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HOW SUPPLIERS OF HI-TECH AND CRITICAL EQUIPMENT KEEP THEIR CUSTOMERS SATISFY AND LOYAL BY UTILIZING SERVICE INNOVATION AND SERVICE RECOVERY? STUDY OF SERVICE FOR INDUSTRIAL CONTROL SYSTEMS (ICS) USERS IN INDONESIA.

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Ichsan Gaffar, Suharyono, Solimun, Andriani Kusumawati. How Suppliers Of Hi-Tech And Critical Equipment Keep Their Customers Satisfy And Loyal By Utilizing Service Innovation And Service Recovery? Study Of Service For Industrial Control Systems (ICS) Users In Indonesia. -- Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(08), 1713-1732. ISSN 1567-214x

Key Words: Service Recovery, Service Innovation, Industrial Control Systems (ICS), Customer Satisfaction and Customer Loyalty.

ABSTRACT

Purpose: The purpose of this research is how the suppliers implement the long-term marketing strategies for ICS (Industrial Control System) users where do not have a Service Contract with suppliers.

Background: In case of emergencies, ICS users still rely on suppliers for technical assistance. Sometimes technical assistance doesn't meet to the expectations of ICS users. A customer's buying behavior is influenced by their experiences and psychological factors. If customers have a negative customer experience, they will share this experience with friends, other company and connections which effects on Satisfaction and even Loyalty. The negative impressions that users have received will affect the buying process as well as buying decision for future. This study is proposed from the interaction of Service Recovery and Service Innovation and examines Customer Satisfaction and Loyalty. It also examines the effect of Customer Satisfaction on Loyalty.

Design/Methodology/Approach: This study uses quantitative method with saturated sampling and involved 88 who did not have a service contract. It was not easy to get a response from those maintenance managers (unit of analysis) who took 3 months to collect a sample of data.

The assistance from suppliers was also very helpful in accelerating and collecting the questionnaires. The data were analyzed using SPSS and WarpPLS /SEM.
Finding: Furthermore, Service Recovery and Service Innovation positively influencing the Customer Satisfaction. In addition, Customer Satisfaction plays a mediating role in the relationship between Service recovery and Service Innovation to Customer loyalty.

Practical Implications: The results highlight that ICS suppliers should implement Service Recovery quickly and with an empathetic manner to satisfy Customers and to encourage Customer's Loyalty. This is one of a new study on the ICS business provided by a supplier in Indonesia. It also reinforces the important of Service Recovery for other suppliers whom supply equipment and services of hi-tech and critical equipment.

Originality/Value: By considering that research in B2B is very rarely carried out by other researchers, especially in Indonesia, it is time to encourage other researchers to look at researching the phenomenon that has occurred in Indonesia where many stated-owned company in energy sectors do not have contracts in order to protect production facilities. This study also is relevant issues for the competitiveness of suppliers, willing to increase their performance, especially for Indonesia local supplier which have implemented concept of Customer Satisfaction and Loyalty together.

INTRODUCTION.

ICS (Industrial Control System) is one of the most important and hi-tech equipment for monitoring and controlling processes in production facilities such as electric power plant, water and wastewater treatment, oil and natural gas processing, transportation, chemical, pharmaceutical, pulp and paper processes, food and beverage, and discrete manufacturing. Problems arise when the warranty period has expired, where the warranty period is only 1 to 2 years after the initial installation. After that the service can be extended through a service contract or handled by the ICS user.

In reality, not all ICS users accept or participate in service contracts offered by suppliers. Various reasons were given by ICS users for refusing offered service contract, and one of them was the contract price which was considered expensive. However, internally, ICS users apparently do not have human resources with sufficient competence in order to maintain the ICS, especially when one of components fails or does not function while production facilities must continue to operate.

In the situations and conditions faced by ICS users, there is no other way to except by calling supplier and ask for technical assistance to solve the problem even though the user knows that at that time there is no service contract agreement with the supplier. The suppliers should know how to take an action and response to ICS users where do not have service contract.

