

CHAPTER I

INTRODUCTION

1.1 Background

The development of a Business in this Industrial era 4.0 is growing rapidly. this is evidenced by the highly competitive business competition. Businesses are facing increasingly fierce business competition and the pandemic has added to competition in economic conditions which indirectly encourages business owners to always innovate in creating their products.

At this moment, the largest sector that contributes to the income of developing countries such as Indonesia is the SME's sector. Apart from being able to open new jobs for the community, the role of SME's is very large for Indonesia's economic advancement. As per the data provided by the Coordinating Ministry for Economic Affairs of Indonesia, the number reaches 99% of all business units. The contribution of SME's to GDP reaches up tp 60,5% and to employment is 96,9% of the total national employment absorbtion (Kementerian Koordinator Bidang Perekonomian, 2022).



Tahun	2018	2019	2020	2021	2022	2023
Jumlah UMKM (Juta)	64.19	65.47	64	65.46	65	66
Pertumbuhan (%)		1.98%	-2.24%	2.28%	-0,70%	1,52%

*Diolah dari berbagai sumber

Figure 1.1 SME's In Indonesia

In light of the data above, from 2018 to 2023, the Number and Rate of Growth of SME's in Indonesia keeps increasing. Because MSMEs are one of the supporting factors in advancing and prospering the Indonesian people with the aim of reducing poverty due to the large number of available jobs.

In 2020, Indonesia faced the COVID-19 which caused many MSMEs to be unable to develop, and many not even continuing their business. The absence of visitors and Lockdown orders from the government are the main causes of the loss of MSMEs. As indicated by the Chairman of the Indonesian MSME Association (Akumindo) M. Ikhsan Ingratubun, during the pandemic tens of millions of MSMEs are no longer operating. As indicated by data provided by KADIN (Chamber of Commerce and Industry) as many as 30 million MSMEs have gone out of business. In March 2021, a survey carried out by Bank Indonesia revealed that 93.3% of MSMEs saw a decline in sales turnover, while 87.5% were impacted by the COVID-19.

Apart from that, there are also many MSMEs that can develop through online sales, improve the quality of taste, service excellence, product standard, and there exist still many innovations that they do to maintain the stability of their business. The MSMEs that are currently leading the way come from the culinary sector or F&B (Food and Beverage). Among the many forms of business that have sprung up, the food and beverage sector is one that still survives. One of the things that is considered the key to the success of the F&B industry in facing intense competition is continuous innovation or creativity in its products and marketing.

With various innovations, the F&B business can continue to grow. Unique innovation is one of the most important in this field.

Also, keep in mind that the F&B field must start with knowledge of business, food and beverage, and marketing planning. One of the reasons why F&B is the most important sector in MSMEs is because food and beverages are the basic needs of humans throughout their lives. If people used to look for food and drink outside the home as a secondary or tertiary need, it has now become a primary need. Going to cafes, eating at restaurants are absolute necessities that cannot be separated from human life. In this modern era, many people choose restaurants or coffee shops as a place to do various activities, such as meeting, spending time with family or simply meeting friends and colleagues. Therefore, as long as you as a business owner are able to come up with creative and innovative ideas, the F&B sector will never be empty.

Drinking coffee has now become a lifestyle in Indonesia. Not only for the elderly, nowadays many young people make drinking coffee a stress reliever. Activities such as meetings between colleagues are no longer even in the office, but in coffee shops. Not only meetings, students also stop by the Coffeeshop to do their assignments and gather at the Coffeeshop. To support this theory, Kasali (2008) argues that coffee is no longer just a way to get rid of sleepiness, but as a lifestyle and coffee shops have become the most popular places today. Coffee shops can also be used as a place for recreation, a place to relieve stress due to daily activities, a place for meetings with colleagues, gathering with friends because basically Indonesian people like gather. In coffee consuming behavior, not only a cup of

coffee was consumed but the coffee drinker also consumed prestige, social status, elegant and exclusive impression, and modern society lifestyle (Solikatun et al., 2015).

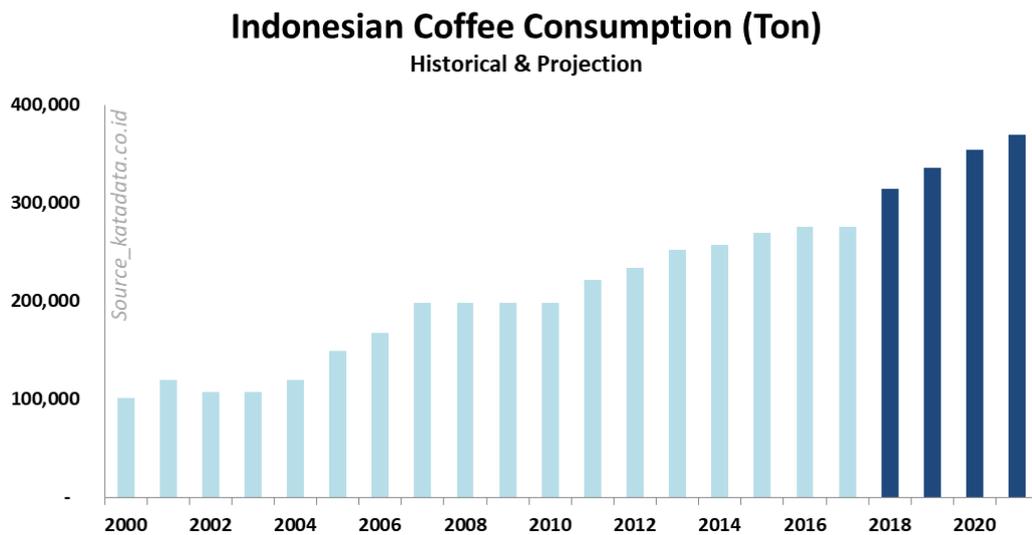


Figure 1.2 Total Coffe Consumption

As indicated by research data by Inge Oktaviani in an article entitled “RTD (Ready to Drink) Coffee: A Fierce Fighting Mission in Indonesia”, since 2010, the growth of coffee consumption in Indonesia has increased by an extraordinary 6-7% annually. Increase from 198 thousand tonnes in 2010 to 276 thousand tonnes in 2017. The significant increase in coffee sales shows that people in Indonesia are very fond of drinking coffee. From the chart above, it is estimated that it will continue to increase with the turn of the year. Because to enjoy coffee, people don't have to go to a trusted Starbucks, but people can also enjoy a cup of coffee and coffee shops on the side of the road to the mall. As the creativity of MSME players, especially those who have coffee shops, coffee shops are no longer considered a seasonal trend. Coffeeshop has become a promising business and opportunity if you want to build a business. High demand from the public and sizable profits from

sales are one of the main reasons why coffee shops are one of the targets for MSME actors.

Coffee shop or what is familiar to us is usually called a cafe, which shifts meaning. Terminologically, the word café comes from French, namely coffee, which means coffee (Oldenburg, 2001). In Indonesia, the word café is then simplified back into a cafe (Herlyana, 2012). The literal meaning refers to (drink) coffee, which is then known as a place to enjoy coffee with various types of other non-alcoholic drinks such as soft drinks and other light snacks.

In Jakarta alone there are 3,000 coffee shops spread across various areas in Jakarta and it is likely that this will continue to grow over time (Kementerian Perindustrian, 2016). Thus, it cannot be denied that Jakarta is one of the regions that has the highest growth rate in increasing the number of coffee shops (Gunawan, 2018). This can also be proven from the high income of Jakarta residents, which encourages them, especially young people, to spend more time at coffee shops.

Wotish Cafe is one of the Coffee Shops located in Jakarta, which is in West Jakarta. This cafe was formed in December 2019 before the Covid-19 virus hit. Since then, Wotish Cafe has struggled to increase sales through online sales from the Gojek, Shopee and Grab applications.

