

## BAB V

### PENUTUP

#### 5.1. Kesimpulan

Berdasarkan hasil penelitian yang telah disajikan pada BAB IV sebelumnya diperoleh beberapa kesimpulan:

Pertama, metode “*Cost Significant Model*” dapat dikembangkan di dalam melaksanakan estimasi pada bangunan gedung yang memakai Arsitektural Bali. Model regresi ini memiliki 8 (delapan) *item* biaya signifikan yang ada di dalam model, yang dapat diuraikan sebagai berikut: biaya pekerjaan pasangan (X2); biaya pekerjaan beton (X4); biaya pekerjaan kap/atap (X5); biaya pekerjaan lantai dan dinding (X6); biaya pekerjaan kusen, pintu, jendela, dan railing tangga (X7); biaya pekerjaan plafond (X8); biaya pekerjaan instalasi listrik/ME (X10); dan biaya pekerjaan *finishing* Bali (X12). Model regresi ini menghasilkan formula:  $Y = -19,120 + 2,977.X2 + 0,875.X4 + 1,201.X5 + 1,081.X6 + 1,496.X7 + 1,210.X8 + 0,957.X10 + 0,897.X12$  dengan akurasi rata-rata pada dua pengujian, yaitu: gedung hidrologi, dan kantor camat adalah 6,334 %.

Kedua, berdasarkan hasil pengujian uji parsial terhadap koefesien regresi dari masing-masing variabel independennya, maka didapat variabel-variabel yang berpengaruh secara signifikan terhadap perubahan variabel dependennya adalah: biaya pekerjaan pasangan (X2); biaya pekerjaan beton (X4); biaya pekerjaan kap/atap (X5); biaya pekerjaan lantai dan dinding (X6); biaya pekerjaan kusen, pintu, jendela, dan railing tangga (X7); biaya pekerjaan plafond (X8); dan biaya pekerjaan instalasi listrik/ME (X10).

Ketiga, paket pekerjaan *finishing* Bali (X12) meskipun masuk di dalam model, tetapi tidak memberikan pengaruh yang signifikan terhadap perubahan nilai dari

variabel dependennya, yaitu: Total biaya proyek pada bangunan gedung yang memakai Arsitektural Bali.

Keempat, untuk bangunan gedung yang memakai Arsitektural Bali di Propinsi Bali memiliki prosentase *item-item* pekerjaan yang dapat disajikan pada Tabel. 5.1.

**Tabel 5.1. Prosentase rata-rata *item-item* pekerjaan di Propinsi Bali**

No	Item Pekerjaan	Persentase (%)
1.	Pekerjaan Tanah	1.08
2.	Pekerjaan Pasangan	3.52
3.	Pekerjaan Plesteran & Acian	3.01
4.	Pekerjaan Beton	26.31
5.	Pekerjaan Atap	14.06
6.	Pekerjaan Lantai & dinding	8.38
7.	Pek. tangga, Kusen, Pintu & Jendela	12.66
8.	Pekerjaan Plafond	5.88
9.	Pekerjaan Sanitasi	2.68
10.	Pekerjaan M&E	14.18
11.	Pekerjaan Finishing	3.75
12.	Pekerjaan Finishing Bali	2.37

## 5.2. Saran-saran

Berdasarkan kesimpulan penelitian ini, sebagaimana yang telah diuraikan sebelumnya, beberapa saran yang perlu diperhatikan sebagai berikut:

Berdasarkan hasil penelitian diperoleh 8 (delapan) *item* biaya signifikan yang masuk di dalam model regresi dari 12 (duabelas) variabel independen, maka mengingat masih cukup banyaknya *item* biaya signifikan yang masuk di dalam model, dengan demikian model regresi yang dikembangkan akan lebih cocok di gunakan dalam melaksanakn estimasi pada tahap tender dari pada tahap-tahap awal, misalnya: tahap *feasibility study*.

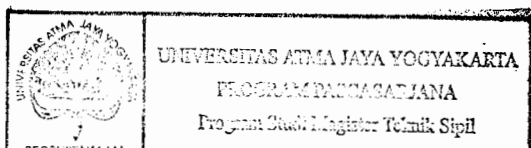
Untuk pelaksanaan penelitian berikutnya, yang mengambil tema serupa, maka diharapkan khusus untuk pekerjaan *style* Bali, perlu dipikirkan atas beragamnya

penggunaan ragam hias dalam bangunan gedung di dalam mencapai bangunan yang bernuansa bali, maka diharapkan adanya pelaksanaan pengelompokan terhadap pola ukiran (polos; semi ukiran; atau pun yang berukir padat) pada pekerjaan *finishing* Bali.



