CHAPTER V

CONCLUSIONS

Conclusions and recommendations of the research on this is "The Analysis Of Forman Performance on Quality Management Implementation in Yogyakarta Construction Project". Conclusion of the results of research conducted and suggestions will be outlined as follows:

5.1. Conclusions

1. The results of the analysis of the description known to most respondents of respondents (70.0%) to assess the ability of the indicator variable-foreman who worked on construction projects in Yogyakarta, often.

2. The results of the OLS regression obtained R^2 of 0.453means that the dependent variable in a model that is performance-foreman who worked on construction projects in Yogyakarta explained by the independent variable is the variable education, experience, motivation, and discipline of 45.3%, while the rest of 54.7%is explained by other variables outside the model

3. The results of multiple linear regression analysis produced a regression equation is

    $$Y = 0.549 + 0.701\ X1 + 0.024\ X2 + 0.115\ X3 + 0.046\ X4$$

    demonstrate that education, experience, motivation, and discipline have a significant influence on the ability of foreman who worked on construction projects in Yogyakarta. This can be interpreted, if the education,

experience, motivation, and discipline increases, the ability of foreman who worked on construction projects in Yogyakarta will also increase.

5.2. Suggestion

1. Management of construction projects in Yogyakarta more direct foreman capabilities in ways to implement the planning, implementation, Inspection, and quality assurance to the foreman who still lacking.

2. The results of multiple linear regression analysis showed that education, experience, motivation, and discipline have a significant effect on the ability of foreman who worked on construction projects in Yogyakarta.

3. Project management to consider the application of the "Punish & rewards" to motivate more targeted to the foreman to achieve the quality as expected

4. Project management in order to review the remuneration system that both parties benefit equally

This can be interpreted, if the education, experience, motivation, and discipline increases, the ability of foreman who worked on construction projects in Yogyakarta will also increase.

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QUESTIONNAIRE OF THE ANALYSIS OF FOREMAN PERFORMANCE ON QUALITY MANAGEMENT IMPLEMENTATION IN YOGYAKARTA CONSTRUCTION PROJECT

1. Respondent data

Age(umur)   :

    a. < 30 years/tahun   c. 35-40 years/tahun

    b. 30-35 years/tahun   d. > 40 years/tahun

Last Graduate (pendidikan terakhir) :………………….

Year of working experience in construction project
(pengalaman kerja dalam proyek konstruksi):

    a. < 5 years / tahun   c. 10-15 years / tahun

    b. 5-10 years / tahun   d. >15 years / tahun

Number of project you have involved with
(jumlah proyek yang pernah ditangani):

    a. < 2 project   c. 5-10 project

    b. 2-5 project   d. > 10 project

The last project type that you handled
(type proyek terakhir yang ditangani):

    a. House / Rumah

    b. Building / Gedung

    c. Road and Bridge / Jalan dan Jembatan

    d. Dam

    e. Others (Please specify) / lain-lain (sebutkan)

        e.1. …………………………………….

        e.2. …………………………………..

        e.3. …………………………………...

What you included in the foreman

(anda termasuk dalam kelompok mandor apa):

- a. Stone / batu
- b. Concrete / beton
- c. Wood / kayu
- d. Iron / besi
- e. steel / baja
- f. electricity / listrik
- g. Others (Pleace specify)/dll(sebut)

....

2. **Application of quality management**

Based on your work experience, how the application of quality management in construction site. mark (√) on the frequency of application you choose.

(berdasarkan pengalaman kerja Anda, bagaimana penerapan manajemen kualitas di lokasi konstruksi. beri tanda (√) pada frekuensi penerapan yang anda pilih)

1 For very rare /sangat jarang

2 For Rarely / jarang

3 For Sometimes / kadang-kadang

4 For Often / sering

5 For Very Often / sangat sering

A. Charakteristics foreman

No	Problem	Frekuensi				
		1	2	3	4	5
1	Payments for foreman received pursuant to an acceptable workload / Pembayaran yang diterima sesuai dengan beban pekerjaan yang diterima					
2	Discipline foremen at construction site / Penerapan disiplin mandor di lokasi proyek konstruksi					
3	Achieving expected quality supposedly / Pencapaian kualitas seperti yg diharapkan					
4	The application of sanctions to the foreman if any quality deviations / Penerapan sangsi kepada mandor jika ada penyimpangan kualitas					
5	The application of the use of protective clothing at the construction project site / Penerapan penggunaan pakaian pengaman dilokasi proyek konstruksi					