A recovery strategy for critical and hi-tech equipment is very important and needs to be considered by suppliers. The technical support that must be available and can be utilized according to user expectations (Sciarelli et al., 2017). Even though recovery assistance has been carried out, sometimes a negative impression is still left in the minds of ICS users (Chiosa and Anastasiei, 2017) especially when suppliers provide technical assistance, customers have

lost of time and productivity which can be impacted to users' financial side. Communication in the recovery request process is very important, especially in responding to customer complaints. It is necessary to consider that the ICS equipment currently in use has a lifetime and requires replacement due to reasons of maintenance, technology, production capacity development. (Rajagopalan, 1998). This could take place in a short or long period of time.

In case of ICS replacement, it can be happened within 7 years to 10 years. The replacement planning process involves several suppliers with various consideration of technical specifications. Normally a team was formed to evaluate the technical and price factors. The existing installed base also is included in evaluation. It can be imagined that if the relationship with the customer is not harmonious, and causes lost opportunities (Peattie and Peattie 1995). In case of ICS business, the opportunity will exist again in 7 years later. Another factor that ICS suppliers need to pay attention that negative information can harm suppliers (Richins, 1983). Therefore, if supplier take care properly it will have a good impact on Customer Satisfaction (Bennett and Rundle-Thiele, 2004) and Customer Loyalty (Robbins and Miller, 2004; Griffin, 2016).

As a supplier, PT. X that has been operating for 30 years in Indonesia. This company has a human resource of 100 good engineers and sufficient infrastructure facilities which supported by the manufacturer in terms of technical services, engineering, projects and sales support. Total number of customers is 240 and only 115 of them are under service contract program. Based on data, there are 125 ICS users who do not have service contract. In fact, 30 of them have decided do not use ICS system with several reasons. One of the reasons was the production facility is not economical anymore some of them were replaced by other systems. PT. X should change the strategy and still keep their existing customers as potential customers even though no service contract. In BtoB, creating a good relationship to achieve long term Customer Satisfaction and Loyalty is very important for future ICS business

Generally, Customers of PT. X are located in several provinces of Java, Sumatra, Kalimantan, Papua and Sulawesi islands. To support their activities, several branches were established at industrial park such as in Cilegon, Surabaya, East Kalimantan, Pekanbaru and Medan. For customers located outside or far away from the branch offices, they can choose technical support by implementing resident engineer system.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT.

Industrial Control System (ICS)

According to Knapp and Langill, 2015) ICS is a system where work automatically to control and monitor various types of processes in manufacturing and various production facilities. An ICS normally is used according to requirement of the facility and even some facilities use a combination of several systems such as process control systems (PCS), distributed control systems (DCS), supervisory computer and data acquisition

systems (SCADA), safety instrument systems (SIS), Programable Logic Control (PLC) and many others. Figure 1 shows a simple of system configuration of ICS were consisting of two controllers and a series of inputs and outputs connecting to others process. All the input and output signals from sensor will be collected to I/O interface that can bridge the analog signal and the digital signal handled by the controllers. HMI (Human machine interface) is require to see the status and activities at plant side. The HMI of a process control system shows the functional components of the system and tightly integrated with an application software to see values and make changes to how the controller is operating.