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## **LAMPIRAN 1**

**Data Penelitian**



Data yang belum di perhitungkan faktor TIME VALUENYA

Tahun Proyek	Nama Proyek	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	Y
1989	P. Gedung Unit Hidrologi Bali	12,464,708.65	56,066,637.18	20,917,026.00	149,386,100.07	71,598,899.20	38,018,910.23	37,189,902.20	22,984,194.00	14,679,050.00	10,465,000.00	28,228,800.00	17,400,000.00	486,236,527.53
	Persentase	2.56	11.53	4.30	30.72	14.72	7.82	7.64	4.73	3.02	2.15	5.80	3.58	100.00
1985	P. Gedung Kantor BP 7 Kab. Dati II	2,200,990.94	12,442,474.70	7,478,465.70	61,408,086.29	27,026,067.67	13,257,142.20	19,788,383.25	7,211,536.41	4,843,000.00	8,523,200.00	10,843,315.90	8,072,800.00	184,369,663.00
	Persentase	1.19	6.75	4.06	33.31	14.68	7.19	10.73	3.91	2.63	4.62	5.77	4.38	100.00
1989	P. Kantor Bupati DATI II Badung	8,852,005.63	63,395,715.07	31,736,687.05	314,164,891.80	80,953,612.68	43,931,822.30	48,833,040.44	38,386,280.50	15,651,902.00	25,385,850.00	46,004,883.44	58,649,900.00	776,258,590.87
	Persentase	1.14	8.17	4.09	40.47	10.43	5.66	6.29	4.95	2.02	3.27	5.93	7.96	100.00
1989	P. Gedung Diklat Pemda TK. II Badung	9,739,603.00	37,852,026.31	16,220,190.99	318,539,874.80	148,776,989.00	56,716,300.54	45,462,057.49	47,831,880.76	15,523,550.00	47,968,000.00	39,198,022.67	14,170,530.00	801,844,925.60
	Persentase	1.21	4.68	2.02	39.73	18.55	7.07	5.67	5.97	1.94	5.98	4.69	1.77	100.00
2002	P. Rumah&Kantor Dinas Kec. Abiansemal	2,651,195.80	30,784,989.52	16,699,646.00	125,103,956.10	45,303,073.47	20,457,693.90	25,276,409.30	20,947,600.00	3,388,000.00	7,680,000.00	16,898,969.20	11,495,000.00	328,084,533.37
	Persentase	0.81	9.38	5.09	38.13	13.81	6.24	7.70	6.38	1.03	2.34	5.15	3.50	100.00
1983	P. Kantor Dinas Perikanan Kab. Badung	3,002,461.00	18,246,386.00	12,323,419.00	94,557,959.25	38,616,660.30	21,591,107.99	15,525,911.00	8,116,270.00	7,657,500.00	6,029,000.00	14,730,038.75	16,819,192.00	259,772,799.29
	Persentase	1.16	7.02	4.74	36.40	14.87	8.31	5.98	3.51	2.95	2.32	5.67	6.47	100.00
2001	P. Kantor Camat Kuta Selatan	11,010,925.75	59,380,484.02	24,251,117.86	203,691,925.34	80,916,594.70	34,773,421.55	83,587,348.00	44,409,854.40	9,687,000.00	15,040,000.00	48,523,185.39	40,741,000.00	701,878,050.81
	Persentase	1.57	8.46	3.46	29.02	11.53	4.95	6.33	1.38	1.38	2.14	6.91	5.80	100.00
2001	P. Kantor Camat Kuta Utara	11,660,950.75	60,724,390.56	24,799,972.19	206,607,178.55	82,064,214.96	35,198,861.06	85,263,594.31	45,039,708.49	10,284,417.81	15,951,082.19	44,623,292.45	37,411,182.76	737,332,615.00
	Persentase	1.58	8.24	3.36	28.02	11.13	4.77	11.56	6.11	1.39	2.16	6.05	5.07	100.00
2001	P. Kantor Cabang Dinas P dan K (Kuta)	23,711,905.14	76,733,590.57	22,377,761.01	199,439,396.30	46,479,523.75	12,765,607.93	23,964,424.81	11,255,740.43	13,844,600.00	9,385,400.00	21,978,516.43	6,493,000.00	531,846,362.63
