

Analysis of Project Owner Satisfaction on the Performance of Supervisory Consultants on Road Construction Projects at Road and Bridge Maintenance Section of the Banjarbaru City Public Works Service, South Kalimantan

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Abstract. During the outbreak of Covid-19 disease, the Banjarbaru City Government allocates most of the APBD funds for handling Covid-19 (Refocusing) including funds for the implementation of road infrastructure from 2020 until 2021. For efficiency, the step taken is to combine several streets on different packages to become one with the same supervisory consultant package. Based on data, supervisory consultants are mostly domiciled outside Banjarbaru City. In addition viewed of the project location which supervised, location packages of construction work are quite far away from each other. In this Covid-19 pandemic condition, Banjarbaru city participated in implementing restrictions on community activities (PPKM) by blocking several city entry points. With these restrictions, communication between supervisory consultants and project owners during the implementation of work is less effective because mostly implemented online so that it can affect the performance of most supervisory consultants. Therefore, an analysis of job owner satisfaction with the performance of supervisory consultants on road construction in Banjarbaru City needs to be done, especially in this Covid-19 era.

The study was conducted by collecting primary data obtained through questionnaires on a sample of sources at Dinas Pekerjaan Umum Kota Banjarbaru (Cipta Karya & Bina Marga). Data were analyzed using the computer program SPSS version 26.00 (Statistical Product and Service Solution). To determine the level of participant satisfaction, the Customer Satisfaction Index (CSI) method is used. Meanwhile, to determine the service factors that need to be improved, the Importance Performance Analysis (IPA) method is used. The results of the respondents' answers in the questionnaire will be analyzed by using Importance Performance Analysis (IPA). Variables that located in zone A or the main priority will be the focus of determining the performance improvement strategy of supervisory consultants.

Based on an analysis of 3(three) indicators with the following levels of satisfaction: Administrative Indicators of 68.84% (Satisfied), Monitoring Indicators of 74.81% (Satisfied), and Ability Indicators of 73.78% (Satisfied). Based on the analysis results, the dominant factors in improving performance, including in quadrant A, are the reporting of work progress activities and reporting of the results of the supervisory consultant activities, the supervision factor for the work method of construction during Covid-19, the ability factor to be present in the midst of the government's policy of enforcing the Enforcement of Restrictions on Community Activities (PPKM) and the factor of communication and coordination ability with the project owner by minimizing direct contact (Virtual).

Keywords: Customer Satisfaction Index, Importance Performance Analysis, Supervising Consultant.

1. INTRODUCTION

The city of Banjarbaru is one of the cities in Indonesia that has just developed and is actively carrying out infrastructure development, one of which is road and bridge infrastructure. The implementation of road infrastructure for the government of Banjarbaru City for the 2020 and 2021 fiscal years through the Public Works and Spatial Planning Office of Banjarbaru City received quite large funds. However, along with the outbreak of the Covid-19 disease, the Banjarbaru City Government transferred most of the APBD funds for handling Covid-19 (Refocusing) including funds for the implementation of road infrastructure in 2020 and will continue in 2021. Changes in the ceiling of funds also affect the number of construction packages as well as supervising.

Judging from the location of the supervised work, the distance between each construction work package is quite far, while the supervising consultant personnel resources are limited. These matters affected the management of human resource mobilization in the field, mainly when the City of Banjarbaru carried out the Implementation of Restricting Community Activities (PPKM) several times by insulating and inspecting several points in Banjarbaru City, which affected the performance of supervising consultants who have domiciles outside the city of Banjarbaru. The consequence is the lack of effective communication between the supervising consultant and the project owner during the execution of the work because it is mainly carried out online. On the other hand, based on an audit carried out by the Supreme Audit Agency of the Republic of Indonesia (BPK-RI) in early 2021 for road construction projects that were implemented in 2020, there were findings of discrepancies between back-up data and installed volume in the field which were considered as overpayment with a value of 0.71% (zero point seven one percent) of the total contract for the entire road construction. Of these several things, it is necessary to question the extent to which the project owner is satisfied with the performance of the supervising consultant.