B. Ability forman

No	Problem	Frekuensi				
		1	2	3	4	5
6	Ability of foreman to implement quality management through planning / Kemampuan mandor menerapkan manajemen kualitas melalui perencanaan					
7	Ability of foreman to implement quality management through inspection / Kemampuan mandor menerapkan manajemen kualitas melalui pemeriksaan					
8	Ability of foreman to implement quality management through assurance / Kemampuan mandor menerapkan manajemen kualitas melalui penjaminan					

C. Quality of planning

No	Problem	Frekuensi				
		1	2	3	4	5
9	Understanding of foreman regarding the design drawing / Pemahaman mandor terhadap gambar rancangan					
10	Understanding of foreman regarding the scope of work / Pemahaman mandor terhadap lingkup pekerjaan					
11	Understanding of foroman the stages regarding the job / Pemahaman mandor terhadap tahapan pekerjaan					

D. Quality control

No	Problem	Frekuensi				
		1	2	3	4	5
12	Implementation readiness inspection equipment / Penerapan pemeriksaan kesiapan peralatan					
13	The application checks the measurement results / Penerapan pemeriksaan hasil pengukuran					
14	The application checks the quality of goods / Penerapan pemeriksaan kualitas barang					
15	The application checks the work sequences / Penerapan pemeriksaan urutan pekerjaan					
16	The application checks the completeness of the work / Penerapan pemeriksaan terhadap kelengkapan pekerjaan					

17	The application checks the quality of the work results / Penerapan pemeriksaan kualitas pekerjaan hasii					

E. Quality assurance

No	Problem	Frekuensi				
		1	2	3	4	5
18	The improvement work / Adanya perbaikan pekerjaan					
19	Demand changes / Adanya permintaan perubahan					
20	The existence of the correction process for quality improvement / Adanya proses koreksi untuk peningkatan kualitas					

3. Opinions of respondents

Circle your answer and give your opinion explanation(lingkari jawaban anda dan beri penjelasan pendapat anda)

1. Should work experience to improve the management quality (Perlukah pengalaman kerja untuk meningkatkan manajemen kualitas)

   a. Very Need/sangat Perlu

   b. Need/ perlu

   c. Us need/sedang

   d. Little need/sedikit perlu

   e. No need/tidak perlu

   Reason/alasan……………………………………………………………

2. Do you think it necessary education to improve the quality of management (menurut anda perlukah pendidikan untuk meningkatkan manajemen kualitas)

