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The Impact of Supply Chain Management in Service Quality Dimension on Patient Perception and Hospital Performance: Switching Cost as a Moderation

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Abstract- In this paper the concept of service quality in supply chain has been investigated in the health system. This article aims to fill the gap in the literature by providing evidence about patients' satisfaction and loyalty regarding the health-care they experienced from Indonesia private hospitals by supply chain strategy. This research was conducted using the data from the consumers who received services from 4 different private hospitals in Surabaya, Indonesia. Core service quality and peripheral service quality (Service Quality dimensions), appraisal emotion and perceived value (Consumer Perception), patient satisfaction, loyalty (Hospital Performance, and switching cost to the hospital) were the variables considered for this study. A path analysis was done on AMOS 23 in order to compute path coefficients, direct and indirect effects of the variables on patients' satisfaction and also loyalty to the hospital. The result found that core service quality impacts patients' satisfaction. The peripheral service quality has no significant effect on the patient's satisfaction. Core service quality and peripheral service quality has a significant effect on appraisal emotion and perceived value. The appraisal emotion and perceived value have an impact on the patient's satisfaction and loyalty. Patients' satisfaction is directly related to patients' loyalty to the hospital.

Keywords- Service Quality Dimension, Patient Perception, Hospital Performance, Switching Cost.

1. Introduction

Relationship of service quality with improved supply chain performance is widely accepted [1-3]. The healthcare sector has been gaining importance due to population growth and the rise in income per capita. The general economic perspective of Indonesia was changed and the number of providing hospitals has increased rapidly. The Indonesia healthcare system was characterized by a strong private sector. Several private hospitals have been established in most of the major cities of Indonesia. According to the data of Health Statistics Yearbook 2018, there are 2,773 hospitals in Indonesia, including public and private hospitals. The number of Public Hospitals grows not as rapidly as that of private hospitals in the last six years. The mean

growth of public hospitals is only 0.4%, while that of private hospitals is 15.3% (Figure 1.). In order to realize universal health coverage, to date as many as 92,244,075 Indonesian are participants in the National Health Insurance (JKN). The trend of JKN membership from 2015 to 2018 has indeed consistently increased towards the target of 95% of Indonesia's total population in 2019 (Ministry of Health, 2018). Due to the fact that health status has increased, the consumers head towards the institutions offering better service.

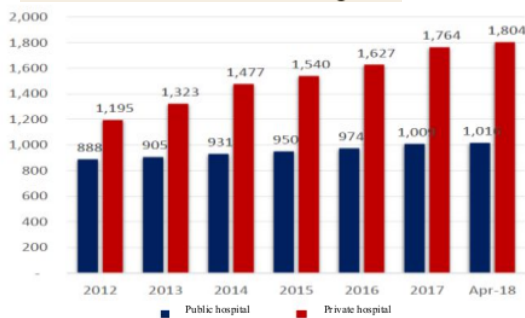


Figure 1. Data on Public and Private Hospitals in Indonesia

The growing use of health-care services has led to growing competition among hospitals. The rising expectations and needs of the community naturally allow health service organizations to pursue higher-quality health services and continue to maintain patient satisfaction and loyalty [34]. Evaluating patient satisfaction and loyalty is an important element that might have a large effect on hospital profits [1],[57]. Thus, hospitals make every effort to identify the strategic factors in that hospitals, if managed well, will ensure survival and success in the future. Of all the possible elements related to their satisfaction and loyalty, the level of core quality service and peripheral quality service are crucial factors for hospitalized patients' satisfaction and loyalty.