	Persentase	4.46	14.43	4.21	37.50	8.74	2.40	4.51	2.12	2.60	1.76	4.13	1.22	100.00
Tahun Proyek	Nama Proyek	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	Y
1983	P. Perpustakaan STP Bali	11,960,792.30	29,630,707.00	22,765,996.50	253,637,978.70	112,411,607.00	81,474,843.00	84,250,891.00	55,304,205.40	15,628,255.00	217,903,200.00	30,807,745.90	12,955,675.00	946,133,907.80
	Persentase (%)	1.26	3.13	2.41	26.81	11.88	8.61	8.90	5.85	1.65	23.03	3.26	1.37	100.00
1993	P. Gedung Rektorat STP Bali	5,324,649.00	14,996,430.50	16,829,832.00	196,633,878.50	121,590,426.00	148,658,376.50	94,703,199.00	55,590,512.00	27,456,867.00	155,959,146.10	18,388,810.00	14,328,644.00	883,100,401.60
	Persentase (%)	0.60	1.70	1.91	22.27	13.77	16.83	10.72	6.29	3.11	17.66	2.08	1.62	100.00
1993	P. Ruang Dosen/Litbang STP Bali	11,721,297.20	14,760,923.50	26,656,651.00	335,716,619.00	308,231,555.50	114,405,573.90	207,727,533.00	91,775,575.00	50,124,774.00	435,573,650.00	39,513,942.50	12,262,558.00	1,668,896,831.80
	Persentase (%)	0.70	0.88	1.60	20.12	18.47	6.86	12.45	5.80	3.00	28.10	2.37	0.73	100.00
1993	P. Kelas Tipe I STP Bali	7,185,706.50	26,556,702.00	42,624,104.00	314,298,044.50	114,426,740.00	99,629,421.00	163,159,153.00	71,423,438.00	24,534,565.00	108,516,700.00	41,290,127.50	19,792,462.10	1,052,249,246.60
	Persentase (%)	0.68	2.52	4.05	29.87	10.87	9.47	15.51	6.79	2.33	10.31	3.92	1.88	100.00
1993	P. Kelas Tipe II STP Bali	7,406,195.00	17,305,000.50	25,195,349.00	224,907,267.50	151,381,411.00	74,484,585.00	118,324,983.50	49,747,701.00	20,464,961.87	59,371,400.00	27,762,495.00	15,100,152.50	765,623,785.67
	Persentase (%)	0.98	2.29	3.33	29.76	20.03	9.86	15.68	0.86	2.71	7.06	3.67	2.00	100.00
1993	P. Kelas Tipe III STP Bali	8,335,340.00	17,392,386.50	30,708,817.00	242,270,777.00	120,088,700.00	79,353,969.00	155,875,885.50	68,207,309.00	24,987,169.50	58,939,400.00	30,384,950.50	21,242,061.50	874,092,016.50
	Persentase (%)	0.95	1.99	3.51	27.72	13.74	9.08	17.83	7.80	2.86	6.74	3.48	2.43	100.00
1993	P. Kelas Tipe IV STP Bali	11,242,137.80	20,263,873.50	32,781,774.00	315,725,802.80	111,138,452.00	90,912,978.50	207,484,306.00	70,239,397.00	24,435,043.00	171,794,200.00	36,004,855.00	17,075,273.00	1,127,139,618.80
	Persentase (%)	1.00	1.80	2.91	28.01	9.88	8.07	18.41	6.23	2.17	15.24	3.19	1.51	100.00
1993	P. Gedung Fas. Olahraga STP Bali	11,980,594.40	34,331,900.41	38,423,285.00	120,936,736.46	171,859,547.40	79,307,400.70	148,578,045.60	84,142,705.55	54,253,622.00	181,931,800.00	46,681,643.31	33,954,066.04	1,024,456,555.18
	Persentase (%)	1.17	3.35	3.75	11.80	16.78	7.74	14.50	8.21	5.90	17.78	4.56	3.31	100.00
1983	P. Gedung Administrasi STP Bali	5,629,155.40	13,960,521.50	17,431,980.00	139,625,700.20	81,085,379.00	51,545,323.50	92,724,015.00	53,159,925.00	15,639,819.00	190,581,861.00	17,476,087.50	10,250,818.00	706,436,175.10
	Persentase (%)	0.80	1.98	2.47	19.76	11.48	7.30	13.13	7.53	2.20	26.98	2.47	1.45	100.00