   a. Very Need/sangat Perlu

   b. Need/ perlu

   c. Us need/sedang

   d. Little need/sedikit perlu

   e. No need/tidak perlu

   Reson/alasan……………………………………………………………

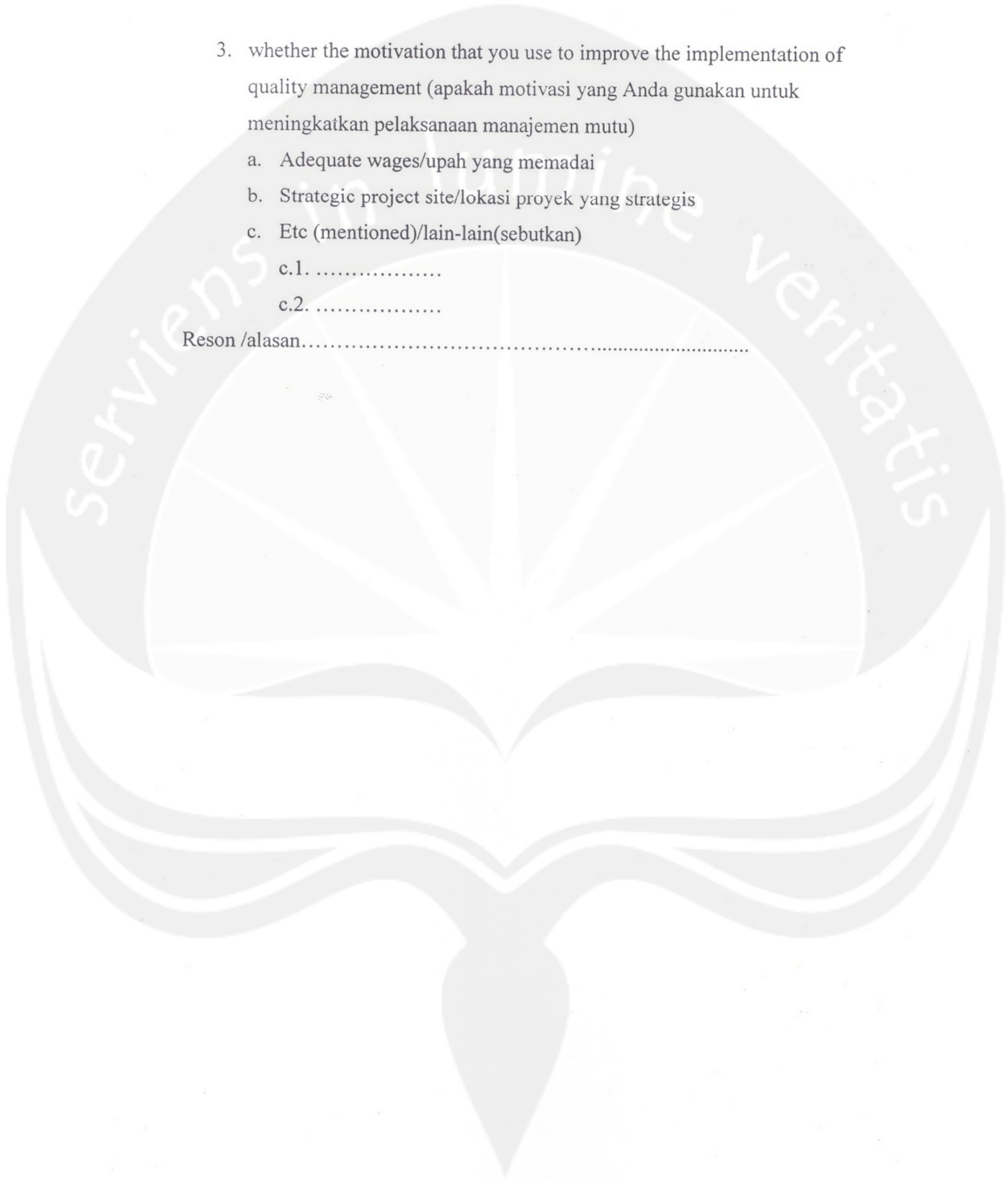3. whether the motivation that you use to improve the implementation of quality management (apakah motivasi yang Anda gunakan untuk meningkatkan pelaksanaan manajemen mutu)
   a. Adequate wages/upah yang memadai
   b. Strategic project site/lokasi proyek yang strategis
   c. Etc (mentioned)/lain-lain(sebutkan)

      c.1. ………………

      c.2. ………………

Reson /alasan………………………………………...........................