The research regarding the satisfaction of the project owner on the performance of the consultant has been carried out by several previous researchers, such as what was done by Harsian (2020), examining the performance satisfaction of the supervising consultant with the analytical method using multiple regression analysis, the number of samples available is 30 (thirty) consisting of Budget User Authorities, Activity Technical Implementation Officers and technical teams. The results of this study show that the project owner is satisfied; this can be seen from the Customer Satisfaction Index value obtained from the performance or service value produced by the supervisory consultant, which is 76.89% included in the Satisfaction category. In addition, research by Noor (2020) was conducted on an analysis of project owner satisfaction, in this case, BPJN XI Banjarmasin, on the performance of supervisory consultants who had supervised the work of the BBPJN XI Banjarmasin bridge project. From the results of the analysis that has been carried out using the Customer Satisfaction Index (CSI) method and the Importance Performance Analysis (IPA) method, it is known that the level of satisfaction with the supervisory consultant is classified as Satisfied with a value of 75.17% for CSI.

The difference between this research and the previous research is the analysis of the project owner's satisfaction with the performance of the supervisory consultant under study is different from the object and the respondent, where the thing that becomes the observation of the project owner's satisfaction is the performance of the supervisory consultant who supervises several roads in 1 (one) supervision package. Respondents consisted of 2 (two) different fields, the Bina Marga and Cipta Karya, where the implementation of work coincides with the outbreak of the Covid-19 pandemic. So based on the description of the background above and considering the critical role of the supervising consultant in controlling the quality of road construction, especially with the ongoing outbreak of Covid-19 in the future, it is felt necessary to analyze the job owner satisfaction with the performance of the supervising consultant on road infrastructure construction in Banjarbaru City.

2. RESEARCH METHOD

2.1 Preliminary Studies

This research required several stages, where the first stage started with studying the work contract between the PPK and the supervision consultant, conducting discussions, and seeking information regarding the implementation of the supervisory consultant contract with the project owner, in this case, the Bina Marga and the Cipta Karya, mainly during the Covid-19 pandemic season. The results focus on finding aspects of the supervisory consultant's performance that influence owner satisfaction. Preliminary studies are also carried out by taking sources from journals, books, texts, and applicable regulations and considering all related aspects to support this research.

2.2 Determination of Work Variables

The variables consist of the expectation variable and the satisfaction variable. Variable X is the satisfaction variable of supervising consultant's performance. Variable Y is an indicator of the expected performance of the supervisory consultant. The variables that are used as an assessment of these variables are:

1. Administrative Indicator
 - a. Documents qualification of experts
 - b. Work volume analysis
 - c. RMPK Response and Technical Specifications
 - d. Reporting on work progress activities and reporting on the results of the supervisory consultant's activities
 - e. Personnel Travel Recording
 - f. Vaccine Certificate
2. Supervision Indicator
 - a. Quality control of construction implementation
 - b. Supervised of work methods for construction implementation
 - c. Supervised of work time and progress
 - d. Monitoring the progress of financial absorption
 - e. Supervised of the implementation of K3, especially health conditions checking
3. Ability Indicator
 - a. Ability to be present in the midst of government policies imposing restrictions on community activities (PPKM)
 - b. Ability to analyze the design planning
 - c. Ability to use virtual zoom apps etc.
 - d. Ability to communicate and coordinate with the project owner by minimizing direct contact (Virtual)

2.3 Data Collection

2.3.1 Primary Data

1. Questionnaire

In this study, the assessment is divided into two categories, the evaluation of the consultant's performance and the evaluation of the consultant's performance expectations. Questionnaire design tables can be seen in Table 1 and Table 2. Answers are given based on the answer choices using a five-code weight value scale, as in Table 3.

Table 1. Performance Questionnaire Design

| Variable | No. | Question |
|--------------------------|-----|--|
| Administrative Indicator | 1.a | How accurate are the qualification documents for experts during the Covid-19 |
| | 1.b | How are the analysis of work volume |
| | 1.c | How are RMPK response and technical specifications during Covid-19 |
| | 1.d | How to report work progress activities and report the results of the supervisory consultant's activities during the Covid-19 |
| | 1.e | How is the recording of personnel travel during the Covid-19 |
| | 1.f | How is the fulfillment of personnel vaccination requirements by supervisory consultants |
| Supervision Indicator | 2.a | How to supervise the quality of construction during the Covid-19 |
| | 2.b | How to supervise construction work methods during the Covid-19 |
| | 2.c | How to monitor time and work progress during the Covid-19 |
| | 2.d | How to supervise the progress of financial absorption during the Covid-19 |
| | 2.e | How to supervise the implementation of K3, especially health conditions checking |
| Ability Indicator | 3.a | How is the ability to be present in the midst of government policies imposing restrictions on community activities (PPKM) |
| | 3.b | How is the ability to analyze the design planning |
| | 3.c | How is the ability to use the virtual zoom application etc |
| | 3.d | How is the ability to communicate and coordinate with the project owner by minimizing direct contact (Virtual) |

