

# The Effect of Electronic Service Quality and Perceived Value on Customer Loyalty Through Customer Satisfaction as a Mediating Variable for Participants in BPJamsostek Medan City Branch

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DOI: <https://doi.org/10.52403/ijrr.20220844>

## ABSTRACT

There are two types of BPJamsostek participation: Non-Wage Recipient Participants (PBPU) and Wage Recipient Participants (PPU). The participation turnover of non-wage recipient participants at BPJamsostek Medan City is higher than that of wage recipient participants. Meanwhile, BPJamsostek focuses on the participation of non-wage recipient participants because they do not have a forum that addresses their needs, in contrast to wage recipient participants. There are indications that the cause of the high participation rate of non-wage recipient participants is due to the lack of services received by participants, especially since BPJamsostek is implementing electronic services. This study aims to see how Electronic Service Quality (E-Servqual) and perceived value influence customer loyalty through customer satisfaction as a mediation variable for participants in BPJamsostek Medan City Branch. The research method is descriptive-quantitative with a path analysis approach to answering the research hypothesis. The study's results indicate that perceived value affects customer loyalty either directly or indirectly through customer satisfaction as a moderating variable. Meanwhile, e-service does not affect customer loyalty directly or indirectly through customer satisfaction as a moderating variable.

**Keywords:** E-ServQual, Perceived Value, Customer Satisfaction, Customer Loyalty

## INTRODUCTION

The implementation of the social security system in Indonesia has entered a new era. With the enactment of Law Number 40 of 2004 concerning the National Social Security System and Law Number 24 of 2011 concerning the Social Security Administering Body, on January 1, 2014, PT Jamsostek changed to a Public Legal Entity and changed its name to BPJS Employment, also known as BPJamsostek. BPJamsostek is mandated to administer a workforce social security program, which includes work accident insurance (JKK), death security (JKM), old age security (JHT), pension security (JP), and job loss insurance (JKP). As a public program organizer, customer service is the most important thing, with quality, fast, easy, affordable, and measurable services that can positively impact participant satisfaction, especially with the conditions of the industrial era 4.0, which was caused all aspects of business activities to shift to the service system based on information technology.

The greatest obstacle is that Indonesia and the rest of the globe are affected by the COVID-19 outbreak. Almost every element of life is impacted, not just the health industry. Adopting physical and social distance in various sectors significantly affects individuals' lives, particularly in the

economic sector. This situation affects BPJamsostek's services, particularly the Medan City Branch, which must adjust to the prevailing circumstances. The presence of societal constraints to prevent the spread of the Coronavirus necessitates that services be modified so that they may continue to serve participants, particularly in claims payment. Typically, face-to-face services are gradually being moved online.

In fact, what is happening at this time is the increase in claims for Old Age Security (JHT) at BPJamsostek due to the high number of workers affected by layoffs. As of June 2020, the number of JHT cases across the country had grown by 61.7% to 1.038 million, which is expected to continue. Meanwhile, the number of participants who submitted claims for the Medan City Branch also increased. A significant increase occurred in 2019, 3,221 claims; in 2020, it was 4,060 claims.

In response to these circumstances, BPJamsostek is implementing the LAPAK ASIK (Service Without Physical Contact), which comprises online, offline, and communal channels. Participants who use the internet channel may apply for Old Age Security (JHT) disbursement from anywhere with a smartphone without having to visit the BPJamsostek Office. Participants may also use the claim tracking feature that has been made available to determine the status of the filed claim. Meanwhile, participants who have difficulty accessing LAPAK ASIK online can be served directly at BPJamsostek Branch Offices throughout Indonesia. Offline services are carried out while still prioritizing health protocols. The offline LAPAK ASIK service does not bring together BPJamsostek officers and participants directly. The BPJamsostek branch office provides booths equipped with monitor screens connected to officers via video conference for communication and data verification needs. Each Customer Service Officer (CSO) can serve 4-6 people simultaneously, so this service method is called "One to many." With the One to Many methods, the production ability to

settle claims is increased five times, and physical distancing is maintained. It has been implemented in almost all BPJamsostek branches throughout Indonesia, especially for offices with adequate space. For small offices, it is still carried out in a one-to-one manner while still paying attention to physical distancing. BPJamsostek also provides easy claims for participants through the collective LAPAK ASIK channel. This facility is designed for large and medium-sized businesses that must lay off at least 30% of their workforce. With this collective claim, the company can accommodate claims.

The next challenge faced by BPJamsostek is to maintain the participation of non-wage recipient participants (PBPU). Non-Wage Recipients (PBPU) assume that they do not get direct benefits. This differs from BPJS Health, where they immediately get benefits when sick. Meanwhile, BPJamsostek's claim benefits occur when they leave the company (JHT disbursement), when they have an accident, or when they die. The existence of a positive experience obtained by participants then forms a positive perceived value for BPJamsostek. Perceived value is the customer's perception of the usefulness of a product or service that they have spent compared to the cost they have incurred.

There are problems with electronic services and negative perceived value by non-wage recipient participants (PBPU), indicating the cause of participants' dissatisfaction with BPJamsostek. This dissatisfaction, in the end, made the participants skeptical about continuing to participate in BPJamsostek Medan Kota. The results of research conducted by Kharisma and Hidayat (2018) found that electronic services and perceived value have an effect on customer satisfaction, where this satisfaction forms an attitude of customer loyalty.