Lampiran 2 : Uji Validitas dan Reliabilitas

Correlations

Correlations

		a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14	a15	a16	a17	a18	a19	a20	AQM
a1	Pearson Correlation	1	,457*	,281	,000	,566*	,335	,265	,181	,438*	,502*	,667*	,527*	,402*	,328	,339	,528*	,279	,143	,379*	,582*	,630*
	Sig. (2-tailed)		,011	,133	1,000	,001	,070	,156	,339	,015	,005	,000	,003	,028	,077	,067	,003	,135	,451	,039	,001	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a2	Pearson Correlation	,457*	1	,299	-,175	,709*	-,073	-,041	-,114	,466*	,729*	,537*	,472*	,421*	-,176	,449*	,462*	,231	-,150	,214	,371*	,416*
	Sig. (2-tailed)	,011		,109	,354	,000	,702	,831	,549	,009	,000	,002	,009	,021	,352	,013	,010	,220	,429	,257	,044	,022
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a3	Pearson Correlation	,281	,299	1	-,024	,269	-,130	,287	-,077	,457*	,289	,089	,631*	,486*	,180	,063	,033	,426*	-,063	,205	,247	,377*
	Sig. (2-tailed)	,133	,109		,901	,151	,492	,123	,685	,011	,121	,641	,000	,007	,341	,741	,862	,019	,743	,277	,189	,040
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a4	Pearson Correlation	,000	-,175	-,024	1	-,298	,441*	,616*	,694*	,129	-,269	-,445*	,211	-,323	,543*	-,283	-,301	-,043	,819*	,759*	,612*	,468*
	Sig. (2-tailed)	1,000	,354	,901		,110	,015	,000	,000	,496	,151	,014	,262	,082	,002	,130	,106	,823	,000	,000	,000	,009
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a5	Pearson Correlation	,566*	,709*	,269	-,298	1	,244	,207	,048	,721*	,609*	,728*	,383*	,518*	,000	,542*	,667*	,280	-,015	,021	,397*	,560*
	Sig. (2-tailed)	,001	,000	,151	,110		,194	,272	,799	,000	,000	,000	,036	,003	1,000	,002	,000	,133	,938	,912	,030	,001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a6	Pearson Correlation	,335	-,073	-,130	,441*	,244	1	,772*	,653*	,169	-,072	,263	,227	,203	,490*	,204	,323	,160	,603*	,317	,458*	,668*
	Sig. (2-tailed)	,070	,702	,492	,015	,194		,000	,000	,372	,705	,160	,228	,281	,006	,279	,082	,397	,000	,088	,011	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a7	Pearson Correlation	,265	-,041	,287	,616*	,207	,772*	1	,672*	,331	-,057	,066	,405*	,174	,599*	,000	,007	,354	,670*	,500*	,549*	,750*
	Sig. (2-tailed)	,156	,831	,123	,000	,272	,000		,000	,074	,764	,727	,027	,357	,000	1,000	,970	,055	,000	,005	,002	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a8	Pearson Correlation	,181	-,114	-,077	,694*	,048	,653*	,672*	1	,176	-,005	,105	-,045	-,204	,853*	,006	,057	,172	,904*	,730*	,532*	,682*
	Sig. (2-tailed)	,339	,549	,685	,000	,799	,000	,000		,353	,980	,582	,813	,280	,000	,976	,765	,364	,000	,000	,002	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a9	Pearson Correlation	,438*	,466*	,457*	,129	,721*	,169	,331	,176	1	,452*	,254	,547*	,276	,281	,352	,484*	,251	,284	,230	,611*	,636*
	Sig. (2-tailed)	,015	,009	,011	,496	,000	,372	,074	,353		,012	,176	,002	,140	,133	,057	,007	,181	,128	,222	,000	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a10	Pearson Correlation	,502*	,729*	,289	-,269	,609*	-,072	-,057	-,005	,452*	1	,707*	,441*	,358	,165	,579*	,684*	,340	-,133	,190	,292	,472*
	Sig. (2-tailed)	,005	,000	,121	,151	,000	,705	,764	,980	,012		,000	,015	,052	,384	,001	,000	,066	,482	,314	,117	,009
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a11	Pearson Correlation	,667*	,537*	,089	-,445*	,728*	,263	,066	,105	,254	,707*	1	,176	,526*	,185	,610*	,792*	,385*	-,143	-,015	,145	,471*