Table 2. Expected Performance Questionnaire Design

| Variable | No. | Question |
|--------------------------|-----|---|
| Administrative Indicator | 1.a | How important are the qualification documents for experts during the Covid-19 |
| | 1.b | How important is the analysis of work volume |
| | 1.c | How important are RMPK response and technical specifications during Covid-19 |
| | 1.d | How important is the way to report work progress activities and report the results of the supervisory consultant's activities during the Covid-19 |
| | 1.e | How important is the recording of personnel travel during the Covid-19 |
| | 1.f | How important is the fulfillment of personnel vaccination requirements by supervisory consultants |
| Supervision Indicator | 2.a | How important is the method of quality control of construction during the Covid-19 |
| | 2.b | How important is the method of supervising construction work methods during the Covid-19 |
| | 2.c | How important is the method of monitoring time and work progress during the Covid-19 |
| | 2.d | How important is monitoring of the progress of financial absorption during the Covid-19 |
| | 2.e | How important is supervision of the implementation of K3, especially health conditions checking |
| Ability Indicator | 3.a | How important is the ability to be present in the midst of government policies imposing restrictions on community activities (PPKM) |
| | 3.b | How important is the ability to analyze the design planning |
| | 3.c | How important is the ability to use the virtual zoom application etc |
| | 3.d | How important is the ability to communicate and coordinate with the project owner by minimizing direct contact (Virtual) |

Table 3. Respondent's Answer Weight Value Code

| Value | Code | Weight | |
|-------|------|-------------------|------------------|
| | | Performance | Expected |
| 1 | SP | Very Satisfied | Very Important |
| 2 | P | Satisfied | Important |
| 3 | CP | Quite Satisfied | Quite Important |
| 4 | TP | Dissatisfied | Not Important |
| 5 | STP | Very Dissatisfied | Very Unimportant |

Respondents used in this study were project owners consisting of Budget Users (PA), Commitment Making Officers (PPK), Activity Technical Implementation Officers (PPTK), Field Supervisors, Technical Managers, and Work Recipient Committees (PPHP) in the Office of Dinas Pekerjaan Umum Kota Banjarbaru (Bina Marga & Cipta Karya) with a cumulative number of 30 people.

Tests are conducted to measure the level of validity and reliability of data. The results of the questionnaire survey will be tested for validity with Spearman's rank and reliability testing with Cronbach's alpha.

2. Interview and Observation

Interviews with one of the elements of the project owner, as well as observations aimed at providing additional information on the construction implementation and improvement of the improvement strategy from this study.

2.3.2 Secondary Data

Secondary data is supporting data obtained from the framework of reference where in the documents are requirements related to the Covid-19 pandemic, contract quality plans, documentation, and activity reports, which will support analyzing factors in the performance of the supervising consultant.

2.4 Analysis Results and Improvement Strategy

Variables that are in zone A or main priority will be the focus of determining the performance improvement strategy of the supervising consultant.

2.4.1 Satisfaction Level Analysis

Analysis of the supervisory consultant's performance satisfaction level, using the CSI (Customer Satisfaction Index) method, this method will determine; 1. Determination of Mean Importance Score (MIS) and Mean Satisfaction Score (MSS); 2. Determine the Weight Factor (WF); 3. Determine the Weighting Score (WS); 4. Determining the value of the Customer Satisfaction Index (CSI) method is shown in Table 4.

Table 4. Satisfaction Index Value

| No. | CSI Value | Satisfaction Level |
|-----|------------|--------------------|
| 1. | 81%-100% | Very Satisfied |
| 2. | 66%-80.99% | Satisfied |
| 3. | 51%-65.9% | Quite Satisfied |
| 4. | 35%-50.99% | Dissatisfied |
| 5. | 0%-34.99% | Very Dissatisfied |

2.4.2 Priority Factor Analysis

Analysis of priority factors for improving the performance of supervisory consultants using the IPA (Importance Performance Analysis) method. This method measures the level of customer expectation in relation to what a company should do to produce high-quality products or services. IPA analysis is described in the form of a 2-dimensional Quadrant which is graphical and easy to interpret.

3. RESULTS AND DISCUSSION

3.1 Questionnaire Results

3.1.1 Respondents Profile

The sampling method in this study uses a purposive sampling technique. Consideration of selecting respondents based on competence, experience, and knowledge to assess the object being studied. Distribution is carried out by locking directly to respondents. The recapitulation of the number of respondents is detailed in Table 5.

