

# THE EFFECT OF RAW MATERIAL SUPPLY, SERVICE QUALITY, PRODUCT QUALITY TO OUTLET PERFORMANCE

Agustinus Haryadi DP (Universitas Mercubuana Jakarta, Indonesia)

Ryani D Parashakti (Universitas Mercubuana Jakarta, Indonesia)

Muhammad Nashar (Universitas Mercubuana Jakarta, Indonesia)

Email : muhammad\_nashar@mercubuana.ac.id

**Abstract**—This study aims to see the effect of raw material, service quality, product quality to outlet performance from one of largest restaurant chains in Indonesia. The resulting raw material inventory has a significant influence on service quality, because it has a t-statistic value above 1.96 which is equal to 6,561 with a positive original sample estimate value that is equal to 0.611. Raw material inventory has a significant influence on product quality, since it has a t-statistic value above 1.96 which is equal to 8.013 with a positive original sample estimate value which is equal to 0.585. Service quality has a significant influence on outlet performance as it has a t-statistic value above 1.96 which is equal to 2.331 with a positive original sample estimate value which is equal to 0.272. Product quality has a significant influence on outlet performance because it has a t-statistic value above 1.96 which is equal to 3.521 with a positive original sample estimate value which is equal to 0.417.

**Keywords**— food restaurant, inventory, strategic management

## I. INTRODUCTION

The food industry plays an important role in economic growth, including the restaurant industry. Customers are faced with a wide choice of various products offered by restaurants. Therefore, the customer is the main target that needs to be considered by the company, because each customer has a different attitude towards a product. After making a product purchase, each customer will be different from one another, because everyone will capture, compile and interpret the information in accordingly. The quality level given by the company is a picture of the performance shown by the company, in other words the results achieved by the company. Stolovitch and Keeps (1992) said performance is defined as a set of results achieved and refers to the actions of achievement and the implementation of the work requested. Customer relations serves to foster good relations with consumers and increase customer loyalty through special offers or through available data by

providing services about customers, making it possible for someone to switch to a competitor's product if there is a change in the competitor's product, both in terms of price and other product attributes (Hermawan, 2011).

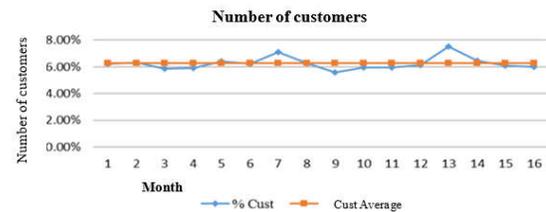


Fig 1. Customer

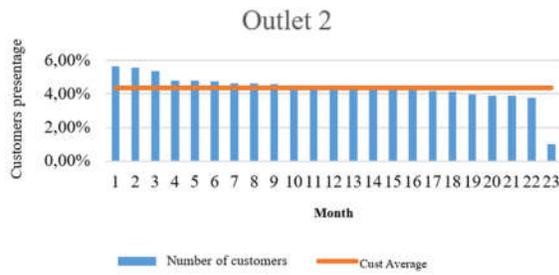
From Figure 1. above, it can be explained from 16 months since the establishment of customer outlets that there has been a downturn, and in the last 3 months there has been a decline



(Source: PT. BMW Promise System)

Fig 2. Number of Outlet Customers 1

In Figure 2, outlet 1 was established on June 3, 2016, during the 19 months from the establishment of this outlet there was 12 times the decrease in customers, whose average decline was 0.26% from the decrease in customers.



(Source: PT. BMW Promise System)  
Fig 3. Number of Outlet Customers 2

In Figure 3, outlet 2 was established in February 2016, during the 23 months since the establishment of this outlet there was 11 times the decrease in customers, whose average decline was 0.13 % from the decrease in customers. Customers who are uncertain cause the number of requests, which is also uncertain, to fluctuate. This happened at 2 outlets of PT BMW which tended to have a decrease in the number of customers. Raw materials that are not met cause the product to not be sold (sold out) and customer demand is not fulfilled. This will cause a loss of opportunity to get maximum profit.