Table 1. 1 Data Sales of Wotish Cafe

Year	Sales Turnover	Sales Change	Growth (%)
2019	17,375,000	-	-
2020	2,150,000	(15,225,000)	(87,62%)
2021	334,204,500	332,054,500	155,44%
2022	352,109,500	17,905,000	1,05%
2023	338,137,600	(13,971,900)	-
2024 Jan-Sept	276,890,200	-	-

If we look from the Wotish Cafe Jakarta Sales Data table above, it has experienced a very severe decline. In December 2019, Wotish Cafe managed to collect Rp. 17,375,500. During the Covid-19 pandemic in 2020, Wotish Cafe only managed to collect Rp. 2,150,000. In 2021 – 2022 Wotish Cafe can collect more than Rp. 300,000,000 and has increased by approximately 8% from 2021 to 2022 and is expected to continue to increase as 2023 progresses where they have collected sales money for 3 months from January to mid-March of IDR 73,830,500.

The goal of all entrepreneurial activity is to maximize earnings so that the company can remain competitive. To be profitable and grow quickly, businesses must respond to their customers' wants and wishes. Creative and new concepts accelerate the company's growth. Marketing concepts are developed alongside unique and creative ideas. To ensure customer preference for our products over competitors, potential buyers evaluate several aspects, including product standards. Therefore, marketing efforts prioritise customer contentment, with a particular focus on key target audiences. (Hayati & Sekartaji, 2015). Items may be presented to the market for assessment, utilisation, ownership, or consumption, aiming to fulfil a desire or requirement. (Firmansyah, 2019). Anything provided to a market to meet a need or desire, such as tangible products, services, events, experiences, individuals, locations, organisations, real estate, knowledge, and concepts, defines product quality. (Kotler & Keller, 2016). Despite the challenge posed by the large number of similar competitors, the company continues to prioritise the quality of its products to guarantee customer satisfaction.

All managerial functions and activities that define the quality policy, goals, and duties and carry them out via the use of quality management instruments are collectively referred to as quality management. The following management-related actions and activities, such as planning, preparing quality guidelines, ensuring and controlling quality, and improving quality, all contribute to maintaining the intended or expected degree of excellence. To achieve long-term objectives within the company, quality management is essential for raising awareness about the standards of company processes. This necessitates the involvement of all team members in the effort. (Gaspersz, 2001).

For instance, implementing a robust quality management system not only boosts employee awareness of process standards but also ensures that everyone in the organisation contributes to meeting long-term business objectives, thus fostering a collective commitment to achieving consistent excellence. (Adhi & Santoso, 2021). Restaurants can retain consumers by creating innovative marketing efforts, keeping up the quality of their products, and satisfying them, all of which foster client loyalty. As a result, in order to bind these clients to the business, a customer satisfaction survey must be carried out in order to ascertain their wants and preferences for the items offered by the firm.

In a business world with intense competition, customer loyalty is needed for business continuity. With regards to coffee shops, teenagers tend to be selective in choosing places to hang out. This shows that people in their teens pay attention to every aspect if they want to go to a coffee shop. Starting from the taste of coffee drinks, non-coffee, food, coffee shop atmosphere, complete facilities and quality of

barista service. Service quality, taste of food and drinks are 2 important things that must be monitored continuously because they are related to customer satisfaction in visiting coffee shops owned by MSME actors (Ramaraj, 2017).

Consumer or buyer satisfaction is a very important thing that must be continuously monitored or paid attention to by MSME actors if they want to maintain their business. To support this theory, Irawan (2021) stated that the customer's feelings in the form of a response after using/using the goods and services that have been consumed. Meanwhile, as indicated by Bahrudin & Zuhro (2018) argue that customer satisfaction is something that is caused by purchasing decisions and experiences in consuming goods or services. If it is associated with MSME businesses engaged in the FNB sector, one can conclude that customer satisfaction is the reaction generated by product buyers after purchasing the food/beverages they have purchased. Getting customer satisfaction manifests in various ways. Two of them are paying attention to product quality and service quality provided by employees of an MSME.

As indicated by (Nasution, 2011), product quality is compatibility in product use to meet customer satisfaction requirements. Meanwhile, as indicated by Kotler & Armstrong (2017) Product quality encompasses all that is presented to the public for use or consumption, aiming to fulfil the desires and requirements of consumers. Based on the understanding of product quality as indicated by experts when it is related to business in the field of FNB, product quality is defined as an offering to the public designed to receive evaluations through comparisons with other similar foods or beverages that have been experienced.

To enhance product quality, MSME operators need to focus on various factors. Among these, the most crucial element is the flavour of the food and beverages offered at Wotish Cafe. For example, if there is too much sugar in the drink and the spices in the food served are not as indicated by the specified recipe, then the taste will change. By changing the taste of food/drinks, visitors will receive a less favorable assessment, resulting in visitors not wanting to revisit the place. The taste of food/drinks is very important to improve product quality. If the taste of the food and drinks at Wotish Cafe matches people's tastes, it will be quite easy for Wotish Cafe to compete with MSMEs that have the same business in the area.

After product quality comes quality service. Service quality is a critical factor influencing customer satisfaction. It involves the thoroughness of services offered by providers to address customer needs and preferences, as well as the precision of service delivery. Service quality is currently an important issue that needs maximum attention in order to survive and remain the customer's choice. "Service quality centres on meeting customer expectations through prompt delivery and addressing their needs and desires effectively" (Tjiptono, 2018:268). As indicated by Kotler & Keller (2016 : 153), service quality, satisfaction and profitability are related when service quality is higher than satisfaction customer.

The quality of service in question is how friendly the baristas or waiters of an MSME are to product buyers. For example, giving congratulations and following it up with a smile when there are customers, saying thank you to customers who have finished ordering food, and saying "thank you for coming" when customers want to go home. Small things like that will increase customer satisfaction because

the calibre of service delivered aligns with customer anticipations. Not only that, accuracy in recording customer orders is also a factor in customer satisfaction.

From some of the opinions above, It can be inferred that service quality refers to a service designed to meet customer satisfaction so that later it has a good impact on producers so that they can provide good quality to customers so that customers will be loyal to their products.

Based on the explanation above, the author is absorbed in making this thesis with the title of **“The Effect of Product Quality and Service Quality on Customer Loyalty Through Customer Satisfaction (Case Study on Product Buyers of Wotish Cafe Jakarta)”**

1.2 Problem Formulation

Base on the title above, the problem outline to be explained is:

1. Is there an effect of Product Quality on Customer Loyalty?
2. Is there an effect of Product Quality on Customer Satisfaction?
3. Is there an effect of Service Quality on Customer Loyalty?
4. Is there any influence of Service Quality on Customer Satisfaction?
5. Is there an effect of Customer Satisfaction on Customer Loyalty?
6. Is there an effect of Product Quality on Customer Loyalty through Customer Satisfaction as an Intervening Variable?
7. Is there any influence of Service Quality on Customer Loyalty through Customer Satisfaction through Intervening Variables?

1.3 Research Objectives

Based on the title above, the purpose of this study is:

1. Analyze the Effect of Product Quality on Customer Loyalty
2. Analyze the Effect of Product Quality on Customer Satisfaction
3. Analyze the Effect of Service Quality on Customer Loyalty
4. Analyze the Effect of Service Quality on Customer Satisfaction
5. Analyze the Effect of Customer Satisfaction on Customer Loyalty
6. Analyze the Effect of Product Quality on Customer Loyalty through Customer Satisfaction as an Intervening Variable
7. Analyze the Effect of Service Quality on Customer Loyalty through Customer Satisfaction as an Intervening Variable.

1.4 Research Benefits

The benefits of this study can be felt by various parties that the author will mention as follows:

1. For Researchers

The benefit for researchers in writing this thesis / essay is that the author can practice what knowledge has been obtained during lecture activities. The author can also have a deeper insight into customer satisfaction

2. For Companies

This research can be felt for the short & long term. With this research, MSME players can learn whether Product Quality and Customer Service affect customer satisfaction. The companies can also revise their activities if there is a mistake in making products and inadequate service quality.