Table 5. Respondents Sample Recapitulation

| No. | Institution | Total | Presentation |
|-------------------|--|-------|--------------|
| 1. | Pengguna Anggaran (PA) | 1 | 3.33% |
| 2. | Pejabat Pembuat Komitmen (PPK) | 2 | 6.67% |
| 3. | Pejabat Pelaksana Teknis Kegiatan (PPTK) | 3 | 10.00% |
| 4. | Pengawas Lapangan | 7 | 23.33% |
| 5. | Pengelola Teknis | 7 | 23.33% |
| 6. | Panitia Penerima Hasil Pekerjaan (PPHP) | 10 | 33.34% |
| Respondents Total | | 30 | 100% |

3.2 Summary of Instrument Testing Results

3.2.1 Validity Test Results

Validity test is used to measure the accuracy of the questionnaire instrument on the concept being analyzed. For degrees of freedom (df)= N-2, where N is the number of samples. It is known that $df = N - 2$, $df = 30 - 2 = 28$ with significant level (α) = 0.05, from the 28th df gets the value $r_{table} = 0.361$. Hypothesis; If $r_{count} > r_{table}$, then H_0 is rejected and H_a is accepted, and if $r_{count} < r_{table}$, then H_a is rejected and H_0 is accepted. The decisions used is if $r_{count} > r_{table}$, which means that there is a correlation between the research instruments or the questionnaire used is valid. The results of the validation test can be seen in Table 6.

Table 6. Coefficient Correlation Validity Test Results

| Item | Variable | Validity | | r_{table} | Result |
|------|--------------------------|-------------|----------|-------------|--------|
| | | r_{count} | | | |
| | | Performance | Expected | | |
| 1a | Administrative Indicator | 0.842 | 0.966 | 0.361 | Valid |
| 1b | | 0.774 | 0.902 | 0.361 | Valid |
| 1c | | 0.842 | 0.966 | 0.361 | Valid |
| 1d | | 0.516 | 0.966 | 0.361 | Valid |
| 1e | | 0.507 | 0.551 | 0.361 | Valid |
| 1f | | 0.773 | 0.828 | 0.361 | Valid |
| 2a | Supervision Indicator | 0.750 | 0.498 | 0.361 | Valid |
| 2b | | 0.802 | 0.737 | 0.361 | Valid |

| | | | | | |
|----|-------------------|-------|-------|-------|-------|
| 2c | | 0.541 | 0.854 | 0.361 | Valid |
| 2d | | 0.824 | 0.767 | 0.361 | Valid |
| 2e | | 0.750 | 0.854 | 0.361 | Valid |
| 3a | | 0.674 | 0.546 | 0.361 | Valid |
| 3b | Ability Indicator | 0.964 | 0.900 | 0.361 | Valid |
| 3c | | 0.964 | 0.738 | 0.361 | Valid |
| 3d | | 0.522 | 0.900 | 0.361 | Valid |

3.2.2 Reliability Test Results

Reliability testing with internal consistency approach using Cronbach's Alpha formula. The Alpha Cronbach formula is used because the results are more accurate and can approach the actual results. The greater the reliability coefficient obtained, the smaller the measurement error and the more reliable the measuring instrument will be used. Conversely, the smaller the reliability coefficient, the greater the measurement error and the less reliable the measuring instrument used (Azwar, 2013). The criteria for an item to be said to be reliable, according to Ghazali (2005), is > 0.6 . In order to simplify calculations, computational calculations using the SPSS program will be used, which can be seen in Table 7.

Table 7. Reliability Test Results

| No. | Variable | Reliability | | | Result |
|-----|--------------------------|-------------|----------|----------|----------|
| | | Performance | Expected | α | |
| 1 | Administrative Indicator | 0.794 | 0.930 | 0.6 | Reliable |
| 2 | Supervision Indicator | 0.774 | 0.790 | 0.6 | Reliable |
| 3 | Ability Indicator | 0.795 | 0.763 | 0.6 | Reliable |

3.3 Research Results Summary

3.3.1 Performance of Supervision Consultants Based on Respondents' Perceptions

Consultant Performance Analysis based on Respondents' Perception of Administration Indicators, using the SPSS computer program can be seen in Table 8.