Based on the description above, the participation turnover of non-wage recipient participants at BPJamsostek Medan Kota is higher than that of wage recipient participants. Meanwhile, BPJamsostek focuses on non-wage recipients participants

because they do not have a forum that addresses their needs, in contrast to Wage Recipient Participants. There are indications that the cause of the high participation rate of non-wage recipient participants is due to the lack of services received by participants, especially since BPJamsostek is implementing electronic services. Another reason is that they do not directly benefit from BPJamsostek's participation; this creates a negative perceived value to BPJamsostek, causing them to be disloyal in terms of membership.

The research questions are as follows:

RQ1: Does E-servqual have a direct effect on participants' satisfaction at BPJS Employment in Medan City Branch?

RQ2: Does perceived value have a direct effect on participants' satisfaction at BPJS Employment in Medan City Branch?

RQ3: Does participant satisfaction have a direct effect on participants' loyalty at BPJS Employment in Medan City Branch?

RQ4: Does E-servqual have a direct effect on participants' loyalty at BPJS Employment in Medan City Branch?

RQ5: Does perceived value have a direct effect on participants' loyalty at BPJS Employment in Medan City Branch?

RQ6: Does E-Servqual have an indirect effect through participant satisfaction on participant loyalty at BPJS Employment in Medan City Branch?

RQ7: Does perceived value have an indirect effect through participant satisfaction on participant loyalty at BPJS Employment in Medan City Branch?

Based on the problem formulation that has been described, the research objectives are as follows:

1. In order to know and analyze the effect of E-Servqual directly on participants' satisfaction at BPJS Employment in Medan City Branch.
2. In order to know and analyze the effect of perceived value directly on participants' satisfaction at BPJS Employment in Medan City Branch.
3. In order to know and analyze the direct influence of participant satisfaction on

participants' loyalty at BPJS Employment in Medan City Branch.

4. In order to know and analyze the effect of E-Servqual directly on participants' loyalty at BPJS Employment in the Medan City Branch.
5. In order to know and analyze the influence of perceived value directly on participants' loyalty at BPJS Employment in Medan City Branch.
6. In order to know and analyze the influence of E-Servqual indirectly through participant satisfaction on participants' loyalty at BPJS Employment in Medan City Branch.
7. In order to know and analyze the influence of perceived value indirectly through participant satisfaction on participants' loyalty at BPJS Employment in Medan Kota Branch.

The theoretical contributions of the study might be considered. It is envisaged that it may enhance the service concept, particularly in terms of the quality of electronic services (e-servqual), perceived value, participant loyalty, and participant satisfaction as a mediator. The beneficial practice contribution as extra information and input for BPJamsostek Medan City increases participants' loyalty to non-wage recipient participants. In terms of electronic services and perceived value via participant satisfaction. It is anticipated that the findings of this study will become library knowledge and references for future research on electronic services, perceived value, participant satisfaction, and participant loyalty.

## LITERATURE REVIEW

### E-Service Quality (E-Servqual)

E-Service Quality is a network-based service that extends the functionality of a website (Wu, 2014). Information technology is utilized to ease the shopping, purchasing, and delivery of products and services (Parasuraman & Malhotra, 2002). E-Service Quality has a dimension often known as the E-SERVQUAL dimension. The quality of general e-service indicates how an

organization can satisfy customers' demands via internet capabilities, including its website. According to Parasuraman et al. (2005), the development of E-Service quality as a specific challenge is now seen through the lens that E-Service quality is a determinant of competitive advantage and a factor in companies' long-term performance. According to Zeithaml et al. (2013), electronic quality is the extent to which a website supports shopping, buying, and delivery of products and services effectively and efficiently. In the meantime, according to Colby and Parasuraman (2003), electronic services are comparable to all services conducted over electronic intermediaries (the Internet), including consumer-initiated and controlled transactions. According to Boyer et al. (2002) and Sousa et al. (2006), all internet-delivered interactive services use advanced multimedia, information, and telecommunications technologies. E-Service Quality is determined to be a service innovation generated via an electronic or internet system that attempts to give ease in addressing the demands of participants to provide participant satisfaction in the end.

The following are the E-SERVQUAL dimensions (Zeithaml, 2013): Efficiency is a feature that is used to make it easier for people to use, search for, and to get. This makes it more efficient. Flexible refers to a characteristic used to facilitate customer payments and transactions. System availability is a function used whether the payment or information given is useful to customers. Personal privacy is a function used to provide security for its customers, be it personal data security, transaction security, or guarantees. Responsiveness is a function that makes it easy for customers to get help if they have problems or questions. Compensation is a function of whether the guarantee feature can be used correctly and appropriately. Contact is a function that is used for customers to contact customer service that has been provided.

According to Tjipto (2012), there are four primary features of services. Intangibility

distinguishes services greatly from tangible things. If the item is an object, tool, substance, or thing that can be seen with the five senses, then the service is an abstract act, activity, experience, process, performance, or business. If products may be owned, services are often consumed with no ownership. Services are intangible since they cannot be seen, tasted, smelt, or touched before purchasing and consumption. A customer cannot evaluate service outcomes unless he has personally consumed them.