3. For Other Students

With this research, it is hoped that it can be a reference or reference in making their Thesis / Essays that have the same variables in the future.

1.5 Theoretical Framework

1.5.1 Consumer Behaviour

Consumer needs and wants vary widely and can change due to factors that influence consumer behavior. So a marketer must understand consumer behavior so that the marketing activities carried out can be carried out effectively.

Some definitions of consumer behavior are given by experts, including as indicated by Mangkunegara (2002) : "Consumer behavior is an action taken by individuals, groups or organizations involved in the decision analysis to obtain, the economic use of goods or services may be affected by the environment." As indicated by Sumarwan (2003) the notion of consumer behavior is: "Behavior directed by insiders" planning, purchasing and using economic goods and services.

Understanding consumer behavior is not an easy task. but quite difficult and complicated. This is because many variables influence it, and these variables tend to interact independently of each other. However, if this can be done, then businesses that produce goods and services will be able to generate far greater profits than competitors because by understanding consumer behavior, companies can provide satisfaction in a certain way better for consumers. Base on the definitions provided, it can be inferred by the author that consumer behaviour involves the influence of both internal and external factors on individuals' actions.

These factors guide consumers in assessing, choosing, acquiring, and utilising the products and services they desire.

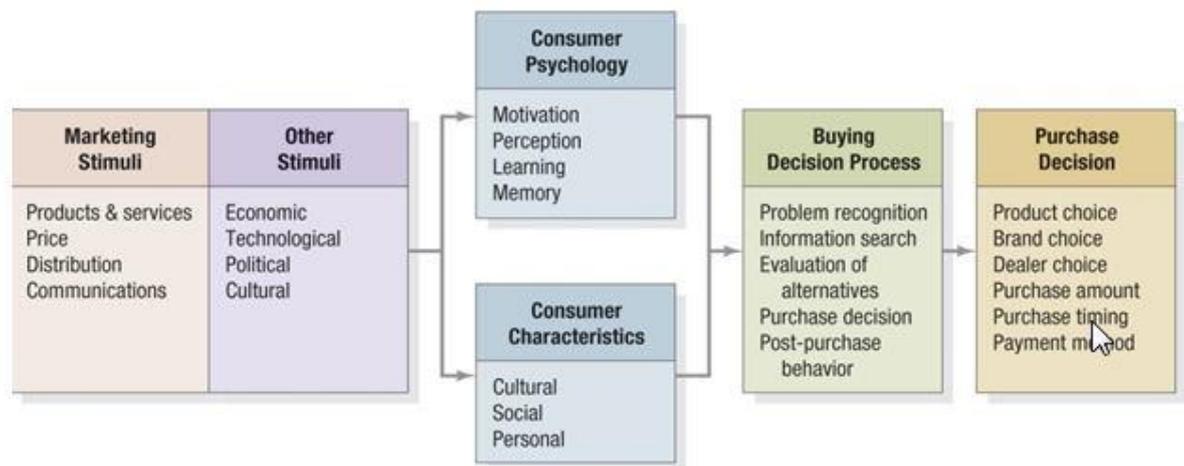


Figure 1. 3 Model of consumer's behaviour

(Source: Kotler and Keller (2006). Marketing management (12 th edition), New Jersey, Pearson Prentice Hall, p. 184)

From the theory from Kotler & Keller (2016) Service quality plays a crucial role in fostering customer loyalty. When customers find personal value and positively evaluate the service, it signifies a strong commitment to the company. Similarly, product quality is integral to customer satisfaction; superior products significantly enhance contentment. The better the quality of the product, the more satisfied the customer is. Increased customer satisfaction, in turn, can lead to higher profits for companies or MSMEs.

1.5.2 Marketing

Marketing is an important component for the running of a company or SME. Because with marketing, a business can benefit. As indicated by the American Marketing Association in Sudaryono (2016 : 64) "Marketing encompasses an organisational function and a series of procedures designed to generate, convey,

and deliver value to customers. It also involves managing relationships between businesses and consumers to benefit both the customers and the producers."

As indicated by Kotler (2016) marketing is a social and managerial process in which a person or group gets what they want and need by creating and exchanging a product. In light of the experts' perspectives outlined, it can be defined that Marketing is an activity to meet consumer demand for goods or services that can benefit the company.

1.5.2.1 Marketing Management Objectives

Marketing management is one of the most important actions that businesses undertake to ensure their survival, expansion, and profit. The marketing process begins well before the creation of goods and does not conclude with sales. For a company to maintain or improve its reputation among consumers, its marketing efforts must also satisfy their expectations. If the business wants to foster a more favourable impression, it is crucial that its marketing strategies resonate positively with its audience. (Dharmmesta & Handoko, 2001). By definition, Marketing Management involves the assessment, strategising, execution, and supervision of initiatives designed to facilitate transactions with target markets, with the aim of attaining organisational objectives. (Kotler, 2016).

Companies that are starting to realize that marketing is a key factor in business success will realize that there are new ways and new philosophies. This new method and philosophy is called the "marketing concept". As a business philosophy, the marketing concept aims to satisfy consumer wants and needs. This

is fundamentally different from the company's previous product-oriented and sales-oriented philosophy.

1.5.3 Marketing Mix

Marketing Mix is a promotional scheme directed at how to sell products as efficiently as possible. Based on the data obtained and collected, either through a computerized process or data collected on a subscription basis, for the smooth running of the sales process. In essence, the marketing mix consists of the elements that each company utilises to meet the demands and desires of consumers. Thus, the marketing mix itself consists of a set of variables that a company can control and use to influence consumer response in its target market.

As indicated by D.W. Foster, the term "marketing mix" encompasses all the marketing and production elements utilised to reach a business's objectives, such as profit, revenue, fixed assets, income, and target market share. The concept of the marketing mix can be implemented in the following manner: (Kotler, 2016):

1. Product: Products offered to the public in the form of food and beverages
2. Price: The price presented to the public aligns with the consumers' purchasing power.
3. Place: Related to a strategic location and in accordance with the target market of a business
4. Promotion: In what way and how can a business promote the goods to be traded.

1.5.4 Product Quality

Products can be interpreted as goods that are traded and can satisfy the wishes or needs of customers. As indicated by Kotler (2016) A product is described as an item that can be introduced to the market to be observed, possessed, used, or consumed, with the aim of fulfilling a want or need. If the product being traded is not in accordance with people's wishes or the taste of the the product is not good, the product will not be sold.

An example of an unpalatable meal is excess seasoning. It will affect the food ordered and served. Buyers tend to like foods that taste balanced, such as sweeteners or seasonings that are not too excessive. If we talk about drinks such as coffee and non-coffee, the feeling of dissatisfaction lies in the taste of the drinks served. Too much sugar or coffee powder and too much sweetener will greatly affect the quality of the product served in the drink

Product quality greatly affects the selling price. As indicated by Tjiptono (2019) price perception is the way consumers interpret and judge the scores of a product based on its cost, influencing their purchasing decisions and overall satisfaction with the perceived worth of the item. As indicated by Schiffman & Kanuk (2014), price perception is how customers evaluate and interpret the scores of a product or service based on its price. This perception influences their willingness to purchase and their overall satisfaction with the product. Factors such as price comparisons, quality expectations, and perceived fairness all contribute to shaping a customer's view of a product's worth.