	Sig. (2-tailed)	,000	,002	,641	,014	,000	,160	,727	,582	,176	,000		,353	,003	,329	,000	,000	,035	,451	,939	,443	,009
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a12	Pearson Correlation	,527*	,472*	,631*	,211	,383*	,227	,405*	-,045	,547*	,441*	,176	1	,514*	,097	,064	,329	,315	,048	,276	,690*	,580*
	Sig. (2-tailed)	,003	,009	,000	,262	,036	,228	,027	,813	,002	,015	,353		,004	,609	,736	,075	,090	,799	,139	,000	,001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a13	Pearson Correlation	,402*	,421*	,486*	-,323	,518*	,203	,174	-,204	,276	,358	,526*	,514*	1	-,103	,377*	,487*	,563*	-,262	-,174	,122	,383*
	Sig. (2-tailed)	,028	,021	,007	,082	,003	,281	,357	,280	,140	,052	,003	,004		,589	,040	,006	,001	,162	,357	,522	,037
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a14	Pearson Correlation	,328	-,176	,180	,543*	,000	,490*	,599*	,853*	,281	,165	,185	,097	-,103	1	,075	,185	,353	,747*	,629*	,463*	,686*
	Sig. (2-tailed)	,077	,352	,341	,002	1,000	,006	,000	,000	,133	,384	,329	,609	,589		,693	,329	,055	,000	,000	,010	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a15	Pearson Correlation	,339	,449*	,063	-,283	,542*	,204	,000	,006	,352	,579*	,610*	,064	,377*	,075	1	,711*	,138	-,125	,018	-,067	,370*
	Sig. (2-tailed)	,067	,013	,741	,130	,002	,279	1,000	,976	,057	,001	,000	,736	,040	,693		,000	,468	,512	,926	,727	,044
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a16	Pearson Correlation	,528*	,462*	,033	-,301	,667*	,323	,007	,057	,484*	,684*	,792*	,329	,487*	,185	,711*	1	,269	-,092	-,087	,259	,496*
	Sig. (2-tailed)	,003	,010	,862	,106	,000	,082	,970	,765	,007	,000	,000	,075	,006	,329	,000		,150	,629	,646	,167	,005
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a17	Pearson Correlation	,279	,231	,426*	-,043	,280	,160	,354	,172	,251	,340	,385*	,315	,563*	,353	,138	,269	1	,056	,077	,170	,484*
	Sig. (2-tailed)	,135	,220	,019	,823	,133	,397	,055	,364	,181	,066	,035	,090	,001	,055	,468	,150		,768	,687	,370	,007
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a18	Pearson Correlation	,143	-,150	-,063	,819*	-,015	,603*	,670*	,904*	,284	-,133	-,143	,048	-,262	,747*	-,125	-,092	,056	1	,745*	,622*	,632*
	Sig. (2-tailed)	,451	,429	,743	,000	,938	,000	,000	,000	,128	,482	,799	,162	,357	,000	,512	,629	,768		,000	,000	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a19	Pearson Correlation	,379*	,214	,205	,759*	,021	,317	,500*	,730*	,230	,190	-,015	,276	-,174	,629*	,018	-,087	,077	,745*	1	,686*	,659*
	Sig. (2-tailed)	,039	,257	,277	,000	,912	,088	,005	,000	,222	,314	,939	,139	,357	,000	,926	,646	,687	,000		,000	,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
a20	Pearson Correlation	,582*	,371*	,247	,612*	,397*	,458*	,549*	,532*	,611*	,292	,145	,690*	,122	,463*	-,067	,259	,170	,622*	,686*	1	,780*
	Sig. (2-tailed)	,001	,044	,189	,000	,030	,011	,002	,002	,000	,117	,443	,000	,522	,010	,727	,167	,370	,000	,000		,000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AQM	Pearson Correlation	,630*	,416*	,377*	,468*	,560*	,668*	,750*	,682*	,636*	,472*	,471*	,580*	,383*	,686*	,370*	,496*	,484*	,632*	,659*	,780*	1
	Sig. (2-tailed)	,000	,022	,040	,009	,001	,000	,000	,000	,000	,009	,009	,001	,037	,000	,044	,005	,007	,000	,000	,000	
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Reliability