Variations or heterogeneity denote that the service is variable or heterogeneous since it is a nonstandardized output, meaning that its form, quality, and kind vary greatly based on who, when, and where it is generated. Variations in service quality are caused by three factors: (1) customer collaboration or engagement during service delivery; (2) employee morale or motivation in serving customers; and (3) the company's workload. Inseparability says that things are often produced, sold, and consumed in that order. Although services are often sold first, they are typically created and consumed simultaneously or later. Interaction between service providers and consumers is a unique aspect of the service's marketing. Both impact the results (outcomes) of the service in concern. The efficiency of service workers is a crucial factor in this interaction between service providers and customers. The implication is that the success or failure of the service is contingent upon the organization's capacity to efficiently execute the recruiting and selection process, performance appraisal, remuneration system, training, and employee development.

Perishability means that a service is a perishable commodity; it cannot be stored for future reuse, resale, or return. Service demand is also fluctuating and changing. As a result, service companies often experience difficult problems. Therefore, service companies design strategies to be better at running their business by adjusting supply and demand.

## Perceived Value

According to Rahayu (2015), perceived value is the result or benefits the customer receives with the total cost (including the price paid plus other costs associated with the purchase). The perceived value indicators from Kim et al. (2013) include: (a) using cellular technology is a pleasant experience. (b) The overall rating of my experience using mobile technology is great. (c) Mobile technology represents a good use of my time and money.

Hellier et al. (2013) explain that perceived value is the customer's overall assessment of the service, the customer's assessment of what is received (the benefits provided by the service), and what is provided (the costs or sacrifices in obtaining and utilizing the service). Meanwhile, Woodruff (1997) also explains that perceived value is the result or benefit received by the customer with the total cost (including the price paid plus other costs associated with purchasing an item or service). However, the value seems to be very personal and special and may vary greatly from one customer to another (Zeithaml, 1988). Therefore, perceived value is a personal, subjective judgment (Xu, 2009).

Furthermore, Kotler and Keller (2012) state that customer perceived value is the difference between prospective customers' assessments of all the benefits and costs of an offer and its alternatives. Perceived value is the creation of more value that consumers feel towards the value of a product or service. The functional value (quality/performance value and value of money) is cognitive-based, and emotional and social values are affective-based (Sweeney & Soutar, 2011).

It can be concluded that perceived value is the customer's overall assessment of the usefulness of a product based on the perception of the benefits received and the sacrifices given in the whole buying process, which is very personal, special, and varied. This dimension of perceived value is measured using the PERVAL scale, which consists of functional value

(quality/performance value and value of money) as a cognitive basis. Also, emotional and social values as affective bases have become the basis for evaluating customer ratings of what they have felt towards a good or service.

Yang and Peterson (2004) state that consumer value is the basis for all marketing activities. Kotler (2010) states that perceived customer value is the difference between total customer value and total customer cost. A product or service's total customer cost is the set of sacrifices that consumers expect to make in evaluating, obtaining, and using the product or service.

According to Lai (2004) and Ariningsih (2009), perceived value is a consumer's overall assessment of the benefits of a product based on what they receive and what they provide. The value shows the trade-off (comparison) between the components provided and obtained by consumers. In other words, perceived value is the difference between total consumer value and total consumer cost. As Payne (2010) notes, total consumer value includes service, product, people, and image value. Total consumer costs include monetary, time, energy, and psychic costs. Candra & Bernardo (2012) state that there are four dimensions of value or benefits companies can provide to customers: economic value, functional value, emotional value, and social value.

Sweeney and Soutar (2001) report that the measurement of perceived value uses a scale known as PERVAL (perceived value), which is used to assess consumer perceptions of the value of a product or service. The functional value (quality/performance value) dimension of PERVAL is the usefulness derived from the perceived quality and anticipated performance of a product or service. All of the physical labor done is referred to as "performance." The usefulness derived from the product as a result of short-term and long-term cost reductions is referred to as functional value (the price of money). Price

is the definition of value as perceived brand utility relative to cost, where customer choice of a brand is determined by the perceived balance between the product's price and all of its uses. Emotional value is the utility derived from happy sensations experienced as a consequence of using a product or service. It is the utility derived from the emotional state in which a product or service delivers a result. A product or service has emotional value when it elicits emotions or affective states (Sweeney & Soutar, 2001). Customers' utility from a product's capacity to enhance their social self-concept is referred to as "social value." It refers to the social benefit obtained from a product or service and is associated with social acceptance and self-image enhancement among individuals.

### **Customer Satisfaction**

Customer satisfaction is defined as a person's joyful or dissatisfied feelings after comparing the performance (outcome) of the product under consideration to the expected performance (Kotler, 2005). According to Sumarwan (2003), consumer satisfaction is the result of a comparison between the customer's expectations before the purchase and what the consumer actually receives from the acquired products.

Satisfaction compares expectations and performance (Brilliant & Achyar, 2013). When performance is seen to be less than anticipated, dissatisfaction occurs. When performance meets or surpasses expectations, this results in satisfaction (Kotler et al., 2005; Brilliant & Achyar, 2013). Satisfaction is the extent to which customers' needs, wants, and expectations are satisfied (McCarthy & Perreault, 2002). Every company's capacity to understand, fulfill, and satisfy the demands of its customers is a strategy. Customer satisfaction has emerged as a critical business idea.

According to Hansemark and Albinsson (2004), total customer satisfaction reflects the attitude toward the service provider or

the emotional response to the gap between what consumers anticipate and what they get. According to Bitner and Zeithaml (2003), customer satisfaction is evaluating whether a product or service meets their wants and expectations.