As indicated by Mullins et al., (2012) the indicators of Product Quality Consist of :

- a) Performance, is the use of the product we buy as the main function of the basic functional characteristics of the product or service. When buying a product, the most important thing is that its performance can affect the main features or operation of the product itself.
- b) Durability (sustainability), which means that the product can be interpreted as durable. The longer it lasts, the longer it will move to other products.
- c) Conformity, not considered a defect if a certain product has a higher specification.
- d) Features are product features designed to add and make consumers interested in the product. Ideas promoted through this feature can usually improve product quality as long as the competition doesn't have it yet. The core scores of a product is a feature dimension that provides additional features to complement product functionality.
- e) Reliability, not at a certain time, the product to work or meet opportunities. Consumers will believe in a product if the product does not have serious defects
- f) Aesthetics (aesthetics) is the shape, taste, smell and visible appearance of the Product.
- g) Perceived quality (quality impression), an object that is used indirectly by consumers so that consumers do not understand the information about the product in question. So the concept of advertising, reputation, price, brand and country of origin that consumers receive from these products.

1.5.5 Service Quality

As indicated by Lovelock (2001) states that the level of excellence expected and for these advantages can meet the expectations of customers or consumers. Meanwhile, as indicated by Zeithaml (1988) service quality is an assessment from customers or buyers of the perceived superiority of consumers for the product as a whole. As indicated by (Wyckof in Tjiptono (2018)) Service quality is the degree of excellence anticipated by customers and the ability of a service provider to meet or exceed these expectations. It encompasses various dimensions, including reliability, responsiveness, assurance, empathy, and tangibles, reflecting how well the service aligns with customer needs and preferences, ultimately influencing overall satisfaction and loyalty.

Service quality is something that can be interpreted as the level of customer satisfaction. Which, it is obtained by comparing other types of services of the same kind. It can be said to be satisfactory if a buyer who wants to buy a product is well received and warmly by Customer Service. It can be said to fail if a Customer Service behaves that should not be done to prospective buyers of the product. Two considerations affect the grade of services (Tjiptono, 2018), namely perceived service and expected service. What is meant by Perceived Service here is if the customer can feel good greetings from Customer Service in a company. Such as providing the best service to buyers. Meanwhile, what is meant by expected Service here is if the company provides quality service that is in accordance with buyer expectations. Such as fast response, explaining in detail if asked by buyers, and

much more. If these 2 things have been carried out properly, then the success of Service Quality in a company.

To ascertain whether the Service Quality delivered by customer service meets expectations, the company employs methods such as issuing surveys to customers and engaging in discussions regarding the quality of service provided. If the overall answer from the buyer leads to positive things, then the company has successfully implemented good Service Quality. If on the contrary, the company should give directions or be given training to cs (customer service) or Barista to match the expectations of the buyers.

1.5.6 Customer Satisfaction

Customer satisfaction is the assessment that a consumer makes of a good or service to ascertain whether or not it has fulfilled their requirements and expectations. (Zeithaml & Bitner (2003), Etemad-Sajadi & Rizzuto (2013), Canny, 2014))

As indicated by Tjiptono (2018), The level of satisfaction that a customer experiences with the performance (or results) they receive in relation to their expectations is known as customer satisfaction. In Tse and Wilton, 1988 (in Tjiptono (2018) customer satisfaction or dissatisfaction is determined by the customer's reaction to assessing the difference between their initial expectations and the actual performance of the product experienced post-use. As indicated by Tjiptono (2018), to achieve and maintain customer satisfaction, service organisations must do four things. The four factors include:

1. Identify who the customer is.

2. Understand customer expectations regarding service quality.
3. Understand customer service quality strategies.
4. Understand customer satisfaction measurement and feedback cycle.

1.5.7 Customer Loyalty

Kotler & Keller (2016) said that, although customers might be tempted to switch due to external influences such as marketing promotions and situational pressures, true loyalty represents a profound commitment to persist in using and endorsing a preferred product or service in the future. Customer loyalty is the desire of customers to stick with a product because of their awareness of it and because they have strong opinions about its quality, satisfaction, and pride in it, which is followed by repeat purchases. As indicated by Cristopher and Lauren in Setiawan (2011), loyalty is characterised by a customer's readiness to consistently engage with a company through repeated purchases and usage of its products and services, as well as willingly endorsing the company's offerings to others.

As indicated by Selnes in Al-Rasyid (2017), When consumers plan to stick with a brand or degree of service they are happy with, they might develop a devoted following. As indicated by Griffin (2005), Loyalty denotes a requirement to fulfill the purchasing action at least twice and within a certain time frame. Customer loyalty, however, is more correlated with actions than with attitudes. Loyal customers demonstrate purchasing behaviour that is marked by consistent, deliberate buying decisions made over time by various decision-making entities. As indicated by Griffin (In Fajarianto et al. (2013)) The advantages a company will gain from having dedicated customers are:

1. Since acquiring new customers tends to be more expensive, marketing expenses can be lowered when a company has loyal clientele.
2. Transaction costs can be reduced.
3. Customer switching costs can be reduced because there are fewer consumption switches.
4. Enhancing cross-selling opportunities can lead to an expansion of the company's market share.
5. By assuming that satisfied customers are also loyal, a company can boost positive word of mouth.
6. Can reduce the cost of errors.

Based on expert viewpoints, it can be inferred that loyalty is a customer's obligation to continue to order again in the future or to continue to buy the selected product or service. Loyal consumers are not measured by how much they buy, but how often they repeat purchases and recommend them to others to buy.

1.6 The Relation Between Variables

1.6.1 The Effect of Product Quality on Customer Satisfaction

In establishing a business, the quality of the product significantly influences customer satisfaction. Quality is the dominant issue in many companies, along with the rapid time, flexibility in meeting consumer demand (products made always in accordance with what consumers ask for) and low selling prices, quality is a key and strategic choice. As stated by Tjiptono (2018), product quality is described as the measures taken to meet or exceed customer expectations.; it encompasses all aspects of a product's life cycle, including people, processes, products, services,

and environment; it is also a dynamic state (e.g. what is considered a current quality may be considered under-qualified in the future). Kotler & Armstrong (2017) assert that a product's capacity to demonstrate its functionality encompasses a variety of features, such as overall durability, accuracy, reliability, ease of use, and repairability.

Quality is important and is one of the competitive factors of excellence. The position of quality has become very important since the competition in the world market has become more intense. If a company achieves higher customer satisfaction, it can lead to substantial profits. This is because an improvement in product quality results in greater satisfaction among buyers.

If a business wants to thrive and be customers' first choice, quality is crucial and needs to be addressed seriously. One of them is the caliber of the goods on offer. Customer satisfaction hinges on the quality of the products provided. The calibre of these products directly influences the level of customer contentment. As indicated by study by Windarti & Ibrahim (2017) Consumers are happy when their expectations are met.

From the theory and the Previous Research above, we can conclude that the following Hypothesis:

H1: It is expected that there will be a positive and significant influence on product quality on customer satisfaction

1.6.2 The Effect of Service Quality on Customer Satisfaction

Customer satisfaction is linked to both positive and negative experiences, stemming from a comparison between the services or products received and the

customers' expectations. When a company's products or services align precisely with what consumers anticipated, they will be highly satisfied. Moreover, if the performance exceeds these expectations, the level of consumer satisfaction will be even greater. (Kotler & Keller, 2016).

Quality service needs to be carried out continuously even though the level of Complaints from buyers or customers is relatively low. If there are customers or buyers who complain, they tend to have a more positive relationship with the company if the quality of service is good. Such as giving a way out that benefits both parties. Service is the key to a company's success. Therefore, the quality of service and quality of service must be the key that must be paid more attention to by the company's management

As indicated by study by Windarti & Ibrahim (2017) service quality is a very important indicator for culinary companies because it will affect the interest in repurchasing the products offered and will offer a sense of contentment to consumers. That sense of satisfaction will affect customers will buy the products offered repeatedly. From the theory and the Previous Research above, we can conclude that the following Hypothesis:

H2: Expected to have a positive and significant influence on service quality on customer satisfaction

1.6.3 The Effect of Product Quality on Customer Loyalty

Product quality is the quality of the product as a whole, able to meet customer needs in accordance with customer expectations. An explanation of the quality of the products presented can be formulated as follows: If a company is able

to offer or supply high quality food, then the company is able to create consumer satisfaction. Customers are usually satisfied with the buying experience of products that are consumed or used. Maintaining customer loyalty to a company's products and influencing customer satisfaction are significantly impacted by the quality of the products offered. Customer satisfaction is an expression of customer feelings, which is described after comparing expectations with what the company/SMEs can offer.