TABLE 1. HISTORICAL DATA ON RAW MATERIAL DEMAND AND ARRIVAL

ITEMS	Unit	Dem and	Arrival	Gap
Au Wagyu Chuck Eye MB9 Cut + 6 Bag	Kg	25	42.85	17.85
Aus Frozen Wagyu Beef Topside 9 ++	Kg	160	149.89	-10.11
Us Frozen Choice Top Blade	Kg	470	340.71	-129.29
Nz Frozen Shortplate	Kg	1510	1242.55	-267.45
Us Top Round	Kg	1580	1140.2	-439.8

(Source: PT ACCPAC system BMW)

Based on table 1. above there is a gap between the demand for raw materials from the outlet and the level of the supplier. Of the 5 meat raw materials used, 4 of them have gaps. The continuity of the production process of an outlet will not be disturbed if the supply of raw materials is in accordance with the needs of the outlet. The purpose of controlling raw materials is to try to provide raw materials needed for the production process so that the production process can run smoothly without an out of stock and a minimum inventory cost (Sukanto Reksohadiprojo, 2000).



(Source: PT ACCPAC system BMW)  
Fig 4. Customer Complaint Data

Figure 4. above explains the data regarding complaints made by customers. there was a compound increase in product quality and service quality. This shows a decline in product quality and service quality according to customers.

Based on the things described above, the writer wants to identify aspects that affect the performance of outlets. The author wants to find the root cause that causes a decrease in the number of customers which results in outlet performance. This study expects to provide recommendations for solutions and suggestions for improvements to the management of the company, especially for repairing outlets.

A. Identification, Problem Formation, and Problem Limitation

1) Identification of problems

The researchers identified the problem as follows:

There was a decrease in the number of customers by 12 months for 19 months

There is a mismatch in the supply of raw materials between orders and the arrival of goods

A decrease in service quality and product quality.

2) Formulation of the problem

The researchers formulate the problem as follows:

1. How does the raw material inventory affect the quality of services that have an impact on outlet performance?

How does the raw material supplies affect the quality of products that have an impact on outlet performance?

How does service quality affect outlet performance?

How does product quality affect outlet performance?

B. Limitations

When conducting research on factors that will always be barriers which cannot be avoided, including factors of time, funds and limited facilities. Factors to

limit the problem so that the results obtained do not deviate from desired goals are as follows:

1. Research conducted at 2 outlets experiencing the phenomenon of a decrease in the number of customers

Assessment of satisfaction with inventory control, product quality and service quality is only based on the results of the questionnaire

Analysis of production quality is only limited to meat products

## II. THEORY AND LITERATURE REVIEW

### A. Performance

Company performance is a display of the situation as a whole over the company for a certain period of time, this is a result or achievement that is influenced by the operational activities of the company in utilizing the resources owned. Lawler (2001) in Andi (2005) states that performance is a measure of success or achievement that has been achieved by the company measured in every time period.

### B. Inventory Management

The control system for the supply of merchandise or raw material inventories must be carried out effectively as possible in a company to prevent and avoid the occurrence of excess or shortage of inventory. According to Harjanto (2008: 237) in the journal Siska (2013), inventory control systems can be defined as a series of control policies to determine the level of inventory that must be maintained, when orders to increase inventory must be made and how many orders must be held.

#### 1) Types of Inventory

According to Bahagia (2016,) in manufacturing, inventory can be found in at least three forms according to their existence, namely: inventory of raw materials, inventory of intermediate goods, and inventory of finished goods.

#### 2) Inventory costs

According to Nasution (2006) in Intega journal (2013) inventory costs are all expenses and losses incurred due to inventory. These costs are the cost of purchase, ordering fees, and storage.