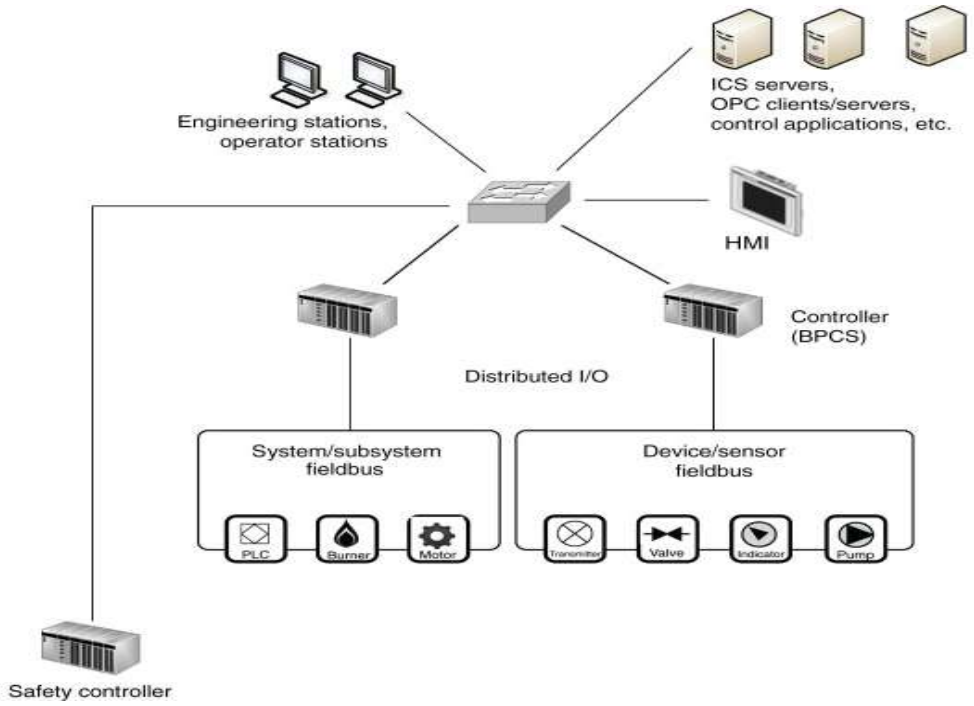

Figure 1. Simple Configuration of ICS.

Source: Knapp and Langill, 2015

Service Innovation

Many suppliers are trying to make improvements to the services offered, but only a few are successful in opening new markets. For this reason, supplier executives are expected to understand the market conditions that drive to create the service innovation (Berry et al. 2006). Innovation is all about offering new or adapted solutions to customer needs. Service innovation required in certain businesses, for example in providing services for production facilities and sometimes supplier must create the system according to customized equipment. The technology in customization can be developed between the customer and the supplier. The adoption of such technologies enabled the organizations to develop the learning relationship with the customers to predict their demands on individual basis and the changing conditions and its effects on the demand of the equipment (Anwar et al., 2011)

According to Korhonen and Kaarela (2011), Service Innovation in general consists of: Preventive Maintenance, Repair, 24H- Emergency Services, Spare Parts, Refurbishment, Modernization, Training, Consultation, Engineering, Recycling and Security Service. However, users are not automatically able to accept offers made by suppliers. Suppliers need to ensure that by having a service contract the customer will get better results.

Innovations that can provide positive changes for customers in terms of productivity. Research conducted by Ta and Yang (2018) in the telecommunications industry provides empirical evidence by adding 2 (two) kinds of Service Innovations, called Interactive and Supportive Innovation where have provided satisfaction and retention. For suppliers, having service innovation will provide challenges because the market will be more open. Service innovation has been created to enliven the new market in the sense that by having service innovation, customers will have many choices. For this reason, supplier organizations are expected to understand the direction of their targets and do it with a proper way.

In the ICS business, service innovation aims to improve the performance of the equipment to match the performance of the production facilities. For this reason, suppliers are expected to always innovate in order to meet customer needs and at the same time maintain a competitive advantage (Christensen et al., 2005). Whatever the suppliers do in innovating is always thinking that innovation provides customer satisfaction and maximizes the potential in growing the business and bringing profit to the company. (Owano et al., 2014). If activity of innovation done continuously, supplier will have a great opportunity to attract more customers than before. Normally customers do like things that are new and tend to be more unique as what they really like. For existing customers by providing information systematically about innovation tends to be loyal. Thus, gaining in term of innovation will be an advantage of supplier. Doing the innovation in technological is enables the company to gain control over many market segments also to establish new industrial standards based on new technology and to gain a preferred reputation (Titus, 2004).

Companies that frequently innovate will provide customers with many choices. This is not only happening in the B2C service industry sector but also in B2B. YuSheng and Ibrahim (2019) proves that service innovation has a positive effect customer satisfaction, and customer loyalty. This finding is in line with previous research by Ameme and Wireko (2016) which states that there is a positive relationship between innovation and customer satisfaction. Based on these studies, the hypotheses to be proven in this study are as follows

H1: There is a positive relationship between Service Innovation and Customer Satisfaction

H2: There is a positive relationship between Service Innovation and Customer Loyalty

Service Recovery

Gronroos (1988) defines service recovery as an action taken by a service provider to address the complaints of failure in service. The definition of Gronroos has been reiterated by Zeithaml et al (2009) and Buttle (2009) provides a definition of service recovery as service recovery related to actions taken by an organization in response to service failures that occur. Miller et al., (2000) also defines service recovery is about actions designed to resolve problems. From some of the above definitions, service recovery can be defined as an action, thought, plan, and process to improve service if an error or disappointment occurs, so that customers are satisfied.