When clients are pleased with the caliber of the products that the business offers, they become loyal to it. Customer loyalty is the willingness to repurchase the goods that the business sells. One of the most crucial elements for the ongoing growth of the business and higher sales is customer loyalty. When food corporations can satisfy every customer they know, they stand to gain a tremendous deal. Customer loyalty to the company's products is bolstered by satisfaction

There is a strong connection between product quality and customer loyalty. When consumers are pleased with the quality of their purchase, they are likely to remain loyal to the product. Reflecting on the findings of a study entitled "the influence of product quality on customer loyalty with customer satisfaction as an intervening variable at cincau station surabaya" Indrawati et al. (2018) indicates that the quality of a product greatly influences customer satisfaction.

From the theory and the Prev Research above, conclude that the following Hypothesis:

H3: Expected to have a positive and significant influence on Product Quality on Customer Loyalty

1.6.4 The Effect of Service Quality on Customer Loyalty

Service quality is crucial in establishing customer loyalty, as those who feel their values are met and hold a positive view of the service tend to show a high degree of commitment to the company. When they receive subpar service or service that falls short of their expectations, customers can become disloyal. As indicated by research by Salamah et al. (2022), service quality has a positive effect on customer retention. As indicated by Hidayat et al. (2024) in a study entitled the influence of service quality on customer loyalty mediated by customer satisfaction states that if an effort provides good service quality, customers will be satisfied.

It was also mentioned by Kotler & Keller (2016) A person's assessment of a product's performance compared to their expectations influences their level of satisfaction or disappointment, a concept referred to as satisfaction. This study demonstrates that service quality has a positive effect on customer loyalty.

From the theory and the Previous Research above, we can conclude that the following Hypothesis:

H4: Service Quality has a positive effect on Customer Loyalty

1.6.5 The Effect of Customer Satisfaction on Customer Loyalty

Essentially, the corporation wants to gain happy clients. Increasing customer satisfaction provides a number of advantages, including strengthening the bond between the business and the client, laying the groundwork for future business transactions and client retention, and generating positive word of mouth for the enterprise. (Tjiptono, 2018). Per findings from Hidayat et al. (2024), customer

satisfaction has a influence on customer loyalty. This is also supported by the research of Ismail et al., (2021) that customer satisfaction has a significant effect on customer loyalty.

From the theory and the Prev Research above, conclude that the following Hypothesis:

H5: Expected to have a positive and significant influence on Customer Satisfaction on Customer Loyalty

1.6.6 The Effect of Product Quality on Customer Loyalty Through Customer Satisfaction

While product quality is a key factor influencing customer loyalty, it is also suggested that other elements, such as customer satisfaction, play a role in affecting loyalty. As indicated by Ng (2021), happiness is the support of individual desires directed at the goal of happiness. Customers demonstrate loyalty to a brand when they are pleased with the products associated with it. Thus, it can be concluded that the impact of product quality on customer loyalty is enhanced when customers are satisfied. Reflecting on the findings of research Anggraeni et al., (2016) entitled influence of product quality on customer satisfaction and loyalty (Survey of Nasi Rawon Customers at Sakinah Restaurant, Pasuruan City) The results shows that product quality has a significant effect on satisfaction customer and customer loyalty, and customer satisfaction has a significant effect on customer loyalty

From the theory and the Prev Research above, we can conclude that the following Hypothesis:

H6: Product quality has a positive effect on customer loyalty through customer satisfaction as an intervening variable

1.6.7 The Effect of Service Quality on Customer Loyalty Through Customer Satisfaction

The success of the business hinges on its capability to meet its customers' needs, since this can boost revenue and market share, encourage recurring business, and vice versa. When a consumer is not happy, they might voice their displeasure in silence or by reporting issues that they are aware of. (Sugiyanto & Kurniasari, 2020);

Moreover, customer satisfaction positively influences itself. The success of a business or MSMEs is also influenced by how employees treat buyers. If the buyer is satisfied with the service provided, it will generate a sense of contentment and subconsciously the buyer will come to the place repeatedly to buy the product.

From the theory and the Prev Research above, conclude that the following Hypothesis:

H7: Expected to have a positive and significant influence on Customer Loyalty Through Customer Satisfaction

1.7 Previous Study

Table 1. 2 Previous Research

No.	Years of Research	Variable	Research Method	Result
1	Gultom, w. s. t., yuliati, l. n., & djohar, s. (2016). pengaruh service quality, product quality dan perceived value terhadap kepuasan dan loyalitas pelanggan industri kayu perhutani. jurnal manajemen dan agribisnis,	Service Quality, Product Quality, Percieved Value, Customer Satisfaction	Quantitative methods using surveys and interviews with business owners.	show the influence of service quality and product quality can significantly increase customer satisfaction

No.	Years of Research	Variable	Research Method	Result
	13(2), 109–121. https://doi.org/10.17358/jma.13.2.109			
2.	Saputra, A. O., Hidayat, W., & Listyorini, S. (2016). pengaruh harga, promosi, dan kualitas pelayanan terhadap kepuasan pelanggan (studi pada bengkel ahas 0002 astra motor siliwangi semarang).	Effect of Price, Promotion, Quality of Service, Customer Satisfaction	Quantitative methods Using sampling from vehicle owners and service users	Based on statistical tests on service quality variables on customer satisfaction, a positive influence was obtained between service quality variables on customer satisfaction
3	Rosanti, DR dan Dewi, S. (2019). analisis pengaruh kualitas pelayanan dan kualitas produk terhadap kepuasan nasabah di pt bank danamon indonesia cabang bintaro tangerang selatan. 8(1).	Service Quality, Product Quality, Customer Satisfaction	Population and sample, Primary and secondary data collection techniques	There is an influence of Service Quality with Customer Satisfaction, There is an influence of Product Quality with Customer Satisfaction, There is an influence of Service Quality and Product Quality together or simultaneously correlated with Customer Satisfaction.
4	Windarti, T., & Ibrahim, M. (2017). pengaruh kualitas produk dan kualitas pelayanan terhadap kepuasan konsumen produk donat madu (studi pada konsumen cv. donat madu cihanjuang±pekanbaru) oleh. in jom fisip (vol. 4, issue 2).	Service Quality, Product Quality, Customer Satisfaction	Data in this study using survey method through questionnaire s filled by consumers. Data were obtained by using multiple regression analysis. This analysis	Product quality and service quality have a positive effect on customer satisfaction

No.	Years of Research	Variable	Research Method	Result
			includes Validity Test, Reliability Test, Multiple Regression Analysis, Hypothesis Testing	
5	Fransisca Anugrahani, Sendhang Nurseto, Published 2017 Pengaruh Kualitas Produk Dan Kualitas Pelayanan Terhadap Loyalitas Pelanggan (Studi Kasus Pada Larissa Aesthetic Center Cabang Salatiga)	Product Quality, Service quality, customer loyalty	The type of research used in this study is explanatory research.	Product quality and service quality have a positive effect on customer loyalty
6	Fauzi, M. R., & Mandala, K. (2019). pengaruh kualitas pelayanan, kualitas produk, dan inovasi produk terhadap kepuasan untuk meningkatkan loyalitas pelanggan. e-jurnal manajemen universitas udayana, 8(11), 6741. https://doi.org/10.24843/ejmunud.2019.v08.i11.p18	Service Quality, Product Quality, Product Innovation, Customer Satisfaction, Customer Loyalty	The sample population uses respondents with a purposive sampling method by distributing questionnaire s	Product Quality and Service Quality Have a Positive Influence on Customer Satisfaction and Customer Loyalty