## INPUT DATA DALAM SPSS

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X' 2	Y
29.62	73.38	56.37	628.1	278.37	201.76	208.63	136.95	38.7	539.61	76.29	32.08	2342.96
13.19	37.14	41.68	486.93	301.1	368.13	234.52	137.66	67.99	386.21	45.54	35.48	2186.87
29.03	36.55	66.01	831.35	763.29	283.31	514.41	227.27	124.13	1078.63	37.86	30.37	4132.78
17.79	65.76	105.55	778.31	283.36	246.72	404.04	176.87	60.76	268.73	102.26	49.01	2605.74
18.34	42.85	62.39	556.95	374.87	184.45	293.01	12.32	50.68	132.17	58.76	37.39	1871.19
20.64	43.07	76.05	599.95	297.38	196.51	386	168.91	61.9	145.95	75.24	52.6	2164.56
27.84	50.18	81.18	781.85	275.22	225.13	513.8	173.94	60.51	425.42	39.16	42.28	2791.19
29.67	85.02	95.15	299.48	425.58	196.39	367.93	208.37	134.35	450.53	115.6	84.08	2536.92
13.94	34.57	43.17	345.76	200.8	127.64	229.62	131.64	38.48	471.95	43.28	25.38	1749.38
7.44	45.18	30.52	234.16	95.63	53.47	38.45	22.58	18.96	14.93	36.48	41.65	643.29
5.45	30.81	18.52	152.07	66.93	32.83	49	17.86	11.99	21.11	26.36	19.99	456.56
17.79	80.02	29.85	213.21	102.19	54.26	53.05	32.8	20.95	14.94	40.29	24.83	694.06
12.63	90.48	45.3	448.39	115.54	62.7	69.7	54.79	22.34	36.23	55.66	83.71	1107.91
13.9	53.6	23.15	454.63	212.34	80.95	64.89	68.27	22.16	68.46	55.96	20.22	1144.43
26.67	86.32	25.17	224.35	52.28	14.36	26.96	12.66	15.57	10.56	24.72	7.3	598.27
12.39	66.8	27.28	229.13	91.02	39.12	94.03	49.96	10.91	16.92	54.58	45.83	789.54
13.12	68.31	27.9	232.41	92.31	39.6	95.91	50.67	11.57	17.94	50.2	42.08	829.43
2.65	30.78	16.7	125.1	45.3	20.46	25.28	20.95	3.39	7.68	16.9	11.5	328.09



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## **LAMPIRAN 2**

Uji Normalitas



Explore

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Standardized Residual	18	100.0%	0	.0%	18	100.0%
Unstandardized Residual	18	100.0%	0	.0%	18	100.0%

Descriptives

		Statistic	Std. Error
Standardized Residual	Mean	-2.27E-14	.1714986
	95% Confidence Interval for Mean	Lower Bound	-.3618304
		Upper Bound	.3618304
	5% Trimmed Mean	4.30E-02	
	Median	5.16E-02	
	Variance	.529	
	Std. Deviation	.7276069	
	Minimum	-1.88656	
	Maximum	1.11338	
	Range	2.99994	
	Interquartile Range	.9499761	
	Skewness	-.876	.536
	Kurtosis	1.254	1.038
Unstandardized Residual	Mean	-5.84E-13	4.4060154
	95% Confidence Interval for Mean	Lower Bound	-9.2958800
		Upper Bound	9.2958800
	5% Trimmed Mean	1.1035468	
	Median	1.3259843	
	Variance	349.433	
	Std. Deviation	18.693140	
	Minimum	-48.46800	
	Maximum	28.60416	
	Range	77.07215	
	Interquartile Range	24.406086	
	Skewness	-.876	.536
	Kurtosis	1.254	1.038

**Extreme Values**

			Case Number	Value
Standardized Residual	Highest	1	17	1.11338
		2	4	.85673
		3	1	.74388
		4	10	.54483
		5	15	.53024
	Lowest	1	12	-1.88656
		2	13	-.82938
		3	7	-.80413
		4	18	-.43464
		5	3	-.40990
Unstandardized Residual	Highest	1	17	28.60416
		2	4	22.01052
		3	1	19.11122
		4	10	13.99741
		5	15	13.62252
	Lowest	1	12	-48.46800
		2	13	-21.30773
		3	7	-20.65900
		4	18	-11.16653
		5	3	-10.53095

**Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	.108	18	.200*	.951	18	.454
Unstandardized Residual	.108	18	.200*	.951	18	.454

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction



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## **LAMPIRAN 3**

**Output Data Penelitian**

**Regression (Backward Method)****Descriptive Statistics**

	Mean	Std. Deviation	N
Y	1609.6206	1040.2935	18
X1	17.3389	8.4344	18
X2	56.7122	20.5001	18
X3	48.4411	27.1674	18
X4	423.4517	229.4792	18
X5	226.3061	178.1340	18
X6	134.8772	105.4903	18
X7	203.8461	171.5915	18
X8	94.6928	74.4209	18
X9	43.0744	37.4592	18
X10	228.2206	286.1107	18
X11	60.2833	28.2533	18
X12	38.0989	20.8277	18