The purpose of inventory management is to determine the balance between inventory investment and customer service. There will be no low-cost strategy without good inventory management. All organizations have several types of inventory control system planning systems. In the case of physical products, an organization must determine whether it is better to produce or buy it. After this decision is made, the next step is to forecast demand.

### C. Quality of Service

Service quality is the overall style and characteristics of a service that supports the ability to satisfy customers both directly and indirectly. According to Parasuraman, (2007) in Yuda (2018) service quality is a measure of how the service level delivered matches customer expectation. Delivery quality service means conforming to customer expectations on a consistent basis. Quality service is a measure of how the service is distributed accordingly with customer expectations. Submission of Quality of Service means aligning customer expectations with something consistent. According to Lovelock and Wright (2014) in Peri (2018) quality of service is a long-term cognitive evaluation of the delivery of services a customer company. According to Wyckof in Tjiptono (2014) in Elves, (2018) service quality is the expected level of excellence and control over these advantages to meet customer desires.

Parasuraman, (2007) in Yuda, (2018) also identifies five quality dimensions that connect certain service characteristics with consumer expectations, including:

1. *Tangibles, appearance of physical facilities, equipment, personnel, and written material.* Tangibles, appearance of physical facilities, equipment, personnel, and tools used to support services (physical appearance).
2. *Reliability, ability to perform the promised service dependably and accurately.* Reliability is the ability to provide accurate services in accordance with the promise (reliable and accurate performance).
3. *Responsiveness - Willingness to help customers and provide prompt service.* Responsiveness is the willingness to help customers and provide appropriate services (speed and usability).
4. *Assurance - Employees' knowledge and courtesy and their ability to inspire trust and confidence.* Assurance is the knowledge and honor of an employee, as well as his ability to give confidence and trust (credibility, security, competence, and courtesy).
5. *Empathy - Caring, individualized attention given to customers.* Empathy is concerned about giving personal attention to customers (easy access, good communication, and customer understanding).

### D. Framework

On customer erratic performance caused outlets this happened at 2 outlets, PT and BMW, which are likely to have a decline in the number of subscribers. Raw materials that are not met in quality and quantity cause the product to be unable to be fulfilled (*sold out*) and customer requests that are not fulfilled. This is also directly proportional to the quality of service and the quality of the products that cause it to lose the opportunity to get maximum profit. To identify things

that are related to the cause of the decline in outlet performance, the following framework can be drawn up:

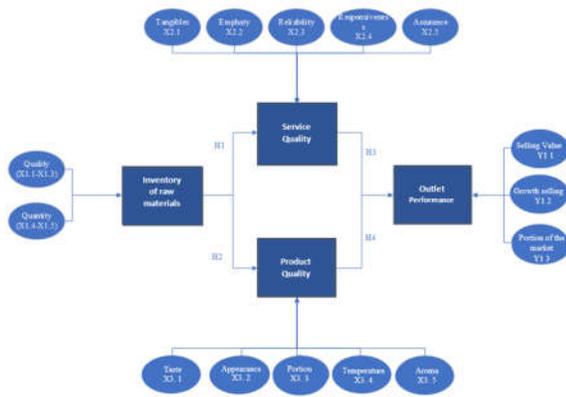


Fig 5. Research Framework

### E. Hypothesis

The hypothesis that explains the relationship above is:

- H1: Raw material inventories have a significant effect on service quality. Control of raw material inventories is very influential on the quality of service, the quality and quantity of raw materials becomes important in service quality at outlet operations.
- H2: Inventory of raw materials has a significant effect on product quality. Raw material inventory is very influential on product quality, quality and quantity of raw materials are important in product quality at outlet operations.
- H3: Service quality has a significant influence on outlet performance. Service quality is very influential on outlet performance, ability to provide services, response/alertness of employees and ability to product knowledge, these are important things that are owned in the operational outlets.
- H4 Product quality significantly affects outlet performance. Product quality greatly influences the amount of outlet performance, color, appearance, portion and aroma of the product which must be considered in the outlet operation.