The most important strategy in a highly competitive industry is to retain existing (current) customers and attract new customers (Chang, et al. 2015), The idea of recovery actually comes from a quality delivery system on the production line in manufacturing that uses the zero-defect principle for all production output. It is hoped that with the seriousness of these efforts, customers will grow trust in the honesty, integrity and reliability of the brand. Trust is a reflection of a sense of security in the customer because it is sure that the brand chosen will meet customer expectations

Not only by responding to complaints, but especially also handling at critical times. That is why supplier must understand how to response, because the quality of response will affect future business. This is also stated by Srinivas (2000) that importance service recovery is to appreciate how service firms improve sales and market share. The intension of customers to switch to other suppliers can be detected from the initial process of build the relationship with the customer. A basic requirement, if a service firm is to develop these relationships, is to understand fully the specific business it is in and the requirements to keep customers satisfied (Gronroos, 1990; Thomas, 1978).

One of the service failures is the inability to meet customer expectations according to service supplier standards (Mueller et al., 2003). Service failures as defined by Varenbergh and Orsingher (2016) occur when the services provided are not in accordance with what customers expect. Lewis and Spyrakopoulos (2001) stated that Service Recovery is an effort made to overcome customer disappointment after using services / equipment from an organization. Ashraf and Manzoor (2017) define Service Recovery as a special action taken to ensure that customers receive appropriate service after a problem occurs in normal service.

Service recovery is a decision taken by the company as a reaction to service failure with the aim of turning dissatisfaction into customer satisfaction and ultimately retaining the customer (Bell, 1994; Miller et al., 2000). The same thing is said by Zemke and Bell (2000) describing Service Recovery as a process carried out by an organization to return customers who feel disadvantaged after the service or equipment fails to meet expectations to their satisfaction level. Schweikhart et al., (1993) view Service Recovery as part of quality management with the ultimate goal of all services is to maintain business relationships with customers.

Service Recovery can bring big profits and as a tool to get more satisfied and loyal customers, not just a process of waste of time and money (Yeoh, 2015). Effective Service Recovery can lead to a higher level of Customer Satisfaction, intention to repurchase, positive word of mouth, improve the company's image, ending in Customer Loyalty (Harris et al., 2006).

H3: There is a positive relationship between Service Recovery and Customer Satisfaction

H4: There is a positive relationship between Service Recovery and Customer Loyalty.

Customer Satisfaction.

In this study, a supplier is defined as any company who provides goods, materials, or services to a company to convert them to a equipment (Akman and Yörür,2012). Oliver (1997) defined that Customer Satisfaction is a consumer response to fulfillment which is an assessment of a equipment or service or ability that can provide a pleasant level of fulfillment resulting from consuming a equipment and service. Cardozo (1965) addresses that satisfaction is the result of hope, while hope comes partly from previous experiences. In other words, expectation comes from experience, which can be adjusted according to the benefit to the customer. According to Kotler (2005), satisfaction is the extent to which a product level is perceived in accordance with buyer expectations. Customer satisfaction is defined as a situation where customer expectations for a product match the reality received by the customer. If the product falls below expectations, the customer will be disappointed. Conversely, if the product meets expectations, the customer will be satisfied. If the perceived performance meets or exceeds the expectations of the customer, the customer is satisfied (Kim *et al*., 2007). Some experience is of the supplier, that establishing and maintaining a long term relationship with satisfied and important to long-run survive (Akman and Yörür,2012). In b2b research, several authors show the existence of a link between satisfaction and loyalty for example, Eriksson and Vaghult (2000) found that satisfied customers stay with the product. This means that the results will affect the loyalty.