A business's primary objective is to produce satisfied customers. Customer satisfaction may bring various advantages, including a harmonious relationship between the firm and the consumer, a solid foundation for repeat purchases and the development of consumer loyalty, and positive word-of-mouth that helps the company. Consumers will have expectations of how the product should operate (performance expectations); these expectations are quality standards that will be compared to the actual function or quality of the product. The product's function that the consumer perceives is the customer's perception of the product's quality. Consumers consider various criteria (dimensions of service quality and product quality) in evaluating the quality of a product or service.

It may be argued that customer satisfaction is an evaluation of each consumer based on comparing actual and anticipated situations. If the company's product or service satisfies the client's expectations, that customer will be satisfied. Conversely, the consumer will be dissatisfied if the company's product or service falls short of the client's expectations.

Customer satisfaction relies heavily on the customer's perceptions and expectations; thus, it is essential to understand the factors that affect it. Tjiptono (2016) classified customer satisfaction-influencing elements into five categories. Customers care about product quality and will be satisfied if their evaluation findings indicate that the products they use are of high quality. The price relates to products of the same quality, yet selecting a relatively low price will provide the customer with great value. Customers will be satisfied if they get excellent service or service that meets their expectations. The emotional aspect suggests that when a customer uses a certain brand

product, they will feel satisfied and acquire confidence that others respect them. Customers are often satisfied with a product or service if they can receive it without spending extra expenses or wasting time.

Several methods are used to measure and monitor customer satisfaction. The system of complaints and suggestions means that every customer-oriented company needs to provide as many opportunities as possible for its customers to convey their suggestions, opinions, and complaints. The media can be used strategically in suggestion boxes (easily accessible or often passed by consumers), providing comment cards and special hotlines. For example, through the survey, the company will obtain responses and feedback directly from the consumer while providing a positive signal that the company pays attention to the consumer.

Satisfaction may be measured in various ways (Tjiptono, 2006). Directly reported satisfaction indicates that the assessment uses a specific scale and questions. Measuring derived dissatisfaction necessitates asking questions addressing two primary factors: the magnitude of customer expectations for certain attributes and the magnitude they experience. Problem analysis entails gauging consumers who serve as responders and are prompted to articulate two main things. First, the issues they confront are connected to the company's offer.

Second, suggestions for improvement, in importance-performance analysis, measuring respondents are asked to rank various elements (attributes) of the offer based on the degree of importance of each element. In addition, respondents were also asked to rank how well the company's performance was in each attribute. Ghost shopping involves employing several people (ghost shoppers) to act or pretend as potential customers or buyers of a company's or competitor's products. Then the ghost shopper delivers their findings about the strengths and weaknesses of the company's products and competitors based

on their experience purchasing those products. Lost customer analysis: the company tries to contact customers who have stopped buying or switched suppliers. These initiatives seek information about the root causes of problems. This information is useful for companies to take additional policies to increase customer satisfaction and loyalty.

The customer satisfaction dimension used in this research is adopted from previous research (Sarim et al., 2013). The price-to-value relationship is the relationship between the price (cost) issued by BPJamsostek participants and the benefits they receive. Product quality is the only guarantee they have against the claims or financial management of BPJamsostek participants. Responding to problems is the extent to which BPJamsostek is responsive to complaints or questions from BPJamsostek participants.

### **Customer Loyalty**

Customers' loyalty is the ultimate objective of all businesses. However, most businesses are unaware that customer loyalty is built in phases, beginning with the search for new consumers and ending with the formation of profit-generating customer advocates. Customer loyalty plays a vital part in the success of a business, and preserving it is essential to enhancing financial performance and ensuring the company's existence. This is the primary reason a business can attract and maintain customers. Efforts to create loyal consumers need many phases, beginning with identifying prospective customers and ending with acquiring partners.

The definition of loyalty based on recurrent purchase behavior does not adequately capture the complexity of this notion. This prompts scholars to suggest other, more inclusive definitions. Dick and Basu in Santouridis and Trivellas (2009) stated that loyalty consists of behavior and attitude components and demonstrated that loyalty is defined by the strength of the correlation between relative attitude and recurring

subscriptions. Psychological engagement, like, and desire for certain products and services may determine a customer's attitude toward loyalty. Even though there are several definitions and conceptualizations of loyalty, there is widespread agreement that attitudes and actions should be included.

The importance of loyalty has been emphasized because a loyal consumer is worth ten times more than the average consumer, brings much profit for the seller, and is considered one of the important indicators used in measuring the success of marketing strategies (Anderson & Srinivasan, 2003; Yoon & Uysal, 2005; Yang & Tsai, 2007).

The understanding of customer loyalty is not only seen from the transaction or repeat purchase. There are several characteristics or characteristics of a customer that can be considered loyal. (1) Customers who make repeat purchases regularly. (2) Customers who buy other products or services at the same place. (3) Customers who refer others. (4) Customers whom competitors cannot influence to move.

Customer Loyalty is a customer's decision to voluntarily continue to subscribe to a particular company over a long period. Customers will remain loyal as long as they perceive better value when compared to switching to other service providers (Lovelock & Wirtz, 2011).

The dimensions of customer loyalty used in this research are adopted from previous research (see Hakim, 2016). The attitudinal dimension is the customer's intention and preference to buy a specific service or product. The intention to buy or recommend a preference to a company is an important factor in determining business in the future. The more the customer's intention to repurchase or recommend a service company, the greater the indication that the company has a bright business in the future. Attitude dimension indicators include speaking positively about the company/brand and being willing to recommend it to others. The behavioral dimension is an aspect of the customer's

behavior that shows that the customer makes repeat purchases, not because of a forced need. However, more for satisfaction, so they want to make repeat purchases. Behavioral dimension indicators such as willingness to repurchase and repurchase within a certain period have an emotional bond with the product/brand.