The delivery of high-quality service is the key to success in service industries. In the current era of intense competition, monitoring and improving service quality is very important to develop high efficiency and organizational performance [19],[42]. In both the

manufacturing and service industries, quality improvement is a major factor influencing customer satisfaction [36],[47],[57]. Some scholars agree that quality is very important for consumer loyalty [38],[39],[45]. Some health care organizations focus on service quality issues to drive customer satisfaction above experience with service [50]. Evaluating patient satisfaction and loyalty is an important element that might have a large effect on hospital profits and management [57]. Users demand health care services according to their expectations [22],[36]. As expected, when the hospital services could meet the patient's needs, patients have a good perception of that hospital. Hume(2008) [28] states that to provide high-quality services, it is necessary to maintain and implement core service quality and peripheral service quality. The quality of these core services includes doctors, nurses, and medical equipment, while the quality of peripheral services includes patient rooms and food. The higher the quality of services provided by doctors, nurses and medical equipment as well as higher patient loyalty. Because patient loyalty to the hospital can only be achieved by improving the quality of service properly. Additionally, Butcher et al.(2003) [8] point out that factors such as core service quality are important factors. Choi et al. (2018) [12] & Munusamy et al.(2010) [49] find that the quality of peripheral services cannot improve customer satisfaction when the quality of core services can affect sustainable performance in the service industry. Another scholar Macinati (2008) [42] confirms that core service quality as an important factor in health service performance, but there is a lack of a statistically significant relationship between peripheral service quality and performance.

Health care is a complex system because it needs to analyze patient satisfaction - what is assessed by patients [33]. In health-care, patient perceptions are vital to observe the hospital's effectiveness and should be a preference for quality improvement [55]. The patient perception is an important source of information in realizing problems and improving effective plan in hospitals [18]. The patient perception is complicated as they result from emotion appraisal and perceived value [23]. Patient perception is generally defined as an overall perception of a service, the gap between what is received compared to alternatives available to them. These include effective or emotional appraisal with the service [21],[60] suggested that the value of patient perception might be a mediator in service quality to patient satisfaction. In order to ensure future success, being able to provide good health-care service quality is the most significant element [9]. This is confirmed by the result of [48],[53] that a well managed intangible asset will lead SMEs to win the competition and in the end, it will enhance financial performance.

The quality of services perceived by the patient would cause patient satisfaction or dissatisfaction, so satisfaction would arise if the patient had a good perception of the hospital quality services. Patient satisfaction is not the final goal for the hospital. Every effort made by the hospital to satisfy the patient was shown to be willing to go back to the hospital again. Creating a patient intention repurchase is important for the hospital to sustain performance and stable growth of market share [48]. Hajiyan et al. (2017) [24] state that satisfaction has a positive effect on customer loyalty. Customers who are satisfied with the service it receives will form loyalty towards the service. The higher satisfaction is felt, the higher the level of customer loyalty. Han et al. (2014) [25] revealed that switching costs are an important factor influencing customers' decisions to remain with service providers. Switching costs are costs faced by consumers or patients when he wants to move from one hospital to another hospital.

This article aims to fill the gap in the literature by providing evidence about patients' satisfaction and loyalty regarding the health-care they experienced from Indonesia private hospitals.

2. Literature Review and Hypothesis

Supply chain Strategy in Service Quality Dimension of Health-Care

There is a change in the landscape of supply chain management in recent years and satisfaction of each member of the supply chain can be increased only by putting aside the traditional arms-length relationship and by developing closer partnership type arrangements. Service quality in health-care can be described as a process that involves measuring and assessing patient care in such a way as to provide optimal medical service to patients [61]. Parasuraman et al.(1998) [52] defined service quality as the gap between customers' expectations of service and their perception of the service experience. The Gap Model, which was first developed by Parasuraman and his colleagues, and is considered the most eminent work done on the topic [31], and focuses on the differences between consumers' viewpoints and marketers' viewpoints [59], has evoked a revolution [56], and encouraged many researchers to investigate service quality constructs as part of the marketing concept [13]. Quality in healthcare is a complex and nonconsensual concept. The current generation of quality concepts is based on the theory and approaches suggested by [15]; [17]; [20]; and [32].

The theory and practice suggest that the service quality system should be characterized by certain elements. Those elements act as catalysts to improve quality and may be viewed as the core values [43]. Following [40], dimensions of quality service can be seen as the merging of two interrelated categories: core service quality and peripheral service quality. Core service quality is the company's main service in the market and

represents the company's basic ability to increase value (usually measured as hospitals, doctors, nurses, midwives, emergency rooms, and medical devices). Quality of care critically depends on the professionals' individual and teamwork abilities. Consequently, to achieve high-quality services it is important to manage the hospital staff in a defined job scope according to the requirements of their professional culture.