### III. RESEARCH RESULT

In this chapter, it is presented from the *observation* process both directly to collect primary data and through the process of data processing and evaluation. In the final section, we will explain the hypothesis testing using SmartPLS.

### A. Characteristics of Research Respondents

The results of the research were conducted on 100 respondents, namely employee's outlets that are directly related to the operation process of outlets from ordering raw materials, the quality of products sold and the quality of services provided. From the responses from customers, there can be seen an overview of: age, gender, current position. Below, the authors present one by one a general description of the respondents of this study: From the gender category, 72 respondents were male or 72% of 100 respondents and 28 were female or 28% of 100 respondents.

Age category, for respondents as many as 54 respondents at the age of 17-25 years or 54% from 100 respondents, at the age of 26-30 years as many as 27 respondents or 27% of 100 respondents, at the age of 31-35 years as many as 12 respondents or 12% of 100 respondents.

Education category, for respondents as many as 78 respondents had high school education or 78% of 100 respondents, 7 respondents had Diploma education or 7% of 100 respondents. 15 respondents had undergraduate education.

### B. Description of Research Variable Statistics

Descriptive statistics are used to provide an initial description of each variable used in the study. Descriptive data can be seen from the *mean*, maximum, minimum, and *standard deviation* values. On the dimensions of the Raw Material Inventory (PB), Service Quality (KL), Product Quality (KP) and Outlet Performance PO.

#### 1) Analysis of Raw Material Inventory Descriptions

From the descriptive statistical data, it can be seen that the highest average value of the outlet performance variable with an average value of 3,677 with a standard deviation of 0.801. It can be seen that the standard deviation is greater than the value - average (*mean*). This shows that the outlet performance variables used vary. The average value of outlet performance of 3,677 is closer to the maximum value because most of the values show agreed 47/100 and strongly agree 14/100 which states that the other 3 variables have a significant effect on outlet performance. From the descriptive statistical data, it can be seen that the highest average value of the raw material inventory variable with an average value of 3,666 with a standard deviation of 0.77. It can be seen that the standard deviation is greater than the value - average (*mean*). This shows that the inventory variable of raw materials used varies. The average value of outlet performance of 3,666 is closer to the maximum value because most of the values show an agreement 48/100 and strongly agree 14/100 which states that raw material inventories have a significant effect. The highest average value of the service quality variable

with an average value of 3,590 with a standard deviation of 0.789. It can be seen that the standard deviation is greater than the value - average (*mean*). This shows that the inventory variable of raw materials used varies. The average value of outlet performance of 3.590 is closer to the maximum value because most of the values show 45/100 and strongly agree 14/100 which states that service quality has a significant effect on outlet performance.

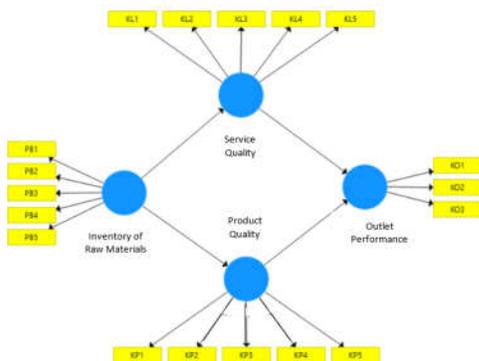
From the descriptive statistical data, it can be seen that the highest average value of the product quality variable with an average value of 3,592 with a standard deviation of 0.747. It can be seen that the standard deviation is greater than the value - average (*mean*). This shows that the variable quality of the product used varies. The average value of outlet performance of 3.592 is closer to the maximum value because most values show 52/100 and strongly agree 9/100 which states that product quality has a significant effect on outlet performance.

Service values show agree 48/100 and strongly agree 14/100 neutral 31/100 and disagree 7/100 which states that the other 3 variables have a significant effect on outlet performance. The amount of agreed value in the data provides operational conditions in the field that raw material inventory, service quality and product quality affect the value of an outlet performance.