### **The effect of e-servqual on customer loyalty**

As a public company that prioritizes customer values, BPJamsostek continues to improve by prioritizing services currently in electronic form. Electronic services aim to facilitate access for everyone, shorten the time, and speed up services. Several studies have shown that E-ServQual can provide customer loyalty, including research conducted by Rifai and Suryani (2016), where they found that E-ServQual proved to be a strong predictor of customer loyalty. Through electronic services, it is expected to reach services evenly for all participants without having to come to the nearest BPJamsostek office. This differs from conventional services, which require participants to visit the nearest branch office.

### **The effect of perceived value on customer loyalty**

BPJamsostek is the agency that administers employment insurance in Indonesia. Until now, the BPJamsostek brand is well known and accepted by the public. Various awards were received by BPJamsostek, including the Indonesia Content Marketing Award (ICMA) category 1st Winner of the Best Content Implementation in the Insurance Category. This shows that the public well receives the BPJamsostek brand. This good image creates a positive perceived value. Septian's (2020) research shows that perceived value can mediate the relationship between service quality and customer loyalty.

### **The effect of e-servqual and perceived value on customer loyalty through customer satisfaction**



It aims to meet the needs or problems participants face through integrated services. BPJamsostek is committed to providing the best service to all participants. With technological advances, BPJamsostek provides services not only physically but also electronically. Electronic services are intended to make it easier for participants to claim benefits so that they can easily get whatever they are entitled to. BPJamsostek aims for the long term and answers the problems of conditions that are not profitable for employees. This positive benefit presents a positive perceived value. The perceived comprehensive service and benefits of the non-wage recipient participant protection program create satisfaction for non-wage recipient participants, which ultimately manifests the loyalty of non-wage recipient participants to remain BPJamsostek participants. Putra and Rahyuda (2018) research found that E-Servqual and perceived value variables affect customer loyalty through customer satisfaction.

#### **The effect of e-servqual and perceived value on customer loyalty through customer satisfaction**

E-Service quality determines not only the success or failure of a firm but also customer loyalty. E-Service Quality may overcome difficulties in evaluating the quality of services offered by a firm because customers will be able to evaluate the quality of services they get. This will affect the loyalty of consumers.

#### **The effect of e-servqual and perceived value on customer loyalty through customer satisfaction**

E-service quality is an electronic-based service used to facilitate the use of products, purchase, and deliver products and services effectively and efficiently (Parasuraman & Malhotra, 2002). E-Service Quality has a dimension commonly referred to as the E-SERVQUAL dimension. There is a statement that perceived value affects

customer loyalty, meaning that there is an increase in perceived value.

#### **The effect of e-servqual on loyalty through participant satisfaction**

The way to obtain participant satisfaction and loyalty is by providing superior electronic service quality (e-servqual). This is supported by Swaid and Wigand (2007). Satisfied customers are more likely to make repeat purchases (Torres Moraga et al., 2008). With the development of e-commerce, the internet has become an alternative for developing, operating, and offering services. The Internet expands market coverage and offers opportunities for companies to increase their market share, reduce operating costs, and develop customer relationships.

#### **The effect of perceived value through participant satisfaction on loyalty.**

According to Lai (2004) and Ariningsih (2009), perceived value means consumers' overall assessment of the product's benefits based on what they receive and provide. The value shows the trade-off (comparison) between the components provided and obtained by consumers. In other words, perceived value is the difference between total consumer value and total consumer cost. According to Payne (2010), total consumer value includes service, product, people, and image value. Total consumer costs include monetary, time, energy, and psychic costs. According to Candra & Bernardo (2012), there are four dimensions of value or benefits that companies can provide to customers: economic value, functional value, emotional value, and social value.

Based on the formulation of the problem and the conceptual framework that the researcher has described, the hypotheses of this research are:

H1: There is a direct and significant effect of E-Servqual on participants' satisfaction at BPJS Employment in Medan City Branch.

H2: There is a direct and significant effect of perceived value on participants' satisfaction at BPJS Employment in Medan City Branch.

H3: There is a direct and significant effect of participant satisfaction on participant loyalty at BPJS Employment in Medan City Branch.

H4: There is a direct and significant effect of E-Servqual on participants' loyalty at BPJS Employment in Medan City Branch.

H5: There is a direct and significant effect of the perceived value on participants' loyalty at BPJS Employment in Medan City Branch.

H6: There is a significant indirect effect of E-Servqual through participant satisfaction on participant loyalty at BPJS Employment in Medan City Branch.

H7: There is a significant indirect effect of perceived value through participant satisfaction on participant loyalty at BPJS Employment in Medan City Branch.

## RESEARCH METHODS

The type of research in this study is descriptive quantitative research, namely research that presents data and information in the form of numbers (Situmorang, 2017). This study's variables include e-service quality, perceived value, customer loyalty, and customer satisfaction. This research was conducted at the BPJamsostek Branch Office, Medan City, North Sumatera - Indonesia.