On the one hand, peripheral service quality is a service that supports and facilitates the quality of core services (parking lots, waiting rooms, ticket queues, transportation access, front office, poly, dispensary, patient rooms, and dining menus) [41]. Coordination among units is needed to shift the focus from structure to process and, consequently, to orchestrate services and responsibilities in order to create quality output. Coordination among peripheral departments also can support clinical performance, the presence and the influential role of the peripheral quality both help in giving high-quality service to patients [42].

Service Quality and Hospital Performance

Despite the perceived importance of introducing and implementing service quality, there is still little systematic evidence in the literature on the relationship between core service quality and peripheral quality on hospital performance in health-care [16],[54]. The existing studies applied different approaches, analytical models and measures. With reference to health-care, however, the few existing studies show the impact of service quality on hospital performance is significantly positive [62]. According to the literature, hospital performance should be measured using a multi-dimensional approach. In health-care, hospital performance measures may be divided into three major categories: financial, operational, and outcome. Quality may affect financial performance, namely profitability, by reducing costs and increasing revenues. On the one hand, quality initiatives often lead to process improvement, which results in cost reduction (direct effect on profitability). On the other hand, quality may initiatives may improve clinical output. Output improvement is critical to augment patient satisfaction and loyalty [42].

Outcome measures of performance are also required. The important dimension of outcomes concerns the provider's ability to meet stakeholder expectations. Patient satisfaction and loyalty may be used to measure this area (Li, 1997). Finally, the category of performance relates to patient satisfaction and loyalty. Measuring in this area aims to demonstrate the hospital's ability to create and maintain a productive, engaging, and caring work environment [62]. The hospital should understand the relationship between specific dimensions of quality health-care service, patient satisfaction, and patient loyalty. Patient's satisfaction and loyalty is the key factor that drives when the hospital performance of the service exceeds

expectations [45]. Satisfaction is a post-purchase state of the consumer's mind that mirrors how much the consumer likes or dislikes the service after experiencing it [64]. In the extant literature, there are three conceptualizations of consumer satisfaction: (a) experience, (b) expectation, and (c) overall satisfaction [3].

Patient satisfaction would appear when experiences, expectations, and needs perceived were combined [46]. The experience relates to consumer's responses to the experiences after consumption. The expected relates to the patient's beliefs about what will be received when purchasing the product. The latter relates to the overall satisfaction with a product or service after several purchases and their experience over time, which leads to consumer loyalty. Consumer satisfaction leads to customer loyalty, recommendation and repeat purchase [63].

The consumer who returns several times to buy the service from the same firm is a loyal customer. But customer defection is not the opposite of customer loyalty and vice versa for several reasons like availability or lack of choice. According ref [37], approximately half of the consumers stay with the firm even when their problem is not solved with firm's service. A variety of reasons such as high switching costs, non-availability of truly differentiated alternatives, choice constrained by the location, money and time, and inertia or habit make a customer stay with the firm [6],[7].

Ref [3]; [11]; [26] argue that patient's loyalty can be measured on three components: (a) using the providers again for the same treatment, (b) using the providers again for different treatments, and (c) referring the providers to others. This research shows that service quality, which is measured on these three components, can predict patient loyalty and demonstrates how to measure the service quality on three constructs, namely, (1) doctor, (2) nurse, and (3) medical device. This is premised more on the performance of individuals but not the total system of delivery.

In the healthcare industry, past research on patient satisfaction has also found a linkage between service quality and satisfaction. For example, [2]; [42]; [45]; [50]; show that core service quality had a strong influence on patient's satisfaction. Smith & Swinehart (2001) [58] observed a strong relationship between the quality of product or service and satisfaction of consumers. They found that consumer's perception of quality is an important variable determining the satisfaction level. Similarly, Caruana(2002) [10], based on the study of customers of Malta's banks, found that service quality is an important driver of customer satisfaction. Several scholars agree that quality is critical to consumer's loyalty [39],[45]. Several health-care organizations focus on service-quality issues to drive customer's satisfaction above experience with a service [50]. Evaluating patients' satisfaction and

loyalty is a crucial element that might exert a great effect on the hospital's profit and management [57].

