidence from Dangdang.com. *Cluster Computing*, 22(Table 1), 15285–15293. <https://doi.org/10.1007/s10586-018-2565-5>
- [22]. Jeon, M. M., & Jeong, M. (2017). Customers' perceived website service quality and its effects on. *International Journal of Contemporary Hospitality Management*, 29(1), 438–457.
- [23]. Ji-Eun, L., & Minsoo, S. (2011). Factors for the Adoption of Smartphone-based Mobile Banking : On User's Technology Readiness and Expertise. *The Korean Journal of Electronic Commerce*, 16(4), 155–172.
- [24]. Kassim, N., & Asiah Abdullah, nor. (2010). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings: A cross cultural analysis. *Asia Pacific Journal of Marketing and Logistics*, 22(3), 351–371. <https://doi.org/10.1108/13555851011062269>
- [25]. Kesharwani, A., & Bisht, S. S. (2012). The impact of trust and perceived risk on internet banking adoption in India: An extension of technology acceptance model. *International Journal of Bank Marketing*, 30(4), 303–322. <https://doi.org/10.1108/02652321211236923>
- [26]. Khan, A., Zubair, S. S., Khurram, S., & Khan, M. A. (2020). Service Quality Dimensions and Customer Satisfaction in online shopping: A customer's perspective. *Journl of Applied Economics and Business Studies*, 4(1), 53–76. <https://doi.org/10.34260/jaeb.413>
- [27]. Kim, Y., Choi, J., Park, Y., & Yeon, J. (2016). *The Adoption of Mobile Payment Services for "Fintech."* International Journal of Applied Engineering Research. <https://www.semanticscholar.org/paper/The-Adoption-of-Mobile-Payment-Services-for-Kim-Choi/2c968789b918883f6f189943f325b44aa69c9b9c>
- [28]. Kim, Y. J., Park, Y.-J., Choi, J., & Yeon, J. (2015). *An Empirical Study on the Adoption of "Fintech" Service: Focused on Mobile Payment Services.* April, 136–140. <https://doi.org/10.14257/astl.2015.114.26>
- [29]. Lai, Y. H., Huang, H. C., Lu, R. S., & Chang, C. M. (2013). The effects of website trust, perceived ease of use, and perceived usefulness on consumers' online booking intention: Evidence from Taiwan B&B sector. *Life Science Journal*, 10(2), 1516–1523.
- [30]. Liao, Y., Deschamps, F., Loures, E. de F. R., & Ramos, L. F. P. (2017). Past, present and future of Industry 4.0 - a systematic literature review and research agenda proposal. In *International Journal of Production Research* (Vol. 55, Issue 12). <https://doi.org/10.1080/00207543.2017.1308576>
- [31]. Maia, C., Lunardi, G., Longaray, A., & Munhoz, P. (2018). Factors and characteristics that influence consumers' participation in social commerce. *Revista de Gestão*, 25(2), 194–211. <https://doi.org/10.1108/rege-03-2018-031>
- [32]. McCloskey, D. W. (2006). The importance of ease of use, usefulness, and trust to online consumers: An examination of the technology acceptance model with older consumers. *Journal of Organizational and End User Computing*, 18(3), 47–65. <https://doi.org/10.4018/joec.2006070103>
- [33]. Miranville, A. (2020). Annual report 2019. *AIMS Mathematics*, 5(1), i–v. <https://doi.org/10.3934/math.2020i>
- [34]. Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL A Multiple-Item Scale for Assessing Electronic Service Quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- [35]. Pearson, A., Tadisina, S., & Griffin, C. (2012). The Role of E-Service Quality and Information Quality in Creating Perceived Value: Antecedents to Web Site Loyalty. *Information Systems Management*, 29(3), 201–215. <https://doi.org/10.1080/10580530.2012.687311>
- [36]. Phuong, N. N. D., & Trang, T. T. D. (2018). Repurchase Intention: The Effect of Service Quality, System Quality, Information Quality, and Customer Satisfaction as Mediating Role: A PLS Approach of M-Commerce Ride Hailing Service in Vietnam. *Marketing and Branding Research*, 5(2), 78–91. <https://doi.org/10.33844/mbr.2018.60463>
- [37]. Purba, J., Samuel, S., & Budiono, S. (2021). Collaboration of digital payment usage decision in COVID-19 pandemic situation: Evidence from Indonesia. *International Journal of Data and Network Science*, 5(4), 557–568. <https://doi.org/10.5267/j.ijdns.2021.8.012>
- [38]. Rasli, S., Khairi, N., Ayathuray, H., & Sudirman, M. S. (2018). *THE IMPACT OF E-BUSINESS WEBSITE QUALITY ON CUSTOMER SATISFACTION THE IMPACT OF E-BUSINESS WEBSITE QUALITY ON CUSTOMER SATISFACTION View project THE IMPACT OF E-BUSINESS WEBSITE QUALITY ON CUSTOMER SATISFACTION.* December.
