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Performance Analysis of Planning Consultants Working on Projects in South Kalimantan

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ABSTRACT

The purpose of this study was to determine the factors that influence the performance of the planning consultant and to develop recommendations for improvement of these factors. There are 4 aspects that measure its performance, namely; 1) quality of planning documents, 2) aspects of planning time, 3) aspects of planning costs and 4) aspects of terms of reference. Therefore, this study uses 2 analytical methods, namely customer satisfaction index (CSI) importance-performance analysis (IPA). The results of the study indicate that there are several factors that affect the performance of the planning consultant and require priority handling, namely: (1) quality of planning documents: consistency between drawing documents, RKS, and engineer estimates, systematic presentation of design documents and considerations of technology availability and capabilities; and (2) terms of reference which consist of: data collection, spatial program structure, architectural design feasibility, final planning report, suitability of work experience with the position occupied. The recommended handling solution to overcome the performance problems of this planning consultant is to improve the competence of human resources. Human resources include planning consultants, architects and all parties involved in the project planning process, both institutionally managing and improving the management of the implementation of the planners.

Keywords: planning consultant, importance-performance analysis, customer satisfaction index

ABSTRAK

Tujuan dari penelitian ini adalah untuk mengetahui faktor-faktor yang mempengaruhi kinerja konsultan perencana dan menyusun rekomendasi untuk perbaikan faktor-faktor tersebut. Ada 4 aspek yang mengukur kinerjanya, yaitu; 1) kualitas dokumen perencanaan, 2) aspek waktu perencanaan, 3) aspek biaya perencanaan dan 4) aspek kerangka acuan. Oleh karena itu, penelitian ini menggunakan 2 metode analisis yaitu customer satisfaction index (CSI) important-performance analysis (IPA). Hasil kajian menunjukkan bahwa terdapat beberapa faktor yang mempengaruhi kinerja konsultan perencana dan memerlukan penanganan prioritas, yaitu: (1) kualitas dokumen perencanaan: konsistensi antara dokumen gambar, RKS, dan perkiraan insinyur, sistematika penyajian dokumen desain. dan pertimbangan ketersediaan dan kemampuan teknologi; dan (2) kerangka acuan yang terdiri dari: pendataan, struktur program tata ruang, kelayakan desain arsitektur, laporan perencanaan akhir, kesesuaian pengalaman kerja dengan jabatan yang diduduki. Solusi penanganan yang direkomendasikan untuk mengatasi permasalahan kinerja konsultan perencana ini adalah dengan meningkatkan kompetensi sumber daya manusia. Sumber daya manusia meliputi konsultan perencanaan, arsitek dan semua pihak yang terlibat dalam proses perencanaan proyek, baik secara kelembagaan mengelola maupun meningkatkan manajemen pelaksanaan para perencana.

Kata kunci: konsultan perencana, importance-performance analysis, customer satisfaction index

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1 INTRODUCTION

Diputra (2009) summarized the 10 points above into 4 variables, namely: 1) planning document quality variable, 2) planning time variable, 3) planning cost variable and 4) term of reference (TOR) variable. According to Diputra, the performance appraisal hierarchy as described above can be used to classify the level of performance of the planning consultant. That is, if the assessment standards as above are not met, it can be said that the performance planning consultant is not in accordance with the standards that have been set. That is, there are many factors that determine the success or failure of a construction project. Even said that in addition to the problem of weak supervision, cost overruns and delays in the completion of construction projects were caused by poor planning and management assistants as well as the performance of project planning consultants. Another problem that shows how weak the performance of planning consultants is is that there are still many planning consultants who do not master the required expertise and skills, so that the quality of planning is poor. (Nurhadi, 2017).

In South Kalimantan Province, based on the South Kalimantan Economic Report issued by Bank Indonesia in February 2021 (BI, 2021), the rate of economic growth and population growth has implications for increasing development programs launched by the Government. Along with the mining and manufacturing sectors, there has been a significant increase in construction projects, both for buildings, roads and bridges, which require planning consultants who meet the requirements as regulated by law. This is understandable, because since East Kalimantan was proclaimed as the New State Capital, based on PUPR Statistical Information data (2020), the growth of the construction sector (especially roads, buildings and bridges) in Kalimantan is quite high (PUPR, 2020).