In relation to Loyalty, Customer Satisfaction is an introduction to repurchase, Customer Loyalty, and customer survival which ultimately benefits to the company. Satisfaction provides many advantages for the company, one of which is important, namely enabling the achievement of customer loyalty (Lovelock and Wright, 2018). Meanwhile, Kotler and Keller (2009) say that satisfaction is a function of expectations for perceived performance. If the performance of the equipment or service is lower than expected, customers will feel dissatisfied. But the performance of the equipment or service is as expected, the customers will be satisfied, and if the performance of the equipment or service exceeds expectations, the customers will feel very satisfied.

Customer Loyalty

Loyalty is a construct that captures the essence of a business customer’s desire to continue doing business with a given supplier in relation to others in the evoked consideration set (Bharadwaj and Matsuno, 2006). Customer loyalty

has considered as an important factor which leads to gain competitive advantage over other firms under a highly competitive and dynamic environment (Leninkumar, V. (2017) and Oliver (1999) defined customer loyalty as a promise of buyers to purchase particular equipment, services and brands of an organization over a consistent period of time, irrespective of competitor's new equipment and innovations and these customers are not compelled to switch. Loyal customers positively view the organization, endorse the organization to others, and would engage in repurchase (Dimitriades, 2006). Similarly, Lam *et al*. (2004) defined customer loyalty as an evidence of the repeated patronage of a service provider and the recommendations of a service provider to other customers. Gummesson (2002) state that it is essential for a supplier to continuously remind a customer to remain loyal.

In the B2B market, keeping customers loyal is a very important factor especially on equipment performance. It is not enough just to rely on excess technical specifications and hope that customers will remain loyal. Equipment for production process must be operated to run in accordance with production targets. Therefore, if something happens to interfere with the performance of the equipment, the supplier must take action in accordance with customer expectations and immediately doing recovery. Delay in taking action will give a negative impression to customers.

According to Anderson et al., (1994), if customers are satisfied with the goods or services provided, it will increase customer loyalty. There is a strong link between satisfaction and loyalty toward a supplier or equipment (Selnes and Gonhaug, 2000). Satisfied customer can provide several benefits including the relationship between companies and customer that will be more harmonious, provide a good basis for repurchasing and creating consumer loyalty to the company. This is as expressed by Dutka (2001) that the benefits of meeting customer expectations with performance will create loyalty to the customer itself with the company concerned. The importance of costomer satisfaction to marketing can be attributed to the argument that customer satisfaction will encourage repeat purchases and provide the advantage of "word of mouth" publicity (Fornell, 1992). Above arguments provides the theoretical basis for our following hypothesis.

H5: There is a positive relationship Customer Satisfaction and Customer Loyalty.

METHODOLOGY

Sampling Procedure

The focus of this research is to build a relationship between Service Innovation (SI), Service recovery (SR), Customer Satisfaction (CS) and Customer Loyalty (CL) for customers engaged in industrial processes that using ICS (Industrial Control System) to control and observe production facilities located in Indonesia. The sampling was used in this research is saturated sampling where the number of ICS users without a service contract is 94 and after screening and cleaning, 88 respondents were found to be useable.

Questionnaire Development

A total of 27 questionnaires have been developed and adapted to the circumstances of ICS users. The questionnaires touch and have a relationship between B2B with attention to characteristics such as long-term relationships, support for equipment owned and pay attention to customer values. Perceptions of ethics in serving customers, escalation of problems, and quality of work are included in consideration.

Source Of Questionnaire Items

The questionnaire items were collected from several study with a marketing approach and supplemented with several questionnaires that became the expectations of customers and were more specific to raise important issues of after-sales service, especially for ICS users. The unit of analysis in this research is the maintenance manager who knows the condition and performance of the ICS. This study uses a Likert scale, a scale used to measure the perceptions, attitudes or opinions of a person or group where the number 1 represents strongly disagree and 5 represents strongly agree.

The collected data was analyzed using SPSS (Statistical Package for the Social Sciences) version 20 and WarpPLS 7.0. Descriptive analysis was used for demographic variables and hypotheses were tested using SEM (Structural Equation Modeling)

Demographic Of Respondents.