### Operationalization of Variables

E-Service quality (X1) is an electronic or internet-based service that attempts to ease the process of addressing participant demands (both information needs and the need to make claims) so that participants may be satisfied. Perceived value (X2) compares the value issued by the participant and the services or benefits that BPJamsostek members will get, including direct and indirect advantages. Customer satisfaction (Z) refers to a consumer's satisfaction after purchasing a product or

service from BPJamsostek. These emotions result from comparing expectations about the product or service to reality. Customer loyalty (Y) is a worker's commitment to remain a participant in BPJamsostek for an extended and uninterrupted length of time as long as the individual is still working.

### Population and Sample

The population is a full set of items, which are often persons, objects, transactions, or events that we want to analyze as research objects (Kuncoro, 2013). The participants in this research were all non-wage recipient participants from the BPJamsostek Medan City Branch. According to Sugiyono (2012), the sample is a subset of the population in terms of size and characteristics. Participants who submitted claims at the BPJamsostek Medan City Branch served as the study's sample criteria. According to Sugiyono (2012), accidental sampling is the practice of randomly selecting respondents; anyone who meets a researcher can be used as a sample. Suppose the person who happens to be met is suitable as a data source, with the main criteria being participants who claim to withdraw the number of measurements. Suppose the actual population size is undetermined or accidental sampling. In that case, a strategy or calculation based on Malhotra's (2006) concept is utilized, which must be at least four or five times the number of question items. The overall number of questions in this survey was 31; hence the total number of samples gathered in this study was 155 BPJamsostek Medan City participants.

### Sources of Data and Data Collection Methods

According to Situmorang (2017), the type of data carried out by the research is primary data, i.e., data collected directly from the object of research, in this case, BPJamsostek Medan City Branch. Secondary data was obtained through research journal articles and scientific books. Data collection methods in this study were: questionnaires, interviews, and documentation studies. In

this study, the authors used a Likert point scale. The data analysis techniques used to test the hypothesis in this study are descriptive analysis and PLS (Partial Least Square) analysis. The descriptive analysis provides an overview or description of each variable seen from the average value (mean), standard deviation, maximum and minimum (Ghozali, 2013). Partial Least Squares (PLS) analysis is a multivariate statistical technique that compares multiple dependents and independent variables (Abdillah & Jogiyanto, 2015). PLS does not assume a certain distribution to estimate parameters and predict causality. Therefore, parametric techniques to test the significance of the parameters are not needed because this model is nonparametric. The data analysis of this research used Structural Equation Modeling (SEM) with Smart Partial Least Squares (SmartPLS) software. PLS model evaluation is done by evaluating both the outer and inner models. The outer model is a measurement model to predict the relationship between the estimated indicator or parameter and its latent variables.

The inner model is a structural model that predicts the causality relationship between latent variables. Research models use multidimensional constructs, namely constructs formed from dimensional constructs. Moreover, for indicators that form latent dimensional constructs, then

### Structural Equation Model (SEM) Path Equation

The Structural Equation is obtained from the Path Analysis Chart as shown in Figure 1 below:

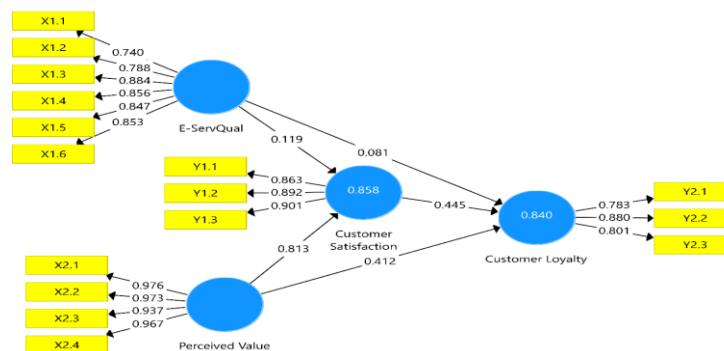


Figure 1: Research Path Analysis Chart

testing or analysis is carried out at two levels, analysis on First Order Constructs or Lower Order Constructs (latent dimensional constructs that are reflected or formed by their indicators) and analysis on Second Order Constructs or Higher Order Constructs (constructs that are reflected or formed by latent construct dimensions).

## RESULTS

### Characteristics of Respondents

Table 1: Characteristics of Respondents

Characteristic	Frequency	Percentage
<b>Occupation group</b>		
Trader	106	68.4
Farmer	31	20
Professional	18	11.6
Amount	155	100.0
<b>Education</b>		
Primary school	22	14.10
Junior school	38	24.52
High school	70	45.16
Diploma	17	10.97
Bachelor	8	5.16
Amount	155	100.0
<b>Age range</b>		
18-25 years	43	27.74
26-40 years	49	31.61
Above 46 years	63	40.65
Amount	155	100.0
<b>Partnership duration</b>		
0-2 years	108	69.68
2-4 years	34	21.94
Above four years	13	8.39
Amount	155	100.0

### Descriptive Analysis

Table 2: Recapitulation of Research Variable Descriptions

Variables	Mean	Category
E-ServQual (X1)	3.992	High
Perceived Value (X2)	4.333	Highest
Customer Satisfaction (Y1)	3.944	High
Customer Loyalty (Y2)	3.815	High

Figure 1 shows directly that the magnitude of the effect of E-ServQual on customer satisfaction is 0.119, while the effect of perceived value on customer satisfaction is 0.813, with an error value of 0.858. The direct equation of the path is as follows:

$$Y = 0,119X1 + 0,813X2 + 0,858$$

Figure 1 indirectly shows the magnitude of the effect of E-Servqual on customer loyalty through customer satisfaction (0.081 X 0.445 = 0.036), while the effect of perceived value on customer loyalty through customer satisfaction is (0.412 X 0.445 = 0.183). The influence of customer satisfaction on customer loyalty is 0.445, with an error value of 0.840.