Patient Perception and Switching Cost

In health-care, patient perceptions are vital to observe the hospital's effectiveness and should be a preference for quality improvement [55]. The patient perception is an important source of information in realizing problems and improving effective plan in hospitals (EPF, 2017). The patient perception is complicated as they result from emotion appraisal and perceived value [23]. Patient perception is generally defined as an overall perception of a service, the gap between what is received compared to alternatives available to them. These include effective or emotional appraisal with the service [44],[60] suggested that the value of patient perception might be a mediator in service quality to patient satisfaction. In order to ensure future success, being able to provide good health-care service quality is the most significant element [9].

The emotional aspect and perceived value are parts of the experience that reflect subjective perceptions of products or services [27],[65]. The emotional appraisal is the result of consequences such as feelings of happiness and pleasure from perceived hospital service [3],[5]. The indicator of emotional appraisal was adopted from Izard (1997) [30], which consisted of happiness, fear, and anger. While perceived value defined as a consumer's overall assessment of product utility, based on perceptions of what was received and what was given in the exchange. The relationship between value and satisfaction appears to be well established in the literature, with the customer's perception of receiving value for their money positively related to the satisfaction of the customer [65].

There are influences among variables as follows: The higher the core quality service and peripheral service quality, the higher the positive emotion appraisal to the hospital. This is in accordance with Hume's research(2010) [29] which found that there was a significant relationship between the core quality service and the peripheral quality services on emotion appraisal. Patients will give a positive appraisal for the hospital if the services provided are in line with what is expected. The relationship between perceived value and satisfaction appears to be well established in the literature, with the customer's perception of receiving value for their money positively related to the satisfaction of the customer [65]. [44] proposed that customer perception (appraisal emotion and perceived value) might be a dominant mediator of future intentions and behavior of customers. Cronin et al.(2000) [14] suggested that the relationship is more complex, stating that the customer may be happy with the service provided, how it is provided and overall be satisfied with the service, but not feel that they have received their money's worth.

Patient satisfaction is not the final goal for the hospital. Every effort made by the hospital to satisfy the patient was shown to be willing to go back to the hospital again. Creating a patient intention repurchase is important for the hospital to sustain performance and stable growth of market share [48]. Hajiyan et al. (2017) [24] state that satisfaction has a positive effect on customer loyalty. A consumer who is satisfied with the service it receives will form loyalty towards the service. The higher satisfaction is felt, the higher the level of customer loyalty. Han et al.(2014) [25] revealed that switching costs are an important factor influencing customers' decisions to remain with service providers. Switching costs are costs faced by patients when he wants to move from one hospital to another hospital. Switching costs not only cover costs in a financial context but can also take the form of time and effort and psychological burdens. Switching costs are expected to be difficult for patients or cause great sacrifices if they want to switch to another hospital [35].

Aydin et al.(2005) [3] find switching costs as moderation on the effect of satisfaction on loyalty. Switching costs that are felt to be high by patients will weaken the effect of satisfaction on loyalty, compared to switching costs that are felt to be low by patients. Switching costs become an important part when patients feel dissatisfaction and reduce the patient's reaction to switch to another hospital.

3. Research Method

Research Conceptual Framework

Health literature has been replete on the importance of supply chain management in delivering health services. Conceptual framework that will be used in this study, then obtained an overview of the research plan to be carried out. This study will analyze and prove the effect of service quality dimension, patient perception and hospital performance in Private Hospital in Surabaya.