Table 8. Consultant Performance Analysis based on Respondents' Perception of Administration Indicators

| No. | Variable | STP | TP | C | P | SP | Total | $\sum x$ | Mean |
|-----------------------------|--|-----|----|----|---|----|-------|----------|-------------|
| 1.a | How accurate are the qualification documents for experts during the Covid-19 | 0 | 7 | 9 | 7 | 7 | 30 | 104 | 3.47 |
| 1.b | How are the analysis of work volume | 2 | 4 | 7 | 5 | 12 | 30 | 111 | 3.70 |
| 1.c | How are RMPK response and technical specifications during Covid-19 | 0 | 7 | 9 | 7 | 7 | 30 | 104 | 3.47 |
| 1.d | How to report work progress activities and report the results of the supervisory consultant's activities during the Covid-19 | 7 | 5 | 9 | 2 | 7 | 30 | 87 | 2.90 |
| 1.e | How is the recording of personnel travel during the Covid-19 | 2 | 4 | 8 | 5 | 11 | 30 | 109 | 3.63 |
| 1.f | How is the fulfillment of personnel vaccination requirements by supervisory consultants | 0 | 6 | 10 | 7 | 7 | 30 | 105 | 3.50 |
| C-Line on the X-axis | | | | | | | | | 3.44 |

Consultant Performance Analysis based on Respondents' Perception of Supervision Indicators, using the SPSS computer program can be seen in Table 9.

Table 9. Consultant Performance Analysis based on Respondents' Perception of Supervision Indicators

| No. | Variable | STP | TP | C | P | SP | Total | $\sum x$ | Mean |
|-----------------------------|--|-----|----|----|----|----|-------|----------|-------------|
| 2.a | How to supervise the quality of construction during the Covid-19 | 0 | 2 | 10 | 11 | 7 | 30 | 113 | 3.77 |
| 2.b | How to supervise construction work methods during the Covid-19 | 0 | 2 | 15 | 7 | 6 | 30 | 107 | 3.57 |
| 2.c | How to monitor time and work progress during the Covid-19 | 1 | 1 | 9 | 10 | 9 | 30 | 115 | 3.83 |
| 2.d | How to supervise the progress of financial absorption during the Covid-19 | 0 | 0 | 14 | 9 | 7 | 30 | 113 | 3.77 |
| 2.e | How to supervise the implementation of K3, especially health conditions checking | 0 | 2 | 10 | 11 | 7 | 30 | 113 | 3.77 |
| C-Line on the X-axis | | | | | | | | | 3.74 |

Consultant Performance Analysis based on Respondents' Perception of Ability Indicators, using the SPSS computer program can be seen in Table 10.

Table 10. Consultant Performance Analysis based on Respondents' Perception of Ability Indicators

| No. | Variable | STP | TP | C | P | SP | Total | $\sum x$ | Mean |
|-----------------------------|---|-----|----|----|----|----|-------|----------|-------------|
| 3.a | How is the ability to be present in the midst of government policies imposing restrictions on community activities (PPKM) | 0 | 2 | 15 | 7 | 6 | 30 | 107 | 3.57 |
| 3.b | How is the ability to analyze the design planning | 1 | 1 | 9 | 10 | 9 | 30 | 115 | 3.83 |
| 3.c | How is the ability to use the virtual zoom application etc | 1 | 1 | 9 | 10 | 9 | 30 | 115 | 3.83 |
| 3.d | How is the ability to communicate and coordinate with the project owner by minimizing direct contact (Virtual) | 0 | 4 | 10 | 12 | 4 | 30 | 106 | 3.53 |
| C-Line on the X-axis | | | | | | | | | 3.69 |

3.3.2 Expected Performance of Supervision Consultants Based on Respondents' Perceptions

Table 11. Analysis of Consultant Performance Data based on Respondents' Expectations of Administrative Indicators

| No. | Variable | STP | TP | C | P | SP | Total | $\sum Y$ | Mean |
|-----|---|-----|----|---|---|----|-------|----------|------|
| 1.a | How important are the qualification documents for experts during the Covid-19 | 3 | 7 | 9 | 5 | 6 | 30 | 94 | 3.13 |

| | | | | | | | | | |
|-----------------------------|---|---|---|----|---|---|----|----|------------|
| 1.b | How important is the analysis of work volume | 3 | 8 | 10 | 4 | 5 | 30 | 90 | 3 |
| 1.c | How important are RMPK response and technical specifications during Covid-19 | 3 | 7 | 9 | 5 | 6 | 30 | 94 | 3.13 |
| 1.d | How important is the way to report work progress activities and report the results of the supervisory consultant's activities during the Covid-19 | 3 | 7 | 9 | 5 | 6 | 30 | 94 | 3.13 |
| 1.e | How important is the recording of personnel travel during the Covid-19 | 4 | 7 | 8 | 4 | 7 | 30 | 93 | 3.1 |
| 1.f | How important is the fulfillment of personnel vaccination requirements by supervisory consultants | 5 | 8 | 5 | 3 | 9 | 30 | 93 | 3.1 |
| C-Line on the Y-axis | | | | | | | | | 3.1 |