The demographics variables were collected in this study: gender, age, and education level. In terms of gender, 100% are male. In Indonesia, generally, those who hold positions as maintenance managers are men. In terms of age, they were between the ages of 30 and 50. In education level, all maintenance managers have completed the higher education at least a diploma.

Table 1. Demographics Of Respondents

Variable	**Category**	**Frequency**	**%**
Gender	Male	88	100
	Female	0	0
Age (years)	Less than 30	1	1.1
	30 - 40	20	22.7
	40 - 50	41	46.6
	More than 50	26	29.6
Level of Education	Diploma	19	21.6
	Tertiary Education	67	76.1
	Post graduate	2	2.3
Title	Manager	85	96.5
	General Manager	3	3.5

MEASUREMENT MODEL

The Validity of Measurement Model Is as Follows:

- ***Convergent validity*.**

Convergent validity can be seen from the value of the factor loading (FL) in table 3 where all items have values of AVE are above 0.5. The convergent validity of the construct is still adequate and this is considered sufficient as a criterion for the convergent validity condition.

- ***Discriminant validity.***

The discriminant validity is achieved when the diagonal value in the bold is higher than the values in its row and column. From table 2, all the diagonal value in bold is higher than the values in its row and column, therefore the discriminant validity was achieved.

Table 2. Discriminant Validity

	SI	SR	CS	CL
SI	**0.734**	0.636	0.529	0.602
SR	0.636	**0.743**	0.474	0.442
CS	0.529	0.474	**0.729**	0.694
CL	0.602	0.442	0.694	**0.724**

SI= Service Innovation, SR=Service Recovery, CS=Customer Satisfaction and CL=Customer Loyalty.

Table 3. Summary For All Constructs

Constructs	Code	Items	FL	CA	CR	AVE
Service Innovation	SI1	The directions provided by Supplier make it easy for us to make decisions quickly	0.716	0.828	0.875	0.539
	SI2	Spare parts support helps us in the operation and optimization of our inventory	0.706			
	SI3	Our systems require protection from cyber attacks	0.689			
	SI4	Our systems require surveillance and protection against corrosive environments	0.728			
	SI5	Maintenance of our facilities based on condition base	0.788			
	SI6	We really need Supplier support in order to improve the system performance	0.774			
Service Recovery	SR 1	By conducting Join risk identification with supplier, We are more safe in operating of ICS system.	0.845	0.862	0.895	0.552
	SR 2	By conducting a joint risk assessment with supplier we are more confident in operating of ICS System	0.791			
	SR 3	By conducting risk monitoring with Supplier, we can keep the performance ICS system.	0.797			
	SR 4	By conducting a risk review with supplier, we can avoid errors in operating the ICS System	0.769			
	SR 5	Cooperation with supplier for mitigation is required to determine the risk conditions	0.621			
	SR 6	Together with supplier we can define the responsibilities and scope of our ICS system operators.	0.738			
	SR 7	We can define responsibilities and the scope of work of our management team.	0.607			

Customer Satisfaction	CS1	We are easy to contact the engineering officer of Supplier	0.708	0.852	0.888	0.531
	CS2	Supplier's engineering staff worked quickly	0.631			
	CS 3	Technical Officer of Supplier work optimally	0.795			
	CS 4	Engineering Officer Supplier is full supported by their management.	0.753			
	CS 5	Technical Officer of Supplier is polite enough to deal with our complaints	0.710			
	CS 6	Technical Officer of Supplier is honest to convey the problem.	0.747			
	CS 7	Technical Officer of Supplier has good skills	0.747			
Cuustomer Loyalty	CL 1	We haven't thought about moving to another supplier	0.754	0.846	0.884	0.554
	CL 2	Supplier knows our expectations .	0.583			
	CL 3	We are quite happy and safe to wear products and services of Supplier	0.758			
	CL 4	We are satisfied to use the products and services of Supplier	0.822			
	CL 5	So far we receive positive information about the supplier performance	0.666			
	CL 6	We recommend using Supplier's products and services for our next project	0.710			
	CL 7	We recommend Supplier to another company	0.749			

Notes: FL= Factor Loading; CA= Cronbach's Alpha; CR= Composite reliability;

AVE= Average variances extracted

The Reliability Assessment of Measurement Model Is as Follows:

- Composite reliability (CR). A questionnaire is said to have good composite reliability if the value is ≥0.70. From table 3, each dimension composite reliability (CR) is between 0.884 and 0.895, and higher than the standard 0.7.