Case Processing Summary

		N	%
Cases	Valid	30	100,0
	Excluded[a]	0	,0
	Total	30	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,870	20

Correlations

Correlations

		o1	o2	o3	Op
o1	Pearson Correlation	1	,915**	,490**	,891**
	Sig. (2-tailed)		,000	,006	,000
	N	30	30	30	30
o2	Pearson Correlation	,915**	1	,536**	,913**
	Sig. (2-tailed)	,000		,002	,000
	N	30	30	30	30
o3	Pearson Correlation	,490**	,536**	1	,813**
	Sig. (2-tailed)	,006	,002		,000
	N	30	30	30	30
Op	Pearson Correlation	,891**	,913**	,813**	1
	Sig. (2-tailed)	,000	,000	,000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Reliability

Case Processing Summary

		N	%
Cases	Valid	30	100,0
	Excluded[a]	0	,0
	Total	30	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,824	3

Lampiran 3 : Frekuensi Karakteristik Responden

Frequencies

Umur

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 30 years/tahun	2	6,7	6,7	6,7
	30-35 years/tahun	18	60,0	60,0	66,7
	35-40 years/tahun	4	13,3	13,3	80,0
	> 40 years/tahun	6	20,0	20,0	100,0
	Total	30	100,0	100,0	

Pddkn

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SLTA	17	56,7	56,7	56,7
	SMP	13	43,3	43,3	100,0
	Total	30	100,0	100,0	

Pnglman

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 5 tahun	4	13,3	13,3	13,3
	5-10 tahun	20	66,7	66,7	80,0
	10-15 tahun	3	10,0	10,0	90,0
	>15 tahun	3	10,0	10,0	100,0
	Total	30	100,0	100,0	

Jml_Pryk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2-5 proyek	21	70,0	70,0	70,0
	5-10 proyek	6	20,0	20,0	90,0
	> 10 proyek	3	10,0	10,0	100,0
	Total	30	100,0	100,0	

Tp_Pryk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rumah	6	20,0	20,0	20,0
	Gedung	16	53,3	53,3	73,3
	Jalan dan Jembatan	5	16,7	16,7	90,0
	Lain-lain	3	10,0	10,0	100,0
	Total	30	100,0	100,0	

Klmpk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Batu	14	46,7	46,7	46,7
	Beton	10	33,3	33,3	80,0
	Listrik	3	10,0	10,0	90,0
	Lain-lain	3	10,0	10,0	100,0
	Total	30	100,0	100,0	
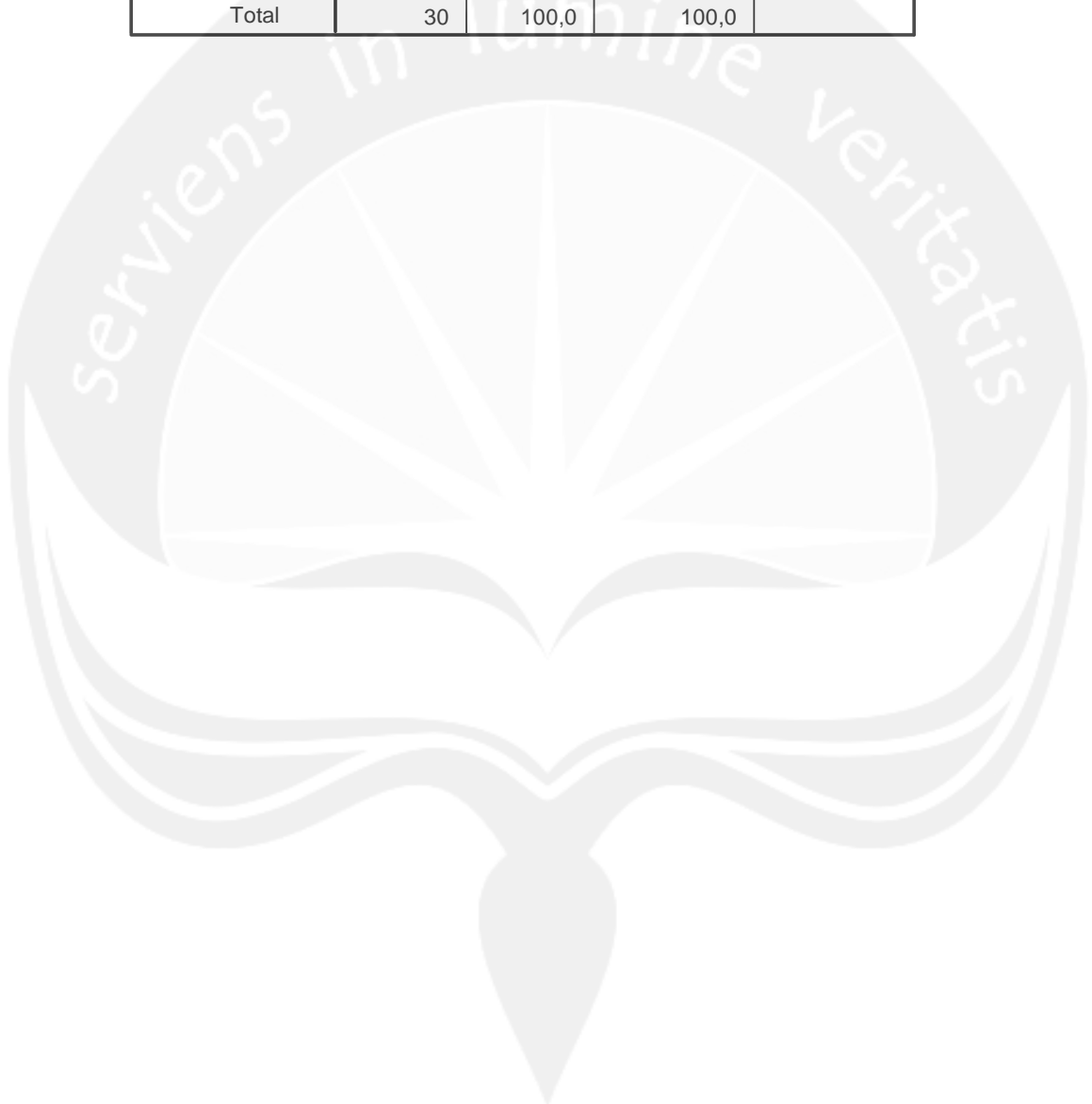
Lampiran 4 : Frekuensi Variabel