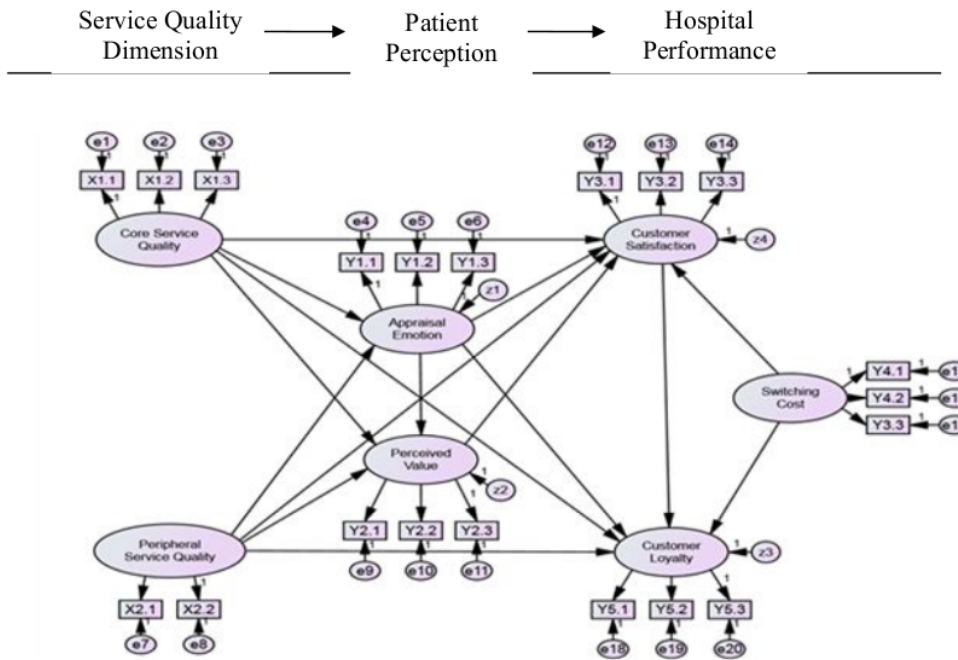


Figure 2. Research Conceptual Framework

Information variable

X1: Core Service Quality	X1.1: Doctor
	X1.2: Nurse
	X1.3: Medical Device
X2: Peripheral Service Quality	X2.1: Patient Room
	X2.2: Meal
Y1: Emotional Appraisal	Y1.1: Happiness
	Y1.2: Fear
	Y1.3: Angry
Y2: Perceived Value	Y2.1: Emotional Value
	Y2.2: Price Value
	Y2.3: The Social Value
Y3: Customer Satisfaction	Y3.1: Experience
	Y3.2: Expectation
	Y3.3: Overall Satisfaction
Y4: Switching Cost	Y4.1: Procedural Switching Cost
	Y4.2: Contractual Switching Cost
	Y4.3: Relational Switching Cost
Y5: Loyalty	Y5.1: Continued of Use
	Y5.2: Recommendation to Others
	Y5.3: Resilience to not Go to Other Products

Population

The study population was all inpatients as users of hospital services for a minimum of three days at a private hospital in Surabaya, amounting to 162 respondents or patients

Sample

The sample of this research is 140 respondents, which is calculated by multiplying the number of indicators 20 times multiplied by 7 observations. Hair (1995) states that the size of the sample for analysis using the SEM model is recommended between 100 to 200 and the absolute minimum is 50. So the sample size to be used in this study is 140 respondents or patients of private hospitals in Surabaya.

Sampling Technique

The sampling technique is proportional random sampling for each hospital, which is a sampling method that is proportional to each hospital where the presentation is as large as the presentation of population members at each hospital for the entire population based on the number of inpatients in private hospitals in Surabaya (Sarmanu 2006: 9). For more details, see Table 2 below:

Table 2. Data of Patient in Private Hospitals as respondents

NO	HOSPITAL NAME	NUMBER OF POPULATIONS	SAMPLE
1	R.S P H C	41	35
2	R.S AdiHusadaUndaanWetan	44	38
3	R.S Husada Utama	42	36
4	R.S Islam Jemursari	35	30
	TOTAL	162	140

Source: processed data

4. Result

After the measurement models are met, then the next stage of analysis can be done. The next stage of the test is the validity of the extract. The construct validity test is a test to ensure that the indicator is a construct of the latent variables under study. The validity test of this construct is a test to ensure that the indicator has formed a unity in each construct of the latent

variable. Indicators are certain to meet the assumption of convergent validity if the value of the *critical ratio* (CR) is greater than twice the standard error value (SE), or the other parameter is the probability value of the indicator is less than 0.05. To find out that the indicator has fulfilled these two conditions can be seen in the following Table 3:

Table 3. Convergent Validity Test Result

			Estimate	S.E.	C.R.	P
X1.1	<---	Core_Service_Quality	1.000			
X1.2	<---	Core_Service_Quality	1.296	0.085	15.295	0.000
X1.3	<---	Core_Service_Quality	1.114	0.095	11.701	0.000
X2.1	<---	Peripheral_Service_Quality	1.000			
X2.2	<---	Peripheral_Service_Quality	0.856	0.051	16.657	0.000
Y1.1	<---	Appraisal_Emotion	1.000			
Y1.2	<---	Appraisal_Emotion	0.988	0.048	20.477	0.000
Y1.3	<---	Appraisal_Emotion	0.916	0.051	18.025	0.000
Y2.1	<---	Perceived_Value	1.000			
Y2.2	<---	Perceived_Value	0.876	0.138	6.364	0.000
Y2.3	<---	Perceived_Value	1.234	0.194	6.347	0.000
Y3.1	<---	Customer_Satisfaction	1.000			
Y3.2	<---	Customer_Satisfaction	1.084	0.113	9.589	0.000
Y3.3	<---	Customer_Satisfaction	1.032	0.108	9.570	0.000
Y4.1	<---	Switching_Cost	1.000			
Y4.2	<---	Switching_Cost	1.208	0.124	9.705	0.000
Y4.3	<---	Switching_Cost	1.248	0.132	9.481	0.000
Y5.1	<---	Customer_Loyalty	1.000			
Y5.2	<---	Customer_Loyalty	1.000	0.131	7.652	0.000
Y5.3	<---	Customer_Loyalty	0.949	0.134	7.097	0.000

Source: processed data

Table 3 shows that all indicators have a CR value greater than two times the *standard error* value (SE) and the probability of each indicator is less than 0.05, so it can be ascertained that all indicators have met the convergent validity requirements. Before further

calculations, assumptions are tested first to ensure that the *structural model* being built can be used.

Model Conformity Testing

The results of the calculation of the values of the *goodness of fit* indexes produced by the structural model are as follows :

Table 4. Value Goodness of Fit & Cut off Value Structural Model

Criteria	Model Test Results	Critical Value	Information
Probability (X ² Chi square)	0.003	≥ 0.05	Not Good
Cmin/DF	1.337	≤ 2.00	Well
RMSEA	0.049	≤ 0.08	Well
GFI	0.880	≥ 0.90	Marginal
AGFI	0.838	≥ 0.90	Marginal
TLI	0.968	≥ 0.90	Well
CFI	0.974	≥ 0.90	Well
RMR	0.039	Small	Well

Source: data processed

Table 5. Summary of Hypothesis Tests

	Hypothesis	P-value	Analysis Results
H1	Core Service Quality has a significant effect on the Appraisal Emotion of patients in private hospitals in Surabaya	0.000	Accepted
H2	Peripheral Service Quality has a significant effect on the Appraisal Emotion of patients in private hospitals in Surabaya	0.000	Accepted
H3	Emotion Appraisal has a significant effect on the Perceived Value of patients private hospital in Surabaya	0.000	Accepted
H4	Core Service Quality has a significant effect on the Perceived Value of patients in private hospitals in Surabaya	0.024	Accepted
H5	Peripheral Service Quality has a significant effect on the Perceived Value of patients in private hospitals in Surabaya	0.032	Accepted
H6	Perceived Value has a significant effect on the Customer Satisfaction of patients in private hospitals in Surabaya	0.009	Accepted
H7	Appraisal Emotion has a significant effect on the Customer Satisfaction of patients in private hospitals in Surabaya	0.008	Accepted
H8	Core Service Quality has a significant effect on the Customer Satisfaction of patients in private hospitals in Surabaya	0.017	Accepted
H9	Peripheral Service Quality has a significant effect on the Customer Satisfaction of patients in private hospitals in Surabaya	0.008	Accepted
H10	Customer Satisfaction has a significant effect on the switching cost of patients in private hospitals in Surabaya	0.002	Accepted
H11	Customer Satisfaction has a significant effect on the Customer Loyalty of patients in private hospitals in Surabaya	0.003	Accepted
H12	Appraisal Emotion has a significant effect on the Customer Loyalty of patients in private hospitals in Surabaya	0.000	Accepted
H13	Core Service Quality has a significant effect on the Customer Loyalty of patients in private hospitals in Surabaya	0.005	Accepted
H14	Peripheral Service Quality has a significant effect on the Customer of patients in private hospitals in Surabaya	0.733	Rejected
H15	Switching Cost has a significant effect on the Customer Loyalty of patients in private hospitals in Surabaya	0.005	Accepted