- Alpha Cronbach. From table 3, the values range between 0.828 and 0.862, all of this are higher than the reliability standard 0.7.

Results of Structural Model.

The following data is computed by WarpPLS statistical software to collate path coefficient T values and the corresponding hypothesis and test result as shown by table 4. In this table 4 below is shown some data such as path coefficients, T-values, P-values and the conclusions of each hypothesis. Path coefficients represent the strength and direction of the relationship between the variables. If this coefficient is positive, meaning that it indicates a positive effect, an analysis

of the path coefficient and levels of significance of all the hypotheses were undertaken. The results showed that 4 of the 5 hypotheses were supported.

Table 4. Result Of Structural Model.

Hypothesis	Relationship	Path Coeff	T-value	P-value	Remarks
H1	SI ----> CS	0.366	3.812	<0.001	Supported
H2	SI ----> CL	0.412	4.363	<0.001	Supported
H3	SR ----> CS	0.229	2.295	0.012	Supported
H4	SR ----> CL	0.142	1.388	0.084	Unsupported
H5	CS ----> CL	0.579	6.418	<0.001	Supported

SI= Service Innovation, SR=Service Recovery, CS=Customer Satisfaction and CL=Customer Loyalty

Figure 1 shows that the R-squared (0.75) means that all the independent variables SI, SR and CS predicted the dependent variable (CL) by 75%.

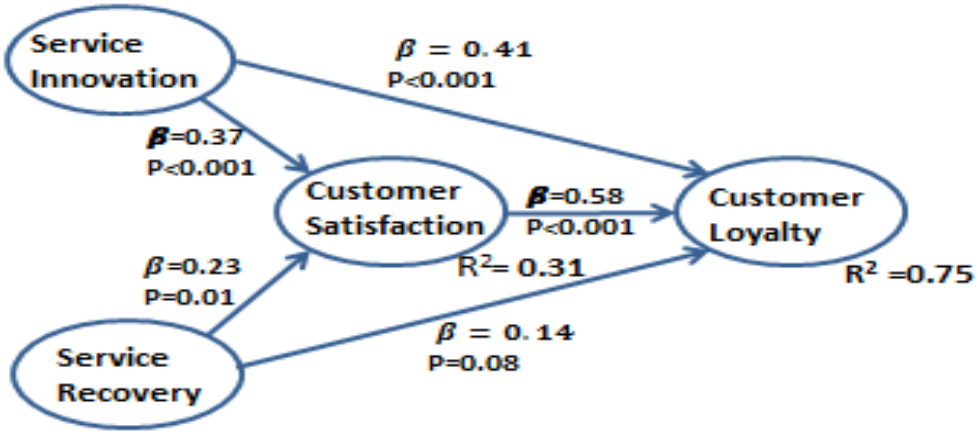

Figure 2. Research Results (Warppls 7.0)

Based on data (table 4), where β = 0.366, T- value=3.812 and p<0.001, means there is direct effect of SI on CS. The β-value = 0.366 means CS will increase about 37 % when SI 1 % increase. The T-value (3.812)) and p-value (<0.001) means there is a positive and direct relationship between SI and CS.

H2 has β =0.2, T-value= 4.363, and P-Value <0.001, means there is direct effect of SI on CL. The β-value= 0.412 means CL will increase 41 % when SI increase 1%. The sense of loyalty will increase about 41% when customer feel performance of SI increase 1%. The T-value (4.363) and P-value (<0.001) also show that there is a positive and direct relationship between SI and CL.

H3 has β = 0.229, T-value=2.295 and P-value=0. 012.means there is direct effect of SR on CS. The β-value= 0.229 means CS will be increased 23% when SR increase 1%. The sense of satisfy will increase about 23% when customer feel recovery quality of SR increase 1%. The T-value (2.295) and P-value (0.012) also show that there is a positive and direct relationship between SR and CS.