Table 12. Analysis of Consultant Performance Data based on Respondents' Expectations of Supervision Indicators

| No | Variable | STP | TP | C | P | SP | Total | $\sum Y$ | Mean |
|-----------------------------|---|-----|----|----|---|----|-------|----------|-------------|
| 2.a | How important is the method of quality control of construction during the Covid-19 | 5 | 7 | 5 | 5 | 8 | 30 | 94 | 3.13 |
| 2.b | How important is the method of supervising construction work methods during the Covid-19 | 2 | 8 | 10 | 4 | 6 | 30 | 94 | 3.13 |
| 2.c | How important is the method of monitoring time and work progress during the Covid-19 | 4 | 7 | 8 | 4 | 7 | 30 | 93 | 3.1 |
| 2.d | How important is monitoring of the progress of financial absorption during the Covid-19 | 3 | 7 | 9 | 5 | 6 | 30 | 94 | 3.13 |
| 2.e | How important is supervision of the implementation of K3, especially health conditions checking | 4 | 7 | 8 | 4 | 7 | 30 | 93 | 3.1 |
| C-Line on the Y-axis | | | | | | | | | 3.12 |

Table 13. Analysis of Consultant Performance Data based on Respondents' Expectations of Ability Indicators

| No. | Variable | STP | TP | C | P | SP | Total | $\sum y$ | Mean |
|-----|---|-----|----|---|----|----|-------|----------|------|
| 3.a | How is the ability to be present in the midst of government policies imposing restrictions on community activities (PPKM) | 0 | 4 | 6 | 11 | 9 | 30 | 115 | 3.83 |
| 3.b | How important is the ability to analyze the design planning | 2 | 2 | 7 | 7 | 12 | 30 | 115 | 3.83 |
| 3.c | How important is the ability to use the virtual zoom application etc | 0 | 4 | 9 | 13 | 4 | 30 | 107 | 3.57 |

| | | | | | | | | | |
|-----------------------------|--|---|---|---|---|----|----|-----|-------------|
| 3.d | How important is the ability to communicate and coordinate with the project owner by minimizing direct contact (Virtual) | 2 | 2 | 7 | 7 | 12 | 30 | 115 | 3.83 |
| C-Line on the Y-axis | | | | | | | | | 3.77 |

3.4 Performance Analysis of Supervisory Consultants in Road Infrastructure Construction in Banjarbaru City during the Covid-19 pandemic

3.4.1 Customer Satisfaction Index (CSI) Analysis

Table 14. Customer Satisfaction Index (CSI) Analysis of Administrative Indicators

| No. | MIS (Mean Y) | Weight Factor $\left(\frac{\text{MIS}}{\sum \text{MIS}} * 100\%\right)$ | MSS (Mean X) | Weight Score |
|---|-----------------|--|-----------------|--------------|
| 1a | 3.13 | 16.85 | 3.47 | 58.4 |
| 1b | 3 | 16.13 | 3.70 | 59.68 |
| 1c | 3.13 | 16.85 | 3.47 | 58.4 |
| 1d | 3.13 | 16.85 | 2.9 | 48.85 |
| 1e | 3.10 | 16.67 | 3.63 | 60.55 |
| 1f | 3.10 | 16.67 | 3.50 | 58.33 |
| Total | 20.67 | 100 | 20.67 | |
| Weight Total | | | | 344.22 |
| CSI Value = (WT/Maximum Value Likert Scale) | | | | 68.84 |

Table 15. Customer Satisfaction Index (CSI) Analysis of Supervision Indicators

| No. | MIS (Mean Y) | Weight Factor $\left(\frac{\text{MIS}}{\sum \text{MIS}} * 100\%\right)$ | MSS (Mean X) | Weight Score |
|---|-----------------|--|-----------------|--------------|
| 2.a | 3.13 | 20.09 | 3.77 | 75.67 |
| 2.b | 3.13 | 20.09 | 3.57 | 71.65 |
| 2.c | 3.10 | 19.88 | 3.83 | 76.19 |
| 2.d | 3.13 | 20.07 | 3.77 | 75.66 |
| 2.e | 3.10 | 19.88 | 3.77 | 74.87 |
| Total | 15.60 | 100 | 18.7 | |
| Weight Total | | | | 374.04 |
| CSI Value = (WT/Maximum Value Likert Scale) | | | | 74.81 |