1.8 Hypothesis

A hypothesis is the temporary answer to the problem that will be from the problem to be studied and still has to be tested for truth. The hypotheses are:

H1: Product Quality has a positive effect on Customer Satisfaction

H2: Service Quality has a positive effect on Customer Satisfaction

H3: Product Quality has a positive effect on Customer Loyalty

H4: Service Quality has a positive effect on Customer Loyalty

H5: Customer Satisfaction has a positive effect on Customer Loyalty

H6: Product quality has a positive effect on customer loyalty through customer satisfaction as an intervening variable

H7: Service Quality Has a Positive Influence on Customer Loyalty Through Customer Satisfaction as an Intervening variable

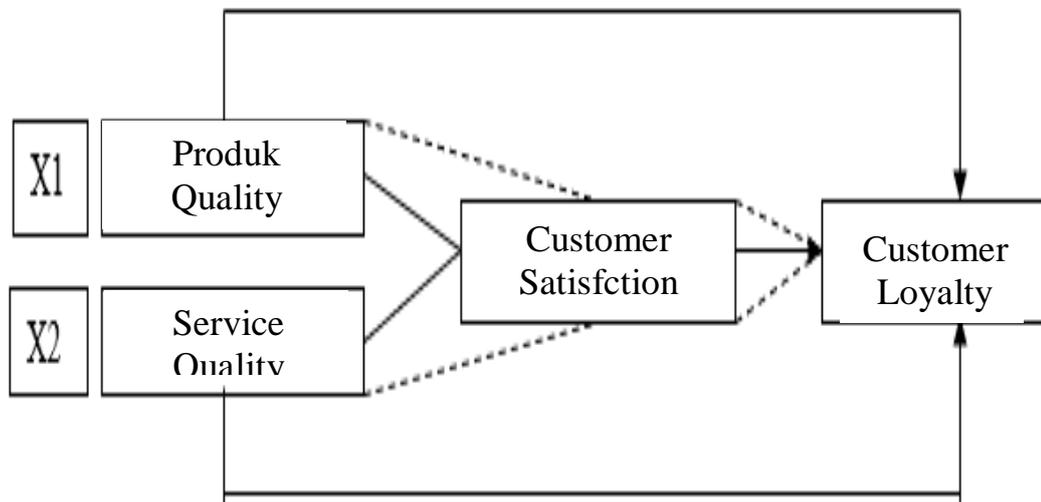


Figure 1.4 Hypothesis

1.9 Conceptual Definition

1.9.1 Product Quality as X1

One tool used by businesses for marketing is product quality. Product or service performance is directly impacted by quality. Product quality is a feature of a good or service that is determined by its capacity to meet the explicit or implicit needs of the user. (Kotler & Armstrong, 2017).

1.9.2 Service Quality as X2

Serving customers quickly, being willing to accommodate their demands, and providing goods or products in an appropriate manner are all components of providing quality service. \ (Kotler (2016)

Customer happiness is positively correlated with service quality, and profitability is positively correlated with service quality. (Kotler & Keller, 2016)

1.9.3 Customer Satisfaction as Z

As indicated by Kotler & Keller (2016), Consumer satisfaction reflects the degree to which an individual evaluates the disparity between the performance of the products or services they received and their expectations. As indicated by Tjiptono (2018), consumer satisfaction occurs after a purchase when the evaluation of the chosen product or service meets or surpasses the expectations held prior to the purchase.

1.9.4 Customer Loyalty as Y

Kolonio & Soepono (2019) loyalty is a process that culminates in satisfaction, which in turn influences the traits and experiences that can affect both customer loyalty and their behavioural intentions. As indicated by Oliver (2014) and Kolonio & Soepono (2019), customer loyalty or customer loyalty is an obligation. Customers hope to buy or present something. Consistently purchasing products, whether goods or services leads to repeated purchases with the same character even though the customer receives Situational influence or market competitors on brand changes.

1.10 Operational Definitions

Operational definition is an explanation of research that will be discussed and used to provide an operational understanding in a study.

1.10.1 Product Quality

Product quality as indicated by Kotler & Armstrong (2017) suggests that there are two dimensions that affect product quality, namely the level, namely in developing a product it is necessary to be more careful in choosing the quality level so that the product can easily be targeted in a competitive and competitive market. Then there is the aspect of consistency, namely high product standards and guaranteed quality to ensure the consistency of the highest quality products. As indicated by Mullins et al. (2012) the indicators of Product Quality Consist of :

- a) Performance, is the use of the product we buy as the main function of the basic functional characteristics of the product or service. When buying a product, the most important thing is that its performance can affect the main features or operation of the product itself.
- b) Durability (sustainability), which means that the product can be interpreted as durable. The longer it lasts, the longer it will move to other products.
- c) Conformity, not considered a defect if a certain product has a higher specification.
- d) Features are product features designed to add and make consumers interested in the product. Ideas promoted through this feature can usually improve product quality as long as the competition doesn't have it yet. The core scores

of a product is a feature dimension that provides additional features to complement product functionality.

- e) Reliability, not at a certain time, the product to work or meet opportunities.

Consumers will believe in a product if the product does not have serious defects

- f) Aesthetics (aesthetics) is the shape, taste, smell and visible appearance of the Product.

- g) Perceived quality (quality impression), an object that is used indirectly by consumers so that consumers do not understand the information about the product in question. So the concept of advertising, reputation, price, brand and country of origin that consumers receive from these products.

1.10.2 Service Quality

Service quality, as defined by Kotler (2016) refers to any action or performance that is fundamentally intangible and doesn't require ownership rights and can be rendered by one person to another. Simply put, comparing the services that customers use and receive can also be used to represent the quality of the services they receive. The quality of a company's service is gauged by the level of satisfaction or dissatisfaction experienced by customers with the services they obtain from it.

As indicated by Tjiptono (2018) the 5 Indicators of service quality can be seen from:

- a) Reliability. Is the capacity to accurately and dependably provide the promised services.

- b) Responsiveness. Is the readiness to assist customers by offering prompt and accurate service.
- c) Assurance. That includes the capacity to win over trust and desire as well as knowledge, skill, and personal kindness or civility
- d) Empathy (Empathy). It is continuing to give each customer's demands individualized or personal attention.
- e) Tangible (Direct evidence). That encompasses physical amenities, tools or apparatus, costs, and personal presentation and written communications.

1.10.3 Customer Satisfaction

Customer Satisfaction Oliver in Kotler & Keller (2016) define satisfaction as a sense of contentment or disappointment that emerges after assessing how a product's performance aligns with one's expectations. A similar understanding is also conveyed by Kotler & Armstrong (2017) It claims that expectations and the impression one gets of one's performance determine how satisfied one is. They experience three different levels of satisfaction: exceeding expectations, meeting expectations, and unsatisfied if performance falls short of expectations.

As indicated by Irawan (2003) mentioned factors or indicators of consumer satisfaction used in this study:

- a) Feelings of satisfaction, an expression of consumer satisfaction when the service and products received from the seller of goods or services is good.
- b) Meet consumer expectations after using the product, whether the quality of the product or service is reasonable or not, so that consumer expectations are met.

- c) Always buy products, namely consumers always use or visit and try products to be purchased to meet consumer expectations.

1.10.4 Customer Loyalty

As indicated by Maryanto & Kaihatu (2021), Loyalty is a resolute pledge to keep buying a forthcoming good or service. As indicated by this viewpoint, loyalty is the strong resolve to stick with a chosen product or service going forward, despite external factors like promotions or events that could persuade customers to go elsewhere. This is in accordance with Kotler & Keller (2016) to other products and services. In other terms, customer loyalty refers to an individual who remains dedicated to repeatedly buying a product or service over an extended period and is reluctant to switch to offerings from another company.