IV. DISCUSSION

A. Measurement Model Evaluation (Outer Model)

This study uses *Component or Variance based Structural Equation Modeling* wherein data management uses *Partial Least Square (Smart-PLS)* programs. The following is illustrated in the model that will be used in this study. This model will be described using PLS algorithm and Bootstrapping (*Structural model*)

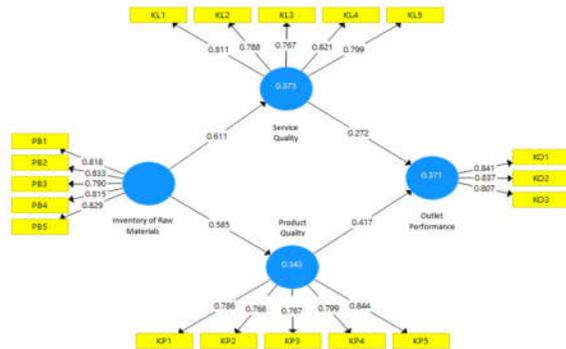


Source: PLS Output

Fig 6. Design of Outer Models

B. Convergent Validity

Testing convergent validity of the measurement model with reflexive indicators is assessed based on the correlation between item score/component score and the construct score calculated by PLS. According to Chin in Ghosly (2015) individual indicators are considered valid if they have a correlation above 0.70. However, in the research stage of developing the scale, loading factors from 0.50 to 0.60 are still acceptable. The following is the output of the correlation between the indicator and the construct as shown below.



(Source: PLS Output)

Fig 7. Convergent Validity

From Figure 7. above it can be seen that the results of testing convergent validity, from each indicator of raw material inventory variables, service quality, and product quality and outlet performance have met convergent validity (valid data) because it has a value of loading factors above 0.50.

From the results of statistical test validity data for raw material inventory statements, service quality, product quality and outlet performance above, it can be seen that  $r_{count} > r_{table}$ , greater than 0.500, so all items of variable statements are valid.

a. Discriminant Validity

A discriminant validity test can be done by way of cross loading i.e. if the correlation construct measurement item is greater than the size of the other constructs. The construct correlation of outlet performance with KO1-KO3 indicator is higher than other construct indicator correlations (service quality, product quality and raw material inventory). Furthermore, construct quality service correlation with KL1-KL5 indicator is higher than indicator correlation with other constructs (product quality, raw material inventory and outlet performance). Then the construct correlation of product quality with the KP1-KP5 indicator is higher than the indicator correlation.

Another method for viewing discriminant validity is to look at the square root value of average variance extracted (AVE) of each construct with a correlation between other constructs in the model, so it is said to have good discriminant validity (Ghozali, 2015).

Outlet performance variable has AVE = 0.686, service quality = 0.636, product quality = 0.629, and raw material inventory = 0.668 or greater than 0.500, it can be concluded that all questions in the variable are declared entirely valid.

b. Composite Reliability and Cronbach Alpha

In composite testing, if all the latent variables have composite reliability and Cronbach's alpha is greater than 0.7, it means that the construct has good reliability or the questionnaire used as a tool in this study has been reliable and consistent (Ghozali, 2014).

The composite reliability test results have a high reliable value because all values of outlet performance variables, service quality, product quality and raw material inventory have composite reliability  $\geq 0.7$ .

Furthermore, the reliability test was strengthened by Cronbach's alpha. The expected value is  $\geq 0.6$  for all constructs, then the value of Cronbach's alpha must be  $\geq 0.6$  according to Ghozali (2015). The results of the Cronbach's alpha test have a high reliable value because all values of the variable performance outlets, service quality, product quality and raw material inventory have composite reliability of 0.7.