Table 16. Customer Satisfaction Index (CSI) Analysis of Ability Indicators

| No. | MIS (Mean Y) | Weight Factor $\left(\frac{\text{MIS}}{\sum \text{MIS}} * 100\%\right)$ | MSS (Mean X) | Weight Score |
|---|-----------------|--|-----------------|--------------|
| 3.a | 3.83 | 25.44 | 3.57 | 90.75 |
| 3.b | 3.83 | 25.44 | 3.83 | 97.53 |
| 3.c | 3.57 | 23.67 | 3.83 | 90.75 |
| 3.d | 3.83 | 25.44 | 3.53 | 89.9 |
| Total | 14.77 | 100 | 15.07 | |
| Weight Total | | | | 368.92 |
| CSI Value = (WT/Maximum Value Likert Scale) | | | | 73.78 |

The CSI value means that the consumer states that they were "satisfied" with the performance of the supervising consultant. Although consumers generally state that they are "satisfied", it should be remembered that there is still a remaining percentage of consumers who express dissatisfaction with the performance of this supervisory consultant.

3.4.2 Important Performance Analysis (IPA)

Based on the average score (Mean), a Cartesian diagram quadrant is made to divide each indicator into variables using the X-axis points and Y-axis points (C-line) to identify all indicators in each Cartesian diagram quadrant that affect consultant supervisor performance, as shown in Figure 1 to Figure 3.

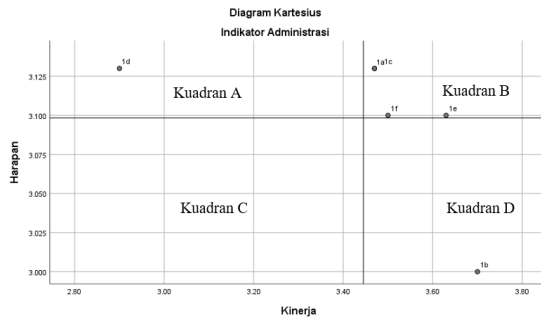


Figure 1. IPA Quadrant Division using Mean Score of Administrative Indicators

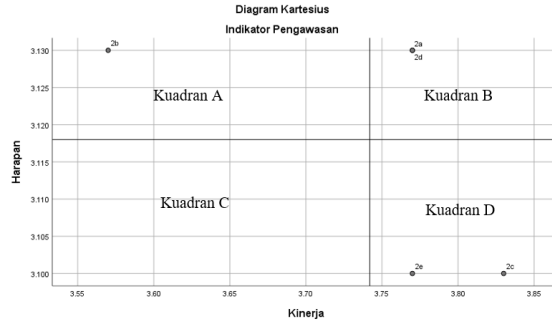


Figure 2. IPA Quadrant Division using Mean Score of Supervision Indicators

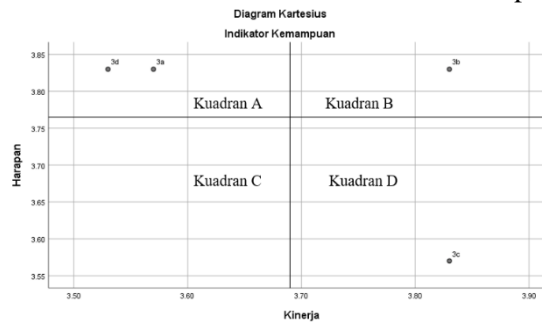


Figure 3. IPA Quadrant Division using Mean Score of Administrative Indicators

Table 17. Identification of Influential Factors Using the Mean Score in Quadrant A

| Quadrant | Administrative | Supervision | Ability |
|------------|--|---|--|
| Quadrant A | 1. Reporting on work progress activities and reporting on the results of the supervisory consultant's activities | 1. Supervised of work methods for construction implementation | 1. Ability to be present in the midst of government policies imposing restrictions on community activities (PPKM) Ability to communicate and coordinate with the project owner by minimizing direct contact (Virtual) |

3.5 Secondary Data

To find out the performance of the supervising consultant, the researcher also studied documents and interviewed the project owner, the Commitment Making Officer (PPK) in the

Development Sector. This interview aims to analyze how the consultant supervises the implementation of construction activities. To answer if the method of work has been stated in the TOR made by the PPK. That is important and related to the satisfaction owner, in this case, the KDP activities with the performance carried out by the consultant. The interviews indicated that the supervising consultant needed help managing personnel. Shown by the ability of the supervising consultant to always be present in the field cannot be adequately fulfilled. Likewise, with the lack of consultant soft skills such as good communication and coordination, in this case, the communication skills possessed by the consultant are expected to be a bridge for information between owners, contractors, construction workers, and the surrounding community so that sometimes some information is late or dismissed with the implementation of the project.