- [39]. Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, 5(10), e02690. <https://doi.org/10.1016/j.heliyon.2019.e02690>
- [40]. Saha, P., Nath, A. K., & Salehi-Sangari, E. (2012). Evaluation of government e-tax websites: An information quality and system quality approach. *Transforming Government: People, Process and Policy*, 6(3), 300–321. <https://doi.org/10.1108/17506161211251281>
- [41]. Santos, J. (2003). E-service quality: A model of virtual service quality dimensions. *Managing Service Quality: An International Journal*, 13(3), 233–246. <https://doi.org/10.1108/09604520310476490>
- [42]. Sekaran, U. (2013). *Research Methods for Business.* Salemba Empat.
- [43]. Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill Building Approach* (Seventh). John Wiley & Sons.
- [44]. Sobihah, M., Mohamad, M., Ali, N. A. M., & Wan Ismail, W. Z. (2015). E-commerce service quality on customer satisfaction, belief and loyalty: A proposal. *Mediterranean Journal of Social Sciences*, 6(2), 260–266. <https://doi.org/10.5901/mjss.2015.v6n2p260>
- [45]. Solomon, Mi. R. (2009). Consumer Behavior: Buying, Having, and Being. In *Management Decision* (8th ed, Vol. 47, Issue 5). Pearson Education. <https://doi.org/10.1108/00251740910960169>
- [46]. Strozzi, F., Colicchia, C., Creazza, A., & Noè, C. (2017). Literature review on the 'smart factory' concept using bibliometric tools. In *International Journal of Production Research* (Vol. 55, Issue 22). <https://doi.org/10.1080/00207543.2017.1326643>
- [47]. Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Alfabeta.
- [48]. Tang, C. S., & Veelenturf, L. P. (2019). The strategic role of logistics in the industry 4.0 era. *Transportation Research Part E: Logistics and Transportation Review*, 129. <https://doi.org/10.1016/j.tre.2019.06.004>
- [49]. Thakur, R., & Srivastava, M. (2014). Adoption readiness, personal innovativeness, perceived risk and usage intention across customer groups for mobile payment services in India. *Internet Research*, 24(3), 369–392. <https://doi.org/10.1108/IntR-12-2012-0244>
- [50]. The Millennial Generation Research Review. (2012). In *The U.S. Chamber of Commerce Foundation.* <https://doi.org/10.1177/2158244017697158>
- [51]. Thiebaut, R. (2019). Ai revolution: How data can identify and shape consumer behavior in ecommerce. *Entrepreneurship and Development in the 21st Century.*
- [52]. Vatulkina, N., Gorbashko, E., Kamynina, N., & Fedotkina, O. (2020). E-service quality from attributes to outcomes: The similarity and difference between digital and hybrid services. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 1–21.

- <https://doi.org/10.3390/joitmc6040143>
- [53]. Venkatesh, V., Davis, F. D., & College, S. M. W. (2000). Theoretical Acceptance Extension Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186–204.
- [54]. Wang, Y. J., Hernandez, M. D., & Minor, M. S. (2010). Web aesthetics effects on perceived online service quality and satisfaction in an e-tail environment: The moderating role of purchase task. *Journal of Business Research*, 63(9–10), 935–942. <https://doi.org/10.1016/j.jbusres.2009.01.016>
- [55]. Xu, X., Munson, C. L., & Zeng, S. (2017). The impact of e-service offerings on the demand of online customers. *International Journal of Production Economics*, 184(June 2016), 231–244. <https://doi.org/10.1016/j.ijpe.2016.11.012>
- [56]. Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2000). A Conceptual Framework for Understanding e-Service Quality: Implications for Future Research and Managerial Practice. In *Marketing Science Institute, Cambridge, MA*.

Sylvia Samuel, et. al. "Factors Influence Satisfaction Mediated by Perceived Service Quality on Platform E-Commerce Agri-Food in Jakarta Area." *International Journal of Business and Management Invention (IJBMI)*, vol. 10(11), 2021, pp. 39-49. Journal DOI- 10.35629/8028