The increasing number of construction projects in South Kalimantan automatically requires the involvement of planning consultants (individuals and legal entities), to ensure that each development program that is prepared meets quality standards in terms of cost, time and quality. This is because planning consultants have a very strategic task, namely to plan and design construction projects in accordance with what has been determined. In addition, the planner has the duty to provide advice and consideration of everything related to the development of the project to the owner. The planner is also tasked with providing answers and explanations for things that are not clear on the plan drawings and work plans and requirements (RKS), make revised drawings when there are changes to plans in the project. The planning work includes various matters related to architectural, structural, mechanical and electrical planning, budgeting and providing necessary advice in the implementation of development.

However, due to the lack of planning consultants who have the required standard qualifications, it is feared that the quality of existing construction projects in South Kalimantan will also be low. Based on the online website of the Indonesian National Association of Consultants (Inkindo), namely ktaonline.inkindo.org, it can be known at least until the end of 2021, there are 118 planning consultants from 118 companies engaged in the planning consulting services sector. This data does not include planning consultants who are members of the Association of Indonesian Consultants (Perkindo) and individual consultants. This number is certainly a much lower percentage when compared to the relatively high growth of construction projects in South Kalimantan. Several research studies also have been conducted in terms of consultant performance (Noviani, 2001) (Djamaluddin, 2015) (nOOR, 2020).

Therefore, this research is needed to analyze the performance of planning consultants in South Kalimantan. The performance analysis is based on the parameters of the planning consultant's performance level, as well as identify the factors that affect the performance of the planning consultants and to determine what strategic steps are most appropriate to improve performance of planning consultant on construction projects. Thus, the results of this research should help to improve the quality of construction projects in South Kalimantan.

2 RESEARCH METHODS

The formulation and objectives to be achieved are to find out how the performance of the planning consultant is, what are the factors that affect the performance of the planning consultant, and how to improve the performance of the planner. This research is a survey research method with a questionnaire that has a scope regarding the process of implementing planning consulting on construction projects in South Kalimantan. This research was conducted using a systematic way of observing, collecting data, analyzing all the information obtained and making conclusions.

In this study, there are several requirements that are used as respondents, namely people who are directly related to the planning of construction projects and planning consulting services, such as PPK (Commitment Making Officer), PPTK (Technical Implementation Officer) and Technical Staff. Contractors (supervisors and implementers) were not selected as one of the respondents, because this study wanted to focus on looking at the performance of the planning consultant from the perspective of the project owner only. After the questionnaires were distributed, there were 40 respondents.

The stage of this research is the analysis stage of all data collected through questionnaires to select statistical tests to be used in analyzing the data, so the type of data has an important role. The type of data will determine the type of statistical test used. In statistics, data is a characteristic, symbol or number of a variable being measured. The analysis carried out at this stage is an analysis of the answers to research questions given to all respondents, the formulation of which has been described in the preliminary description, namely to determine the factors that affect the performance of the planning consultant, what are the factors that affect the level of the planning consultant's performance on the results. construction project planning in South Kalimantan.

The next step taken at this stage is to develop recommendations and priorities for improvement or strategies for handling in the field for the factors that become research findings related to factors affecting the performance of planning consultants in planning construction projects in South Kalimantan. At this stage, strategic steps will be explained to avoid the occurrence of the same factors or problems that can affect the performance of the construction project planning process in South Kalimantan.

3 RESULTS AND DISCUSSION

3.1 Data Analysis

The following is a description based on the results of the Customer Satisfaction Index (CSI) analysis of the research instrument that had previously been given to the respondents through a questionnaire. Based on the previous explanation, there are 4 variables that are the focus of this research. The four variables are 1) planning document aspect, 2) planning time aspect, 3) planning cost aspect and 4) term of reference aspect, will be measured using the customer satisfaction index (CSI) value parameter as described previously in. Next, is to determine the calculation of the performance of the planning consultant on the project in Kalimantan using CSI analysis. Analysis of the Customer Satisfaction Index (CSI) of the planning consultant performance could be seen on Table 1 until Table 4.