Source: data processed

5. Discussion

Theoretical and Empirical Findings

The results of hypothesis testing prove that the *core service quality*, *appraisal emotion*, *switching cost*, and *patient satisfaction* have a positive and significant effect on *patient loyalty*, while *peripheral service quality* has no effect on *patient loyalty* type B private hospitals in Surabaya. Supporting this hypothesis is caused by the *estimated* value of *core service quality*, *appraisal emotion*, *switching cost*, and *patient satisfaction* is positive with the *p-value* all smaller than 5% because the *p-value* is smaller than 5%, then the hypothesis is accepted and proven true.

Limitations

In this study, there are some limitations of studies that are generally known and must be considered to perfect these limitations. The limitations of the results of this study are as follows:

1. The area tested in this study is only limited to the Surabaya area, so care must be taken in generalizing the results of this study because the different coverage of the research area will give different results. In the next research expected that the expansion of the area, so it can reflect the condition of the further research area.
2. This study does not classify the research sample by sex, so the influence of sex may be able to cause a diversity of opinion which is influenced

by differences in the views and psychological of men and women.

3. The variables in this study only include *core service quality*, *peripheral service quality*, *appraisal emotion*, *perceived value*, *patient satisfaction*, *switching costs*, and *patient loyalty*. This is a limitation in the study, given the variables that match the characteristics of patients in Surabaya. In the next research expected that the expansion of the variable, so it can reflect the condition of a more detailed study.

6. Conclusion

Objectively, this study aim at understanding supply chain management in the health industry. Exploring the role of supply chain management is imperative in order to ensure improvement and sustainability of the health industry. Overall the results of this study can be explained that hypothesis testing has a significant influence and a positive direction, namely *core service quality*, *peripheral service quality*, *appraisal emotion*, *perceived value*, *patient satisfaction*, *switching costs*, and *patient loyalty* have a significant effect and with a positive direction on appraisal emotion and hospital *patient loyalty*. Except testing the hypothesis of *peripheral service quality* variables on *patient loyalty* has no significant effect.

From the results of the study there were a number of suggestions as follows: *Core service quality* and *peripheral service quality* have a positive and significant effect on *Appraisal emotion* in private hospitals in Surabaya. Managerial implementation

related to this is the management of private hospitals in Surabaya should maintain and improve both the quality of core services and the quality of supporting services so that a positive emotional assessment of the patient is created. Core service quality, peripheral service quality, and appraisal emotion all have positive and significant effects on perceived value in private hospitals in Surabaya. Managerial implementation related to this is the management of private hospitals type B in Surabaya should maintain and improve both the quality of core services, the quality of supporting services, and emotional assessment so that what is expected by patients in accordance with what is expected. Core service quality, peripheral service quality, appraisal emotion, perceived value, and switching cost, all of which have a positive and significant effect on patient satisfaction in private hospitals type B in Surabaya. Managerial implementation related to this is that of these five variables really must be considered, implemented, and maintained so that private type B hospitals in Surabaya can increase patient satisfaction. Core service quality, appraisal emotion, switching cost, and patient satisfaction are all four positive and significant effects on patient loyalty. Managerial implementation related to this is that of the four variables is very important to be maintained and improved so that patients do not move to other hospitals, so that patients who are loyal. For the sake of further research on the effect of service quality on appraisal emotion, perceived value, patient satisfaction, switching cost and patient loyalty, it is recommended to test by taking patient objects not only in private type B hospitals in Surabaya, but are expected for researchers further expanding the research area.

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