On the other hand, hypothesis H4, the effect of SR (β =0.142, T-value=1.388 and P-value = 0.084) did not have a significant direct relationship with CL. The reason was T- value = 1.388 less than 1.96 and P-value = 0.084 more than 0.05. H5 has β = 0.579, T-value=6.418 and P-value<0.001 means there is direct effect of CS on CL. The β-value = 0.579 mean CL will increase 58% when CS increase 1%. The CL will strongest 58% when customer feel satisfies of CS increase 1%. The T-value (6.418) and P-value (<0.001) also show that there is a positive and direct relationship between CS and CL.

DISCUSSION.

On this study found that SI has a significant positive and direct influence on CS and CL. This result confirms previous studies findings (Ganesan and Sridhar, 2016; Seesaiprai, 2016; YuSheng and Ibrahim, 2019) that Service Innovation in Service industries sector could effectively influence customers' satisfaction and loyalty.

Supplier Service Innovation has a significant effect on Customer Satisfaction and increases the loyalty of Industrial Control System users in Indonesia. Whereas with the services provided by the supplier, users can take advantage of the service support where available at any time. Whether the service support provided is used for planned or unplanned work, it is entirely up to the user. Moreover, support is in Indonesia so that the concerns of ICS users can be resolved. Suppliers should not consider this technical service support only for ICS users who have a service contract but also for users who do not have a service contract.

In this research, Service Recovery has a significant effect on Customer Satisfaction. With proper recovery from the operational side, the supplier, it will greatly help the condition of ICS users, because with the availability of this service the problems being faced by customers can be resolved immediately. For customers, the delay in recovery will result in disrupted production and commitment to their customers. On the supplier side, the delay in recovery will result in disappointment on the side of ICS users. In general, this needs to be watched out for because it will affect the reputation of the two companies. Service recovery should be seen as something important to the organization's goals for success, because when service recovery is done properly, it will give a strong impression to other customers so that customers are satisfied and employees feel that suppliers seriously concern in terms of service quality.

Customer Satisfaction has a significant effect on Customer Loyalty in the Industrial Control System in Indonesia. On a very competitive business condition and situation like today, where competition between ICS suppliers is quite tight by involving various differentiation of equipment and services, the factors of customer satisfaction and loyalty are very important and absolute. For certain suppliers, customer satisfaction and loyalty are very important in order to increase profits and maintain good relations. That is why by having Service Innovation and Service Recovery in accordance with the needs of ICS users and proper mitigation, it is hoped that users will be loyal to the supplier company. Customer Satisfaction and Loyalty are related but not mutually supportive. ICS users may be dissatisfied, but loyal. There are also satisfied but disloyal users.

This situation can occur in the BtoB market which has limitations in maintaining their existing customers.

CONCLUSION

Based on the results, the following conclusions can be explained. Service Innovation has a positive impact on customer satisfaction, meaning that if suppliers have better on technical service innovation, the customer will be more satisfied. Service Innovation has positive impact on customer loyalty, meaning that if supplier have better on technical service innovation and maintain the relationship, the customer will be more loyal. Service Recovery has a positive impact on customer satisfaction, meaning that is service recovery is executed with good response and safe, customer will be more happy and satisfied On the other side Service Recovery has positive impact on customer loyalty but not significant, meaning that service recovery must be approved and shown before customer believe and loyal The Customer Satisfaction has positive impact on customer loyalty, meaning that customer will be more loyal once they feel satisfied with service and recovery activities.

Theoretical implications in this study are building and developing concept of customer satisfaction and loyalty on Industrial Control System (ICS) especially in Indonesia. As known that ICS equipment is very important equipment in production facility. Technical support response with flexibility needs to be improved and developed base on customer requirement. Lost of production means lost of profit. Supplier should not see whether their customers are having service contract or not but the most important how to help them once customer are in trouble. Service recovery must be carried out with good timing and response to resolving problem properly.

Managerial implications in this study are the service organization of supplier and how supplier focus on long term relationship. Income for supplier should not be from maintenance contract only. The most important is make sure that relationship with customer is according to the company target. Increase market share and keep existing install base. In ICS business cost of losing customer is high compare with cost-of-service contract.

Finally, the result of this study cannot be generalized due to this study focused on ICS customers only with status do not have service contract and involved one supplier.

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