As indicated by Maryanto & Kaihatu (2021), there are four indicators of customer loyalty.

- a) Regularly purchase products and services from companies of your choice.
- b) Purchase a different type of product or service from your chosen company than you purchased previously (obtain a different product or service line).
- c) Advocate for others to purchase products or services from the company you are affiliated with (refer others).
- d) Keep buying products and services from the same location and avoid being tempted by products and services from other locations (showing that you will not give in to the temptation of competition).

1.11 Research Methods

Definition Of Research method is a step owned and carried out by researchers in order to gather information or data and analyse the information that has been collected. As indicated by Darmadi (2013) research methods are a scientific way to obtain data with the aim of certain uses. The scientific way means that research activities are based on scientific characteristics, namely rational, empirical, and systematic. From the explanation provided, it can be inferred that a research method is a systematic approach used to acquire data for a defined objective and application.

1.11.1 Research Method

The research method that will be used in this study will use explanatory research. Explanatory research is used when researchers want to see if there is a correlation between 2 or more variables to be studied. Before that, the researcher must make a hypothesis as an assumption to explain all the variables to be explained.

1.11.2 Population and Sample

1.11.2.1 Population

Population is the area that the researcher wants to study. Opinion from Sugiyono (2019) Population refers to the entire group of individuals or items that are the subject of a study or analysis. It includes every member of the group from which data is to be collected and analysed. This opinion becomes a reference for the author to determine the population. Questionnaire will be given to people who

have visited Wotish Cafe already understand how to answer the questionnaire that will be given

1.11.2.2 Sample

The sample is the part of the population that wants to be studied. As indicated by Sugiyono (2019) The sample is a subset of the population selected for analysis, intended to represent the larger group and provide insights or data applicable to the entire populations. The sample taken in this study was 100 respondents of people who had purchased Wotish Cafe products namely the foods and beverages. As indicated by Cooper & Emory (1997), the determination of the magnitude of the number of samples in an indefinite population was set at 100 respondents. In this research, the sampling approach employed is non-random sampling and utilises the purposive sampling method, namely the specific sampling technique that is intentional. Additionally, this research employs a random sampling technique in which sample selection is based on chance. Specifically, anyone who encounters the researcher and meets the specified criteria may be included as a sample:

1. Have visited and purchased Wotish Cafe products twice or more in a month
2. Age 17 years or older.
3. Willing to fill out a questionnaire related to the research topic.

1.11.3 Data Types and Source

1.11.3.1 Data Types

The data employed in this study are quantitative data, which are facts that can be directly measured or computed and that take the form of numerically

represented information or justifications. (Sugiyono, 2019). The type of data used is the buyer of the product such as foods and drinks in Wotish Cafe about the influence of product quality and Service Quality.

1.11.3.2 Data Source

1. Primary data

Is a data source derived from data collect. In this study, primary data was carried out by providing a questionnaire that must be filled out to buyers of Wotish Cafe products.

2. Secondary Data

Is a data source that comes from a document or previous research. Searchable through the internet, books and research that has been done before

1.11.4 Measuring Scale

The measurement scale is a reference used to determine the short length of the interval in units of measuring instruments with using a measurement scale, the measuring instrument used will produce quantitative data. After the measurement process that produces quantitative data in the form of these numbers, then a statistical analysis is determined that is proper for utilisation.

This study will use the Interval Scale of each of the variables mentioned. The Interval Scale is a measurement scale that can be used to express the ranks for between levels.

The scores given to measure consumer interest use a Likert Scale, as follows:

- a) For answers that are considered strongly agree are given a score of 5

- b) For answers that are considered agree are given a score of 4
- c) For answers that are considered neutral, they are given a score of 3
- d) For answers that are considered disagree are given a score of 2
- e) For answers that are considered strongly disagree are given a score of 1

Table 1. 3 Likert Scale Measurement

NO	ANSWER	SCORE
1	Strongly Agree	5
2	Agree	4
3	Neutral	3
4	Disagree	2
5	Strongly Disagree	1

1.11.5 Data Collection Technique

In collecting data for this study, Researchers used several techniques to collect data

a) Questionnaire Technique

This method involves gathering data by distributing a questionnaire to respondents, who answer based on the instructions provided in relation to the study.

b) Literature review

This collection technique aims to obtain theories or concepts that are related to the research to be carried out obtained from journals or books.

c) Interview

This method of data collection involves directly accessing the source related to the needed information.

1.11.6 Data Analysis Technique

In general, data analysis techniques are a process for collecting, selecting and transforming data into valid and useful information to facilitate work in solving a problem that is usually encountered by SMEs or companies.

1.11.6.1 Quantitative Technique Analysis

Quantitative data analysis techniques are techniques that process or manage numerical or statistical data. Quantitative data analysis techniques use numerical data as data or numerical data that can be calculated accurately by calculating statistical formulas. Quantitative data comes in the form of surveys, data archives, ratings, etc. Data analysis techniques with quantitative techniques can be performed using statistical calculations through the SPSS application

1.11.6.1.1 Validity Test

Is a method employed to assess the accuracy or validity of a questionnaire. A survey is deemed valid if the questions in the questionnaire accurately reflect the aspects being measured by the instrument. Therefore this validity is used to measure whether the questions in the questionnaire can actually measure what is being measured. Any element can be considered valid if $R_{count} > R_{array}$ (Ghozali, 2016).

- a) Calculated r score exceeds the critical r score, then the content is regarded as valid.
- b) Calculated r score is less than the critical r score, then the content is deemed invalid.

Each question's validity rating is shown in the corrected items \pm the general correlation of each question.

1.11.6.1.2 Reliability Test

Is an instrument for assessing questionnaires that serve as indicators of variables or constructs. A questionnaire is considered authoritative or trustworthy if respondents' responses to the questionnaire are consistent or stable (Ghozali, 2016). SPSS for Windows provides functionality for measuring reliability using the Cronbach alpha statistic test > 0.60 .

This reliability testing method uses analytical techniques developed by Alpha Cronbach. In this reliability test, α is considered reliable if α surpasses 0.6 (Ghozali, 2016). If the coefficient exceeds 0.6, the submitted questionnaire can be used with confidence.

1.11.6.2 Coefficient of Correlation

As indicated by the Investopedia article, a positive relationship exists when the correlation coefficient score exceeds 0, indicating a strong linear association between two distinct variables, X and Y. On the other hand, if the displayed score is less than 0, there is a negative correlation.

The range of possible scores for the correlation coefficient is -1.0 to 1.0. That is, the score should not exceed 1.0 and should not be less than -1.0. A number of -1.0 indicates a completely negative correlation score. 1.0 indicates a perfect positive correlation number.

Correlation coefficient is a measure used to determine how related the movements of two different variables are. Note that the two variables are correlated,

but that doesn't mean one variable causes the other. Correlation coefficient analysis assesses both the direction and strength of the relationship between variables, with positive and negative scores indicating the nature of the relationship and the magnitude reflecting its strength. (Sugiyono, 2019).