3.6 Performance Improvement Strategy

The references used to compile these recommendations are based on the conclusions of the IPA quadrant A analysis, as previously explained.

1. Administrative

Indicators of Reporting on work progress activities and reporting on the results of the supervisory consultant's activities during Covid-19 (1.d), the supervisory consultant is considered to be not optimal because the requested report is slow to be provided so the project owner cannot keep up to date information at any time. The Improvement Strategy is in terms of reporting work progress activities while implementing physical activities, and supervisory consultants must continue to develop themselves by improving personnel's soft skills by studying the latest technology such as online media, zoom, google meet, and online reporting. So that when it is necessary to report the progress of activities both verbally and in written form can be quickly obtained. In addition, the supervisory consultant must prepare administrative personnel who are reliable in making reports on the results of supervision activities, which is the obligation of the supervisory consultant about the terms of the contract.

2. Supervision

Indicators of Supervision of construction work methods during Covid-19 (2.b), the supervisory consultant is considered not optimal. Improvement Strategy by increasing coordination with contractors and project owners, such as discipline in implementing work methods and scheduling (time schedule) listed in the Construction Implementation Quality Plan (RMPK) document, which has been agreed upon, especially during the Covid-19 pandemic.

3. Ability

Indicators of Ability to be present amid government policy imposing Restrictions on Community Activities (PPKM) (3.a) supervisory consultants are considered to be still not optimal. The presence of the supervisory consultant at the work site still needs to be improved due to the lack of ability of the supervisory consultant to always be there at all times to supervise work to coordinate with the contractor. Improvement Strategy: a. Supervision consultants must be able to manage personnel, time, and costs. This is necessary so that any supervised construction work can run properly. Such as making arrangements for expert personnel assigned to the field; b. Adding mandatory habitation requirements for supervisory consultants who are domiciled outside the city of Banjarbaru if there is a policy of blocking entry and exit of Banjarbaru City in the Minutes of the Pre-Construction Meeting (PCM).

Indicators of the Ability to communicate and coordinate with the project owner by minimizing direct (Virtual) contact (3.d) is also considered not optimal because the consultant's ability to communicate and coordinate directly with related parties in construction projects is minimal; this is constrained due to the pandemic Covid-19 requires that the delivery of information cannot be

delivered in person or face to face. Improvement strategies for activities that require direct meetings/direct contact with large numbers of people, such as joint hospitalization/examination, the implementation of these activities must be carefully coordinated, especially field/location readiness so that the performance of these activities can be carried out in a short time. The condition of road construction work in an open space allows for the application of physical distancing following the Instruction of the Minister of Public Works and Public Housing Number: 2/IN/M/2020 concerning the Protocol to Prevent the Spread of Covid-19 in the Implementation of Construction Services.

4. CONCLUSIONS

Based on the analysis conducted in this study, the following conclusions are:

1. The results of the analysis carried out using the Customer Satisfaction Index (CSI) method on three indicators with 15 instruments concluded that the performance of the supervisory consultant who received the road infrastructure construction work package in the City of Banjarbaru in the Bina Marga and Cipta Karya Dinas Pekerjaan Umum dan Penataan Ruang of Banjarbaru City which, along with the current Covid-19 outbreak, can be categorized as satisfied with the following levels of satisfaction: Administrative Indicators of 68.84% (Satisfied), Supervision Indicators of 74.81% (Satisfied) and Ability Indicators of 73.78% (Satisfied).
2. Based on the results of the IPA analysis, there are 4 (four) instruments that are included in quadrant A (main priority), including administrative indicators, reporting on work progress activities, and reporting on the results of supervisory consultant activities. Supervision indicators: supervision of construction work methods during the Covid-19. Ability indicators: the ability to be present in the midst of government policies imposing restrictions on community activities (PPKM) and the ability to communicate and coordinate with project owners by minimizing direct contact.
3. Based on the results of this research analysis, strategies for improving the performance of supervisory consultants in order to provide satisfaction to project owners, especially during the Covid-19 pandemic outbreak, are:
 - a. Supervision consultants must continue to develop themselves by improving the quality of their skills both in terms of personnel soft skills training and the ability to use the latest technology as a means of communication and coordination. To meet the demands of a supervisory contract that has to supervise several packages of construction activities, it is necessary to properly manage the supervisory personnel resource management.
 - b. In carrying out their duties, especially in the era of the Covid-19 pandemic, supervisory consultants are required to comply with all rules related to health protocols set by the government and develop strategies for smooth supervision, especially for supervisory consultants who are domiciled outside the city.

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