Interval Skala

Interval	Kategori
1,00 s/d 1,79	SJ
1,80 s/d 2,59	J
2,60 s/d 3,39	KK
3,40 s/d 4,19	S
4,20 s/d 5,00	SS

Frequencies

o2 (X1)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Perlu	22	73,3	73,3	73,3
	Sangat Perlu	8	26,7	26,7	100,0
	Total	30	100,0	100,0	

o1 (X2)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Perlu	23	76,7	76,7	76,7
	Sangat Perlu	7	23,3	23,3	100,0
	Total	30	100,0	100,0	

o3 (X3)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Upah yang memadai	16	53,3	53,3	53,3
	Lokasi proyek yang strategis	13	43,3	43,3	96,7
	Lain-lain	1	3,3	3,3	100,0
	Total	30	100,0	100,0	

D (X4)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rendah	2	6,7	6,7	6,7
	Sedang	7	23,3	23,3	30,0
	Tinggi	15	50,0	50,0	80,0
	Sangat Tinggi	6	20,0	20,0	100,0
	Total	30	100,0	100,0	

AQM (Y)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	KK	1	3,3	3,3	3,3
	KK	1	3,3	3,3	6,7
	KK	1	3,3	3,3	10,0
	KK	2	6,7	6,7	16,7
	S	1	3,3	3,3	20,0
	S	2	6,7	6,7	26,7
	S	2	6,7	6,7	33,3
	S	1	3,3	3,3	36,7
	S	3	10,0	10,0	46,7
	S	1	3,3	3,3	50,0
	S	1	3,3	3,3	53,3
	S	1	3,3	3,3	56,7
	S	6	20,0	20,0	76,7
	S	1	3,3	3,3	80,0
	S	2	6,7	6,7	86,7
	SS	2	6,7	6,7	93,3
	SS	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

Frequencies

KrM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	S	2	6,7	6,7	6,7
	S	6	20,0	20,0	26,7
	S	6	20,0	20,0	46,7
	S	7	23,3	23,3	70,0
	SS	4	13,3	13,3	83,3
	SS	3	10,0	10,0	93,3