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

- r = Correlation Coefficient
- x_1 = the scores of the variable x in the sample
- \bar{x} = the average scores of the variable x
- y_1 = the scores of the variable y in the sample
- \bar{y} = the average scores of the variable y

Table 1. 4 Interval Coefficient of Correlation

Coefficient Intervals	Relationship Levels
0,00 – 0,199	Very Weak
0,20 – 0,399	Weak
0,40 – 0,599	Moderate
0,60 – 0,799	Strong
0,80 – 1,000	Very Strong

1.11.6.3 Coefficient of Determination

Determination analysis quantifies the extent to which changes in the dependent may be explained by the model. There is a 0 and 1 coefficient of determination. A low R2 score indicates a very high ability of the dependent variable. Limited scores near 1 indicate that practically all of the info required to forecast the fluctuation of a dependent is provided by the independent variable. (Ghozali, 2016). This research employs quantitative analysis to ascertain the extent to which independent influence variations in the dependent.

$$\mathbf{KD} = \mathbf{r^2 \times 100\%}$$

KD = Coefficient of Determination

r^2 = Determination

1.11.6.4 Simple Linear Regression

Was used to analyze the linear relationship between the independent variables. Formula:

$$\mathbf{Y} = \mathbf{a} + \mathbf{b_1X_1}$$

Y = Predicted Score

a = Constant

b_1 = Regression Coefficient

x_1 = independent variable score

1.11.6.5 Multiple Linear Regression

Multiple linear regression with several independent and one dependent. Linear regression is often used to analyze the effect of product quality (X1) and service quality (X2) on customer satisfaction (Y)

$$\mathbf{.Y} = \mathbf{a} + \mathbf{b_1X_1} + \mathbf{b_2X_2}$$

Y = Customer Satisfaction Variable

a = Constant

b_1 = Correlation Coefficient x_1 against Y

x_1 = Product Quality Variable

b_2 = Correlation Coefficient x_2 against Y

x_2 = Service Quality

1.11.6.6 Hypothesis Test

A hypothesis is an assumption or assumption about something that is made to explain something that often needs to be verified. The statistical hypothesis is that when formulating a hypothesis there is always a pair between the null (Ho) and the alternative hypothesis (Ha), if one is rejected then the other must be accepted to make a convincing decision that if Ho is rejected. and Ha accepted. Statistical hypotheses are expressed by symbols (Sugiyono, 2019). Hypothesis testing is presented as a statistical method in tables and figures, evaluating the individual impact of independent variables on the dependent variable using the t-test, and examining their combined effect with the F-test.

1.11.6.6.1 t-Test

The t-test is employed to assess the significance of the relationship between independent and the dependent on an individual basis.

$$t = \frac{r\sqrt{n-2}}{1-r^2}$$

t = arithmetic t score or t test

r = correlation coefficient as a comparison score

n = total data size

The t scores of the calculation results is used to determine the results with the following steps:

1. Determine the null hypothesis and alternative hypothesis.
 - Ha: $\beta = 0$ indicates that neither product quality (X1) nor service quality (X2) individually influences the dependent variable, Customer Loyalty (Y).

- $H_a: \beta \neq 0$ signifies that product quality (X1) and service quality (X2) each have an impact on the dependent variable, Customer Loyalty (Y).
2. Determine the confidence level of the interval with a significant $\alpha = 0.05$ or 5% very significant.
 3. Comparing between t count and t table
 - H_0 is rejected and H_a is accepted if t count $>$ t table, means there is effect of product quality (X1) and Service Quality (X2) on the dependent variable is the customer Loyalty (Y).
 - H_0 is accepted and H_a is rejected if t count $<$ t table, meaning there is no effect between product quality (X1) and Service Quality (X2) to the dependent variable, namely customer Loyalty (Y).

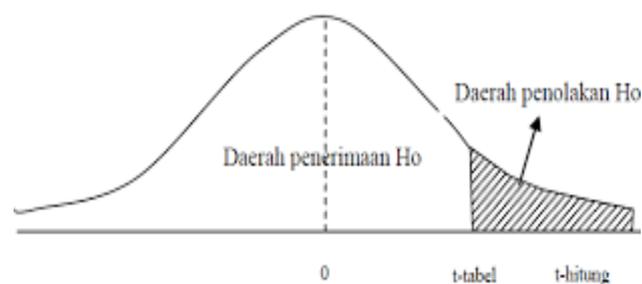


Figure 1.5 The Curve of t-Test

1.11.6.6.2 F-Test

The F test is employed to assess the significance level of the combined effect of the independent on the dependent var.

$$F = \frac{\frac{R^2}{k}}{\frac{(1-R^2)}{(n-k-1)}}$$

Explanation :

R^2 = Multiple Correlation Coefficient

k = Total of Independent Variable

n = Total of Sample

F testing steps are:

1. Determine the null hypothesis and the alternative hypothesis
 - $H_0: \beta_1 = 0$ means that there is no influence between the independent variables individually on the dependent variable
 - $H_a: \beta_1 > 0$ means that there is positive influence between the independent variables individually on the dependent variable
2. Determine the confidence level of the interval with a significant $\alpha = 0.05$ or 5% very significant.
3. Compare the scores of the F statistic with the critical point as indicated by the table
 - H_0 is accepted if $F \text{ count} \leq F \text{ table}$, meaning that the independent variable (X) together do not affect the dependent variable (Y).
 - H_0 is rejected if $F \text{ count} > F \text{ table}$, meaning the independent variable (X) together able to influence the variable (Y).

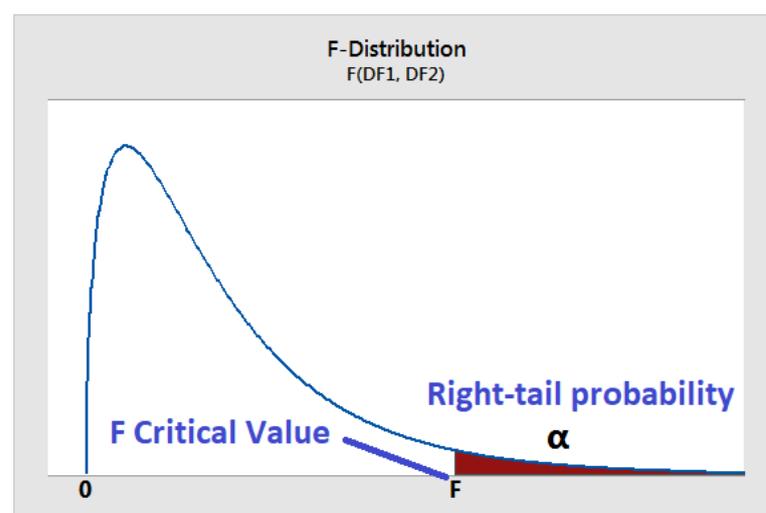


Figure 1.6 The Curve of f-Test

1.11.6.6.3 Sobel Test

The Sobel test is used to determine whether a mediating variable significantly serves as an intermediary in the relationship between other variables. Testing this hypothesis can be done with the procedure developed by Sobel. As indicated by Baron & Kenny (1986) If a variable affects how the independent and dependent variables relate to one another, it is referred to as an intervening variable. The path $Z \rightarrow Y$ (b) or ab is multiplied by the path $X \rightarrow Z$ (a) to get the indirect influence of X on Y through Z. Therefore, the coefficient $ab = (c - c')$, where c is the influence of X on Y in the absence of Z control and c' is the effect of X on Y in the presence of Z control. Sa and Sb stand for the standard error coefficients a and b. In order to aid with Sobel test testing in research, the website provides an online calculator. <https://quantspy.org/sobel/sobel.htm>

In this study there is an intervening variable, namely positive Customer Loyalty variable. The Sobel test evaluates the magnitude of the indirect effect of the independent (X) on the dependent (Y) through the intermediary variable (Z). To carry out this test, the results of previous tests are required, namely simple regression on the relationship of the independent with the intermediate and multiple regression between the independent and intermediate on the dependent variable (Ghozali, 2016). The Formula is:

$$S_{eab} = \sqrt{b^2 S_a^2 + a^2 S_b^2 + S_a^2 S_b^2}$$

Explanation:

S_{eab} = standard error of indirect effect.

S_a = error of coefficient a.

S_b = error of coefficient b.

a = coefficient of influence of independent on intervening variables.

b = coefficient of influence of the intervening on the dependent controlled
by the independent variable.

testing the significance scores of the indirect effect is carried out with the
following formula:

$$t = \frac{ab}{S_{ab}}$$

If the computed t score exceeds the critical t score, it can be inferred that a
mediating effect is present.