Table 1. Analysis of the Customer Satisfaction Index (CSI) on the Quality Aspects of Planning Documents

No	Indicator	MIS (mean y)	Weight Factor (MIS/∑MISx100%)	MSS (mean x)	Wieight Score (WFxMSS)
1	Consistency between drawing documents, RKS, and Engineer Estimate.	3.75	7.25	3.65	26.45
2	Consistency between architectural drawings, structural drawings and MEP drawings.	3.68	7,10	3.73	26.45
3	Consistency in the use of symbols, notations and units.	3.90	7.54	3.85	29.01
4	the accuracy of the use of scale on the image	3.40	6.57	3.53	23.16
5	Planning conformity with government regulations.	3.98	7.68	3.78	29,00
6	The results of the calculation of the bill of quantity and estimated costs in planning.	4.10	7.92	3.83	30,30
7	Systematic presentation of design documents.	3.70	7.15	3.68	26.28
8	Use of 3D visualizations/mockups.	4.03	7.78	3.88	30,14
9	Consideration of material availability in the field.	4.08	7.87	3.93	30.91
10	Consider the availability and capabilities of human resources	3.68	7,10	3.78	26.81
11	Consideration of technology availability and capability	3.90	7.54	3.78	28.45
12	The use of modular shapes and sizes.	3.43	6.62	3.93	25.98
13	Consideration of the impact of planning on the environment	3.25	6.28	3.83	24.02
14	Consideration of the ease of maintenance and operation of the building.	2.90	5.60	3.88	21.71
	Total	**51.75**	**100**	**53.00**	
	***Total Weight*(WT)**				**378.67**
	Value of Customer Satisfaction Index (CSI) = (WT/Maximum Value of Likert Scale)				**75.73**

Table 2. Analysis of the Customer Satisfaction Index (CSI) on the Planning Time Aspect

No	Indicator	MIS (mean y)	Weight Factor (MIS/∑MISx100%)	MSS (mean x)	Wieight Score (WFxMSS)
15	Systematics of scheduling	3.40	25,19	3.88	91.69
16	Determination of rational time allocation	3.43	25.37	3.93	117.25
17	Accuracy of document completion at every planning stage	3.38	25.00	3.73	85.57
18	Timely submission of planning documents	3.30	24.44	3.65	100,80
	Total	**13.50**	**100**	**15.18**	
	***Total Weight*(WT)**				**379.52**
	***Customer Satisfaction Index*/CSI = (WT/Maximum Value Likert Scale**				**75,90**

Table 3. Analysis of the Customer Satisfaction Index (CSI) on the Planning Cost Aspect

No	Indicator	MIS (mean y)	Weight Factor (MIS/∑MISx100%)	MSS (mean x)	Wieight Score (WFxMSS)
19	The suitability of the type of cost with the needs of the project	3.63	24.29	3.78	26.45
20	Conformity of the method of calculating personnel costs with regulations	4.00	26,80	4.38	26.45
21	The suitability of the type of cost with the needs of the project	3.68	24.62	3.48	29.01
22	The suitability of the type of cost with the needs of the project	3.63	24.29	4.15	23.16
	Total	**14.93**	**100**	**15.78**	
	Total Weight				**395,30**
	***Customer Satisfaction Index*/CSI = (WT/Maximum Score Likert Scale)**				**79.06**

Table 4. Analysis of the Customer Satisfaction Index (CSI) on the Term of References Aspect

No	Indicator	MIS (mean y)	Weight Factor (MIS/∑MISx100%)	MSS (mean x)	Wieight Score (WFxMSS)
23	Data collection	4.05	4.72	3.75	17.69
24	Design concept	3.60	4.19	3.70	15.52
25	Planning work program.	3.90	4.54	4.15	18.85
26	Site planning	3.75	4.37	3.85	16.82
27	Space program arrangement.	3.95	4.60	3.75	17.25
28	Estimated cost (globally)	3.35	3.90	4.05	15,80
29	Licensing	3.80	4.43	4.05	17.93
30	Planning report	4.30	5.01	4.05	20.28
31	Feasibility of design in terms of architecture.	4.00	4.66	3.80	17.70
32	Feasibility of the design in terms of structure and utility.	3.95	4.60	3.95	18,17
33	Explanation of the use of building materials	3.95	4.60	4.05	18.63
34	More detailed cost estimates.	3.75	4.37	3.70	16,16
35	More detailed technical specifications.	4.15	4.83	4.05	19.58
36	Making detailed pictures	3.60	4.19	3.75	15.72
37	Work plan and terms	4.00	4.66	4.05	18.87
38	Details of the volume of work execution.	4.25	4.95	4.15	20.54
39	*Engineer Estimates.*	3.45	4.02	3.85	15.47
40	Planning Final Report.	4.05	4.72	3.85	18,16
41	The suitability of the number of experts with the needs of the project.	4.30	5.01	4.45	22.29
42	Conformity between the disciplines of the field of work handled.	3.85	4.48	3.65	16.37
43	Suitability of work experience with the position occupied.	3.95	4.60	3.90	17.94
44	Personnel Certification	3.90	4.55	3.93	17.87
	Total	**85.85**	**100**	**86.48**	
	Total Weight				**393.63**
	***Customer Satisfaction Index*/CSI = (WT/Maximum Score Likert Scale)**				**78.73**