C. Testing of Structural Models / Hypothesis Tests (Inner Model)

Testing the inner model is the development of models based on concepts and theories in order to analyze the relationship between exogenous and endogenous variables, then the next step is to evaluate structural models. In the structural model the hypothesis is tested through the significance of: (1) path coefficient, (2) t-statistic, (3) r-squared values. The stages of testing of the structural model (inner model) are carried out by the following steps:

a. R-square value

Seeing the value of R-Square which is a goodness-fit model test with values of 0.67, 0.33 and 0.19 in the structural model indicates that the model is "good", "moderate", and "weak"

R-Square on service quality variables and product quality on outlet performance is 0.371, which means that the model has a moderate level of goodness-fit, which means variability of outlet performance can be explained by both variables, namely service quality and product quality 37.1 % while the remaining 62.9% is explained by other variables not examined in this model. Furthermore, the value of R-Square on raw material inventory variables on service quality of 0.373 means that the model has a moderate level of goodness-fit, which means that the variability of service quality can be explained by the raw material inventory variable of 37.3% while the remaining 62.7% is explained by other variables which are not examined in this model. For the value of R-Square on the raw material inventory variable for product quality of 0.343 means that the model has a moderate level of

goodness-fit, which means the variability of product quality can be explained by the raw material inventory variable of 34.3% while the remaining 65.7% is explained by variables others not examined in this model.

b. Hypothesis Testing Results (Estimated Path Coefficient)

The estimated value for track relationships in the structural model must be significant. This significance value can be obtained by a scraping procedure. Seeing the significance of the hypothesis by looking at the parameter coefficients and the T-statistic significance value of the algorithm to boost report the T-statistic significance value must be more than 1.96 (Ghozali, 2014). To look significant or not significant, we can see from T-table at alpha 0.05 (5%) = 1.96, then T-table compared to t-count (T-statistic).

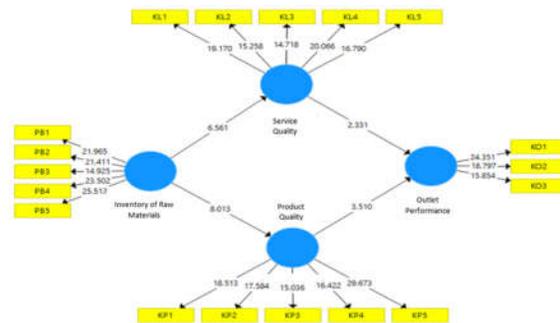


Fig 8. Convergent Validity

Based on figure above, it shows that the relationship between raw material inventory and service quality is significant with t-statistic of 6.519 > 1.96 or can be seen from p-value 0.000 < 0.05. And the original sample estimate value is 0.561 which shows that the direction of the relationship between the supplies of raw materials to service quality is positive. In other words, H1 in this study can be concluded that raw material inventories have a positive and significant effect on service quality.

Furthermore, the relationship between raw material inventory and product quality is significant with t-statistic of 8.013 > 1.96 or can be seen from p-value 0.000 < 0.05. And the original sample estimate value is 0.585 which indicates that the direction of the relationship between the supplies of raw materials to product quality is positive. In other words, H2 in this study can be concluded that raw material inventories have a positive and significant effect on product quality.

Then the relationship between service quality and outlet performance is significant with t-statistic of 2.331 > 1.96 or can be seen from p-value 0.019 < 0.05. And the original sample estimate value is 0.272 which indicates that the direction of the relationship between service quality and outlet performance is positive. In

other words, H3 in this study can be concluded that service quality has a positive and significant effect on outlet performance.

The relationship between product quality and outlet performance is significant with t-statistic of  $3.510 > 1.96$  or can be seen from p-value  $0.000 < 0.05$ . And the original sample estimate value is 0.417 which indicates that the direction of the relationship between product quality and outlet performance is positive. In other words, H4 in this study can be concluded that product quality has a positive and significant effect on outlet performance.

## V. DISCUSSION

### A. *Effect of Raw Material Inventory on Service Quality*

Based on the testing of the first hypothesis it is known that H1 is submitted. Thus, the H1 hypothesis in this study states that the supply of raw materials to service quality has a significant effect.