Path Equation as follows:

$$Z = 0,036X1 + 0,183X2 + 0,445Y + 0,840$$

### Outer Model

Convergent validity testing is performed using the outer loading test on the SmartPLS application (version 3.3.3), with the criterion that a questionnaire item is valid if the correlation coefficient is greater than or equal to 0.70. The validity test revealed that all 12 sub-dimensions with a range of 0.820–0.965 were practicable at the time of this study since their validity values were more than 0.70. These data also suggest that no trimming was discovered during the investigation, indicating that the study should be continued based on its findings. Details are provided in Table 3 below:

**Table 3: Convergent Validity on Research Instruments**

	Customer Loyalty	Customer Satisfaction	E-ServQual	Perceived Value
X1.1			0.740	
X1.2			0.788	
X1.3			0.884	
X1.4			0.856	
X1.5			0.847	
X1.6			0.853	
X2.1				0.976
X2.2				0.973
X2.3				0.937
X2.4				0.967
Y1.1		0.863		
Y1.2		0.892		
Y1.3		0.901		
Y2.1	0.783			
Y2.2	0.880			
Y2.3	0.801			

Table 3 shows that all outer loading coefficients are more than 0.700; hence it can be inferred that the convergent validity of this investigation has been fulfilled. Then, consider discriminant validity as a measurement model with reflection

indicators evaluated by the Average Variance Extracted (AVE) coefficient, where discriminant validity is met if the EVA coefficient is more than 0.600. The EVA coefficient is shown in Table 4:

**Table 4: Discriminant Validity on Research Instruments**

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Customer Loyalty	0.761	0.781	0.862	0.677
Customer Satisfaction	0.862	0.865	0.916	0.784
E-ServQual	0.909	0.915	0.930	0.688
Perceived Value	0.974	0.975	0.981	0.928

Table 4 displays the EVA coefficient for all research instruments with a discriminant validity score greater than 0.600. Next, examine the instrument's reliability using Cronbach's alpha and composite reliability,

where the resultant coefficient must be more than 0.700. Hence, all Cronbach's Alpha coefficients on the research instrument are more than 0.700, indicating that all research instruments meet the measuring instrument's

reliability requirements. All composite reliability coefficients are revealed to be more than 0.700, and it is also determined that the reliability of all research instruments is high.

### Inner Model

The inner model is intended to see the study results following the research hypothesis. This study proved two types of hypotheses: direct and indirect evidence. The proof of its direct effect is shown in Table 5 below:

Table 5: Direct Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P- Values	Decisions
Customer Satisfaction - > Customer Loyalty	0.445	0.455	0.085	5.260	0.000	Accepted
E-ServQual - > Customer Loyalty	0.081	0.077	0.112	0.726	0.468	Rejected
E-ServQual - > Customer Satisfaction	0.119	0.117	0.100	1.194	0.233	Rejected
Perceived Value -> Customer Loyalty	0.412	0.405	0.126	3.272	0.001	Accepted
Perceived Value -> Customer Satisfaction	0.813	0.814	0.097	8.361	0.000	Accepted

Table 5 shows that E-ServQual has no direct effect on customer satisfaction at BPJamsostek Medan City. This is indicated by a significance value of  $0.233 > 0.050$ , and the hypothesis is rejected. Perceived value directly positively and significantly affects customer satisfaction at BPJamsostek Medan City. This is indicated by a significance value of  $0.000 < 0.050$ , and the hypothesis is accepted. Customer satisfaction directly positively and significantly affects customer loyalty at BPJamsostek, Medan City. This is indicated by a significance value of  $0.000 < 0.050$ ,

and the hypothesis is accepted. At BPJamsostek, Medan City, E-ServQual has no direct effect on customer loyalty at BPJamsostek. This is indicated by a significance value of  $0.468 > 0.050$ , and the hypothesis is rejected. Perceived value directly positively and significantly affects customer loyalty at PT. BPJamsostek Medan City. This is indicated by a significance value of  $0.001 < 0.050$ , and the hypothesis is accepted. Meanwhile, Table 6 demonstrates the indirect evidence of the hypothesis between variables.

Table 6: Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Perceived Value -> Customer Satisfaction -> Customer Loyalty	0.362	0.372	0.090	4.035	0.000
E-ServQual -> Customer Satisfaction -> Customer Loyalty	0.053	0.052	0.045	1.166	0.244

The indirect evidence for the hypothesis is shown in Table 6: Through customer

satisfaction, E-servqual does not influence customer loyalty at BPJamsostek Medan

City. As indicated by the significance value of  $0.244 > 0.050$ , the hypothesis is rejected. Perceived value positively and significantly influences customer loyalty at BPJamsostek Medan City via customer satisfaction. This is represented by a significance value of  $0.001 < 0.050$ . The hypothesis is accepted.

### Determination Test

The determination test (R<sup>2</sup>) measures the contribution of the independent latent variable to the latent dependent variable. The closer the value to 1.00, the greater the contribution of the independent latent variable to the latent dependent variable (Sinulingga, 2017).