		Frequency	Percent	Valid Percent	Cumulative Percent
	SS	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

KmM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SJ	2	6,7	6,7	6,7
	J	4	13,3	13,3	20,0
	KK	3	10,0	10,0	30,0
	KK	2	6,7	6,7	36,7
	S	8	26,7	26,7	63,3
	S	6	20,0	20,0	83,3
	SS	3	10,0	10,0	93,3
	SS	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

KP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	KK	4	13,3	13,3	13,3
	S	8	26,7	26,7	40,0
	S	11	36,7	36,7	76,7
	SS	2	6,7	6,7	83,3
	SS	3	10,0	10,0	93,3
	SS	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

QK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	KK	4	13,3	13,3	13,3
	KK	3	10,0	10,0	23,3
	S	2	6,7	6,7	30,0
	S	3	10,0	10,0	40,0
	S	4	13,3	13,3	53,3
	S	3	10,0	10,0	63,3
	S	8	26,7	26,7	90,0
	SS	1	3,3	3,3	93,3
	SS	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

JK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	J	5	16,7	16,7	16,7

KK	5	16,7	16,7	33,3
KK	2	6,7	6,7	40,0
S	6	20,0	20,0	60,0
S	8	26,7	26,7	86,7
SS	2	6,7	6,7	93,3
SS	2	6,7	6,7	100,0
Total	30	100,0	100,0	

Lampiran 5 : Hasil Regresi Linier Berganda

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	D (X4), o3 (X3), o1 (X2), o2 (X1)[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: AQM (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,673[a]	,453	,365	,34952

a. Predictors: (Constant), D (X4), o3 (X3), o1 (X2), o2 (X1)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,527	4	,632	5,171	,000[a]
	Residual	3,054	25	,122		
	Total	5,581	29			

a. Predictors: (Constant), D (X4), o3 (X3), o1 (X2), o2 (X1)

b. Dependent Variable: AQM (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,549	,887		,619	,542
	o2 (X1)	,701	,356	,718	1,969	,048
	o1 (X2)	,024	,008	,023	3,000	,010
	o3 (X3)	,115	,037	,150	3,108	,007
	D (X4)	,046	,022	,087	2,091	,024

a. Dependent Variable: AQM (Y)

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	o2 (X1)[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: AQM (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,659[a]	,434	,414	,33584

a. Predictors: (Constant), o2 (X1)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,423	1	2,423	21,479	,000[a]
	Residual	3,158	28	,113		
	Total	5,581	29			

a. Predictors: (Constant), o2 (X1)

b. Dependent Variable: AQM (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,043	,595		1,754	,090
	o2 (X1)	,643	,139	,659	4,635	,000

a. Dependent Variable: AQM (Y)

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	o1 (X2)[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: AQM (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,595[a]	,354	,331	,35889

a. Predictors: (Constant), o1 (X2)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,974	1	1,974	15,327	,001[a]
	Residual	3,607	28	,129		
	Total	5,581	29			

a. Predictors: (Constant), o1 (X2)

b. Dependent Variable: AQM (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,217	,659		1,847	,075
	o1 (X2)	,607	,155	,595	3,915	,001

a. Dependent Variable: AQM (Y)

Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,258[a]	,066	,033	,43139

a. Predictors: (Constant), o3 (X3)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,370	1	,370	1,989	,170[a]
	Residual	5,211	28	,186		
	Total	5,581	29			

a. Predictors: (Constant), o3 (X3)

b. Dependent Variable: AQM (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,081	,224		18,200	,000
	o3 (X3)	,197	,091	,258	2,165	,017

a. Dependent Variable: AQM (Y)

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	D (X4)[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: AQM (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,370[a]	,137	,106	,41476

a. Predictors: (Constant), D (X4)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,764	1	,764	4,441	,044[a]
	Residual	4,817	28	,172		
	Total	5,581	29			

a. Predictors: (Constant), D (X4)

b. Dependent Variable: AQM (Y)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,039	,362		8,394	,000
	D (X4)	,195	,092	,370	2,107	,044

a. Dependent Variable: AQM (Y)