This means that from the description above it can be concluded that raw material inventories have a significant influence on service quality. Because it has a t-statistic value above 1.96 which is equal to 6,561 with a positive original sample estimate value that is equal to 0.611.

### B. *Effect of Inventory of Raw Materials on Product Quality*

Based on the testing of the first hypothesis it is known that H2 was submitted. Thus, the H2 hypothesis in this study states that the supply of raw materials to product quality has a significant effect.

This means that from the description above it can be concluded that raw material inventories have a significant influence on product quality. Because it has a t-statistic value above 1.96 which is equal to 8.013 with a positive original sample estimate value which is equal to 0.585.

### C. *Effect of Service Quality on Outlet Performance*

Based on the testing of the first hypothesis it is known that H3 was submitted accepted. Thus, the hypothesis H3 in this study states that service quality to the performance of outlets has a significant effect. This means that from the description above it can be concluded that service quality has a significant influence on outlet performance. Because it has a t-statistic value above 1.96 which is equal to 2.331 with a positive original sample estimate value which is equal to 0.272.

### D. *Effect of Product Quality on Outlet Performance*

Based on the testing of the first hypothesis it is known that H4 was submitted accepted. Thus, the hypothesis H4 in this study states that the quality of the product to the performance of the outlet has a significant effect. This means that from the description

above it can be concluded that product quality has a significant influence on outlet performance. Because it has a t-statistic value above 1.96 which is equal to 3.521 with a positive original sample estimate value which is equal to 0.417.

## VI. CONCLUSION

After conducting research and discussion about the factors that influence outlet performance by using variable inventory of raw materials, service quality and product quality, the following results are obtained:

1. Raw material inventory has a significant influence on service quality. Because it has a t-statistic value above 1.96 which is equal to 6,561 with a positive original sample estimate value that is equal to 0.611.

Raw material inventory has a significant influence on product quality. Because it has a t-statistic value above 1.96 which is equal to 8.013 with a positive original sample estimate value which is equal to 0.585.

Service quality has a significant influence on outlet performance. Because it has a t-statistic value above 1.96 which is equal to 2.331 with a positive original sample estimate value which is equal to 0.272.

Product quality has a significant influence on outlet performance. Because it has a t-statistic value above 1.96 which is equal to 3.521 with a positive original sample estimate value which is equal to 0.417.

## REFERENCE

- [1] Adam M. Grant, Francesca Gino, and David A. Hofman. (2011). " Reversing the Extraverted Leadership Advantage: The Role of Employee Proactivity". *Management* . 1 (2), 2.
- [2] Arief Chaidir Abdillah , Farid Wajdi. (2011). "The Effect of Leadership, Job Stress, Work Discipline, and Compensation with Employee Performance at the Primary Tax Office in Boyolali" . Essay, Surakarta Faculty of Economics and Business.
- [3] Arif Rahman Hakim, M. Yahya. (2014) . " Analysis of the Effect of Leadership Style, Work Motivation, and Compensation on Teacher's Performance at PPMI High School in Surakarta " . Thesis. Surakarta Faculty of Economics and Business.
- [4] Ghozali, Imam. (2009). *Application of Multivariate Analysis with the SPSS Program* . Semarang: Diponogoro University.
- [5] Hasibuan, Malayu. (2012). *Human Resource Management* . Jakarta: PT. Earth Literacy.
- [6] I Wayan Mudiarta Utama. (2013). " The Effect of Compensation, Leadership and Physical Work Environment on Employee Satisfaction of the Taman

Harum Hotel in Gianyar Ubud " . Essay. Gianyar School of Business Economics.

[7] Jane Skakon. ( 2010) . " Are leaders' well-being, behaviors and styles associated with affective well-being of their employees? A systematic review of

three decades of research "Work, Health, and Organizations . 24 (2), 2.

[8] Kadarisman. (2012). Compensation Management . Jakarta: Raja Grafindo Persada