Table 7: Coefficient of Determination (R<sup>2</sup>)

	R Square	Adjusted R Square
Customer Loyalty	0.840	0.837
Customer Satisfaction	0.858	0.857

Table 7 shows that the coefficient of determination for the latent variable "customer satisfaction" is 0.858 percent. This means that E-ServQual and perceived value make up 85.8% of customer satisfaction at BPJamsostek Medan City. The other 14.2% is made up of factors that were not looked into in this study. The latent variable "customer loyalty" has a determination coefficient of 0.840 or 84.0 percent. This means that in this study, customer loyalty at BPJamsostek Medan City was caused by E-ServQual and perceived value through customer satisfaction 84% of the time. In comparison, the other 16% was caused by variables that were not studied.

## DISCUSSION

According to the study's findings, e-servqual did not influence customer satisfaction. The findings of this research support Satuti and Salisah's (2016) claim that e-servqual does not influence customer satisfaction. This shows that many people have not yet switched to getting services online. Instead, they still use manual services to meet their needs.

According to the findings of this research, perceived value has a positive and significant influence on customer satisfaction. This finding is similar to what Sucahyo and Sugiharto (2017) found. They found that companies try to give their customers value and that good perceived value could lead to brand loyalty.

According to the study's findings, customer satisfaction impacts customer loyalty. This is consistent with the findings of Indra (2017) and Elvita and Suhaeni (2017), who discovered that good customer service makes people more loyal to a product.

According to the study's findings, E-Servqual did not influence customer loyalty. The findings show that good service offered by the firm does not necessarily improve customer loyalty, which is consistent with Dewi's (2020) study showing that satisfied consumers do not guarantee loyalty. However, the findings of this research vary from those of Juhria et al. (2021). They discovered that customer service in digital form is particularly difficult.

According to the findings, the perceived value positively and significantly influenced customer loyalty. Customers will remain loyal if their perceived value is high (Soegoto, 2013). El-adly and Eid (2016) confirm that perceived value has a significant and positive effect on customer loyalty, directly and through customer satisfaction.

According to the study's findings, e-service quality has a direct and significant influence on customer loyalty via customer satisfaction. This outcome contradicts the findings of David's investigation (2018). Elrado et al. (2014) prove that providing the finest service to customers leads to their satisfaction, which motivates them to continue using the product in the long run.

According to the study's findings, perceived value, as measured by customer satisfaction, has a direct and positive influence on customer loyalty. These findings are consistent with the findings of Bernardo and Patricia (2019). They discovered that positive value influences customer

satisfaction with the product, and this satisfaction encourages them to continue using the product.

### **Managerial Implications**

According to the findings, the perceived value variable has an average value of 4.333 and falls into the "Very High" category of the four study variables. This is an input for management to sustain participants' perceived value of BPJamsostek. Non-participant wage recipients have come to trust BPJamsostek with their social security contributions. On the other hand, the customer loyalty variable has the lowest average score of 3,815 in the "High" category. Even if it is already in the top category, BPJamsostek Medan City Branch has shown an issue with participant loyalty to being a participant for a long period. Looking at the questionnaire findings, the first statement item has a lower score than the other statement items in terms of enhancing the service satisfaction of BPJamsostek participants: "I am satisfied with the solutions offered by BPJamsostek." The average score for this statement item is 3.74, which is lower than the 3.81 average scores for the customer satisfaction dimension. BPJamsostek should keep offline services in mind. Most respondents, those who have completed high school, junior high school, and elementary school, are unfamiliar with the usage of digital services.

### **CONCLUSION & SUGGESTIONS**

This research concluded that the E-ServQual variable had no direct or indirect influence on customer loyalty. This suggests that BPJamsostek's electronic services can still not match their expectations, resulting in dissatisfied participants and low membership loyalty. BPJamsostek could think about developing E-ServQual, which is simpler to reach or more widespread in socializing with non-wage recipient participants. In this research, 84 percent of the E-ServQual and Perceived Value variables received the findings of the

determination test via customer satisfaction, leading to the establishment of customer loyalty at BPJamsostek Medan City. In other words, 16% of the other factors were also impacted. This suggests more study into customer loyalty issues and other factors such as customer relationship marketing (CRM), word of mouth, and marketing communication. This study was done in the center of Medan City, where most BPJamsostek participants are wage recipients. Similar studies need to be done in sites on the periphery of metropolitan centers, such as Medan Branch, or in districts where participants are mostly non-wage recipient participants.

According to interviews with selected respondents, there was a lack of socialization by BPJamsostek about the non-wage recipient participation program, and many people/respondents still had difficulties differentiating BPJamsostek items from BPJS Health Products. As a result, the authors suggest that socialization may be carried out more broadly by partnering with community leaders, particularly those in charge of informal community activities. Several respondents also commented that they were aware that they could join the non-wage recipient participant program after becoming wage recipient participants in a company. The authors suggest increasing the number of information services available in the form of posters, billboards, announcements, and other materials posted in the food stocks of informal workers. Even if online services have started to be accommodated, BPJamsostek is urged to retain offline services. Due to the number of informal employees, the benefits of BPJamsostek still need to be proven through a service touch or other direct interaction.

**Acknowledgement:** None

**Conflict of Interest:** None

**Source of Funding:** None

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- How to cite this article: Romi Aji Setiawan, Endang Sulistya Rini, Amlys Syahputra Silalahi. The effect of electronic service quality and perceived value on customer loyalty through customer satisfaction as a mediating variable for participants in BPJamsostek Medan city branch. *International Journal of Research and Review*. 2022; 9(8): 543-559. DOI: <https://doi.org/10.52403/ijrr.20220844>

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