Based on the average score (Mean) from Table 1 until Table 4, a Cartesian diagram quadrant will be made to divide each indicator on the variable using the X-axis points and the Y-axis points (C-line) which have been discussed in the previous description. This C-line serves to identify all indicators in each quadrant of the Cartesian diagram that affect the performance of planning consultants in project planning in South Kalimantan. The division of the Importance-Performance Analysis (IPA) quadrant uses the SPSS 20.0 program to determine the Cartesian diagram using the average score (Mean). This diagram is used to describe the variables and a number of indicators that are considered to affect the performance of planning consultants on projects in South Kalimantan as shown in Figure 1 until Figure 4.

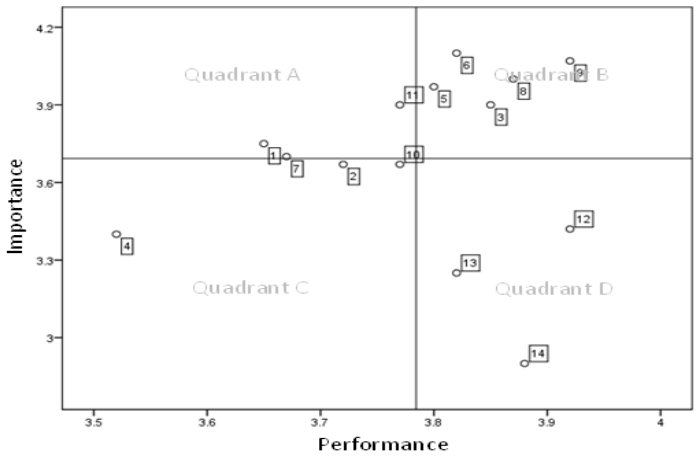

Figure 1. Division of the IPA Quadrant Using the Mean Score on the Quality of Planning Documents

Figure 1 above shows that there are indicators in all quadrants that influence especially in quadrant A (concentrate here) and quadrant C (low priority) on the performance of planning consultants on the quality aspect of planning documents. In Figure 1, indicator that need to be considered are (1) Consistency between drawing documents, RKS, and Engineer Estimate; (7) Systematic presentation of design documents, and (11) Consideration of technology availability and capability.

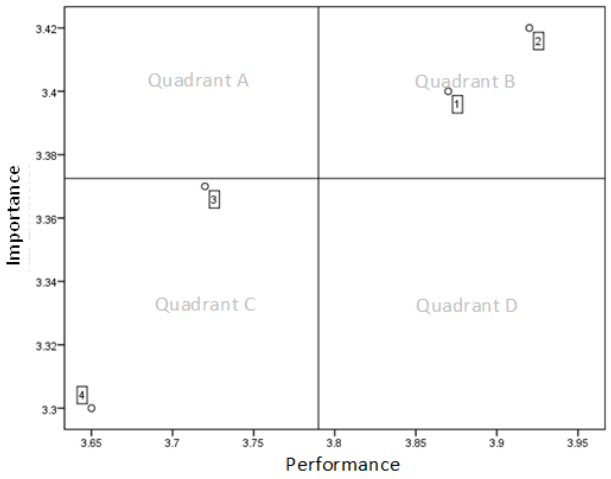

Figure 2. Division of the IPA Quadrant Using the Mean Score on the Planning Time

According to Figure 2 above, it can be seen that there are only quadrants, namely in Quadrant B (Quadrant that must be maintained) in Quadrant C (Low priority quadrant). Based on the planning time aspect in the figure above, it shows that the indicators contained in quadrant C can be a concern for improvement priorities, but can also be ignored. In Figure 2, there is none of the indicator that need to be considered. This fact also could be found on the Planning Cost Aspect as can be seen on the Figure 3.

