Optimasi biaya tenaga kerja proyek jalan pada kontraktor jalan kelas besar

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Abstrak

Tujuan penelitian ini unluk mengetahui komposisi biaya tenaga kerja yang optimal pada proyek jalan raya dengan membuat pemodelan komposisi tenaga kerja. Penelitian dilakukan di Jakarta, dengan obyek kontraktor jalan kalas besar di Jakarta. Jumlah sampel 45 proyek jalan yang dibangun di wilayah Indonesia dalam kurun waktu tahun 2000 - 2004, dipilih secara acak. Analisis data menggunakan regresi sederhana dan jamak, setelah terlebih dulu dilakukan uji persyaratan analisis normalitas. Analisis probabilitas menggunakan bantuan program Crystal! Ball dan optimalisasi menggunakan program Opquesl.

Penelitian menyimpulkan bahwa : (1) kinerja biaya material, kinerja biaya tenaga kerja, klneria biaya alat, kinerja biaya sub kontraktor, dan kinerja biaya overhead Iapangan Secrara bersama-Sama ikut menentukan kinerja biaya pelaksanaan proyek jalan, sehingga jika kinerja biaya pelaksanaan proyek akan ditingkatkan maka kinerja biaya material, kinerja biaya tenaga kerja, kinerja biaya alat, kinerja biaya sub kontraktor, dan klnerja biaya overhead Iapangan secara bersama-sama perlu ditingkatkan. (2) kinerja biaya tenaga kerja ikut mernberikan Kontribusi positif terhadap kinerja biaya pelaksanaan proyek jalan. Artinya, makin tinggi kinerja biaya tenaga kerja maka semakin baik kinerja biaya pelaksanaan proyek jalan, sehingga jika kinerja biaya pelaksanaan proyek akan ditingkatkan maka kinerja tenaga kerja perlu ditingkatkan. (3) pada proyek jalan, bobot biaya tenaga kerja ikut menentukan kinerja biaya tenaga kerja. Artinya, semakin tepat dalam perenoanaan bobot biaya tenaga kerja maka semakin baik kineaja biaya tenaga kerja. Sehingga jika kinerja tenaga kerja akan ditingkatkan maka ketepatan dalarn estimasi biaya tenaga kerja perlu ditingkatkan. (4) rekaman data proyek jalan yang telah selesai dapat digunakan untuk mengoptimasi biaya proyek jalan. Sehingga kontraktor perlu melakukan rekaman data setiap kejadian selama pelaksanaan proyek benangsung. (5) besarnya bobot biaya tenwa keija yang optimal dan aman pada proyek jalan dalam batasan 6,52% sampai 11%. Dengan demikian bila kontraktor akan mengoptimalkan biaya pelaksanaan proyek jalan, malta untuk biaya tenaga kerja tidak boleh melewati batas tersebut. (6) dari analisis data proyek berdasarkan bobot tenaga kerja optimal, nilai kontrak, dan lokasi proyek, diclapat suatu pengelompokan proyek Pengelompokan proyek jalan berdasarkan biaya tenaga kerja yang optimal dan aman dengan kondlsi: (a) Proyek jalan tersebut mempunyai nilai kontrak di bawah 10 milyar rupiah dan berada di Sumatra, Jawa, dan Sulawesi. (b) Proyek jalan tersabut mempunyai nilai kontrak lebih dari 10 mllyar dan berada di Jawa, Sulawesi, dan NTT.

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This research purposed to identity optimal labor cost composition in road project by using labor composition modeling. The research conducted in Jakarta, with object of leading road contractor in Jakarta. The total amount of sample are 45 road projects constructed in Indonesia area for time period of 2000 to 2004, and was random selected. Data analysis conducted by using simple and multiple regressions by previously conducting normality analysis requisite test. Probability analysis by using of Crystal Ball program and

optimized with Op quest program.

The research concludes that : (1) material cost, labor cost equipment cost, subcontractor cost and held overhead cost performances simultaneously determines the cost of road proyect realization. Therefore if of project realization cost performance should be increased thus performances of mattered, labor equipment subcontractor and tiled overhead cost should be increased simultaneously. (2) Labor cost performance also gives positive contribution toward cost performance of road project realization. By definition, the higher the labor cost performance the better cost preference of road project realization. Therefore, if cost performance of project realization would be increased then labor cost performance of road project realization need to be increased. (3) ln road project, charge of labor cost also determines labor cost preference. lt meant that, the more accuracy the charge plan of labor cost the better the labor cost performance. Therefore, if labor performance would be increased the accuracy of labor cost estimation need to be increased (4) Data record of the highway project had done, can be used to optimize cost of highway project. Therefore, the contractor need to do data recording in every situation during the accomplishment of the project. (S The percentage of optimize and secure labor cost in highway project is in the limit between 6.52% - 11%. Therefore, lf the contractor would be optimized the cost of project realization, the labor cost couldn?t pass that limit. (6) Classification of precut based on optimal labor composition, contract value, and project location. Road project classification base on the optimize and secure labor cost with these conditions : (a) The road project has under 10 billion rupiah contract value and located in Sumatra, Java, and Sulawesi. (b) The road project has over 10 billion rupiah contract value and located in Java, Sulawesi and NTT.