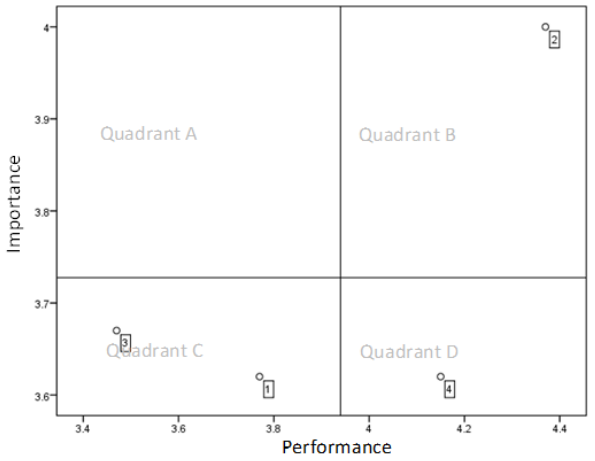

Figure 3. Division of the IPA Quadrant Using the Mean Score on the Planning Cost Aspect

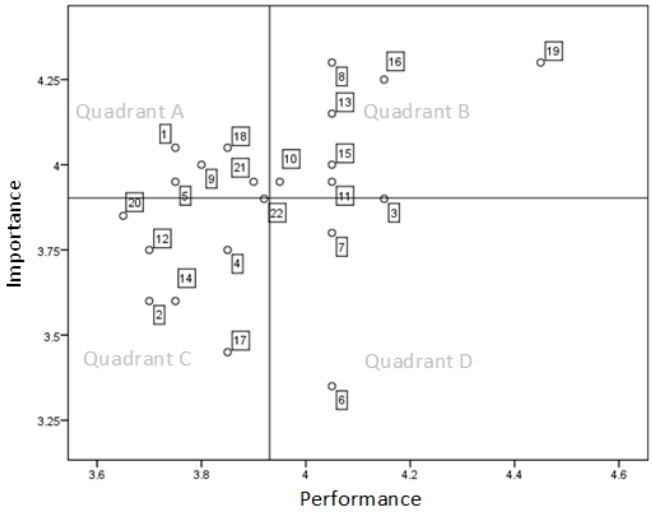

Figure 4. Division of the IPA Quadrant Using the Mean Score on the Term of References

Based on Figure 4 above, it can be concluded that in Quadrant A (the main priority quadrant) there are 5 important indicators that are considered to have an effect on the performance of the planning consultant. All indicators in this quadrant (concentrate here) must be prioritized for improvement, so that the performance of the planning consultants on projects in South Kalimantan can run as expected. Indicator that needs to be considered are (1) Data collection; (5) Spatial program arrangement; (9) Feasibility of design in terms of architecture; (18) Final planning report, and (21) Suitability of work experience with the position occupied.

Referring to the division of the Importance Performance Analysis (IPA) quadrant using the Mean Score as described in Table VI.31 above, it can be concluded that there are 5 Concentrate Here variables (Quadrant A top priority), and 7 indicators contained in the Low Priority Quadrant (low priority quadrant). The indicators in quadrant A must receive top priority for improvement, which will be described in the next chapter regarding recommendations for improvement, while the indicators in quadrant C can be ignored, because their effect on the consultant's performance in terms of references is not significant. Based on the quadrant division above, it means that there are 5 important indicators that must be taken seriously, so that the performance of planning consultants on projects in South Kalimantan can be improved.

4 CONCLUSION

Based on the analysis conducted in this study, it can be concluded that several indicators have various influences on the performance of planning consultants in project planning in South Kalimantan, so that the following conclusions can be drawn:

1. There are 4 variables with 44 indicators as factors that determine the level of performance of planning consultants in project planning in South Kalimantan. The 4 variables are the quality of planning documents, planning time, planning costs and terms of reference.
2. This study succeeded in identifying 8 dominant factors that affect the performance of planning consultants, namely:
   a. In terms of the quality of the planning document, it consists of: 1)consistency between drawing documents, rks, and engineer estimates, 2) systematic presentation of design documents, and 3) consideration of technology availability and capabilities;
   b. On the aspect of terms reference consists of: 1) data collection, 2) spatial program arrangement, 3) architectural feasibility of design, 4) final planning report, and 5) suitability of work experience with the position occupied
3. Based on the results of this study and interviews with one of the project owners, strategies to improve the performance of consultants in the aspect of planning documents are:
   a. There needs to be monitoring of the results of the planning drawing document by the owner
   b. The planning consultant coordinates with the owner regarding planning documents
   c. The need for the planning consultant to haveability and knowledge to identify project needs.
   d. In the Term of References Aspect, the consultant is obliged to place expert personnel in accordance with their competence (field of expertise/skills).

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