Correlations

		Y	X1	X2	X3	X4
Pearson Correlation	Y	1.000	.708	-.128	.797	.876
	X1	.708	1.000	.406	.633	.592
	X2	-.128	.406	1.000	.136	-.106
	X3	.797	.633	.136	1.000	.740
	X4	.876	.592	-.106	.740	1.000
	X5	.927	.628	-.199	.647	.739
	X6	.875	.500	-.242	.703	.785
	X7	.936	.651	-.189	.875	.838
	X8	.906	.637	-.055	.795	.721
	X9	.875	.666	-.028	.769	.587
	X10	.901	.629	-.211	.530	.675
	X11	.835	.694	.243	.910	.745
	X12	.298	.208	.440	.577	.221
Sig. (1-tailed)	Y	.	.001	.306	.000	.000
	X1	.001	.	.047	.002	.005
	X2	.306	.047	.	.296	.337
	X3	.000	.002	.296	.	.000
	X4	.000	.005	.337	.000	.
	X5	.000	.003	.214	.002	.000
	X6	.000	.017	.167	.001	.000
	X7	.000	.002	.226	.000	.000
	X8	.000	.002	.415	.000	.000
	X9	.000	.001	.456	.000	.005
	X10	.000	.003	.200	.012	.001
	X11	.000	.001	.166	.000	.000
	X12	.115	.203	.034	.006	.189
N	Y	18	18	18	18	18
	X1	18	18	18	18	18
	X2	18	18	18	18	18
	X3	18	18	18	18	18
	X4	18	18	18	18	18
	X5	18	18	18	18	18
	X6	18	18	18	18	18
	X7	18	18	18	18	18
	X8	18	18	18	18	18
	X9	18	18	18	18	18
	X10	18	18	18	18	18
	X11	18	18	18	18	18
	X12	18	18	18	18	18

Correlations

		X5	X6	X7	X8	X9
Pearson Correlation	Y	.927	.875	.936	.906	.875
	X1	.628	.500	.651	.637	.666
	X2	-.199	-.242	-.189	-.055	-.028
	X3	.647	.703	.875	.795	.769
	X4	.739	.785	.838	.721	.587
	X5	1.000	.778	.824	.770	.897
	X6	.778	1.000	.814	.793	.771
	X7	.824	.814	1.000	.871	.829
	X8	.770	.793	.871	1.000	.851
	X9	.897	.771	.829	.851	1.000
	X10	.877	.737	.755	.820	.792
	X11	.749	.651	.832	.814	.810
	X12	.229	.245	.334	.391	.441
Sig. (1-tailed)	Y	.000	.000	.000	.000	.000
	X1	.003	.017	.002	.002	.001
	X2	.214	.167	.226	.415	.456
	X3	.002	.001	.000	.000	.000
	X4	.000	.000	.000	.000	.005
	X5		.000	.000	.000	.000
	X6	.000		.000	.000	.000
	X7	.000	.000		.000	.000
	X8	.000	.000	.000		.000
	X9	.000	.000	.000	.000	
	X10	.000	.000	.000	.000	.000
	X11	.000	.002	.000	.000	.000
	X12	.180	.164	.088	.054	.033
N	Y	18	18	18	18	18
	X1	18	18	18	18	18
	X2	18	18	18	18	18
	X3	18	18	18	18	18
	X4	18	18	18	18	18
	X5	18	18	18	18	18
	X6	18	18	18	18	18
	X7	18	18	18	18	18
	X8	18	18	18	18	18
	X9	18	18	18	18	18
	X10	18	18	18	18	18
	X11	18	18	18	18	18
	X12	18	18	18	18	18

Correlations

		X10	X11	X12
Pearson Correlation	Y	.901	.835	.298
	X1	.629	.694	.208
	X2	-.211	.243	.440
	X3	.530	.910	.577
	X4	.675	.745	.221
	X5	.877	.749	.229
	X6	.737	.651	.245
	X7	.755	.832	.334
	X8	.820	.814	.391
	X9	.792	.810	.441
	X10	1.000	.617	.083
	X11	.617	1.000	.648
	X12	.083	.648	1.000
Sig. (1-tailed)	Y	.000	.000	.115
	X1	.003	.001	.203
	X2	.200	.166	.034
	X3	.012	.000	.006
	X4	.001	.000	.189
	X5	.000	.000	.180
	X6	.000	.002	.164
	X7	.000	.000	.088
	X8	.000	.000	.054
	X9	.000	.000	.033
	X10	.	.003	.371
	X11	.003	.	.002
	X12	.371	.002	.
N	Y	18	18	18
	X1	18	18	18
	X2	18	18	18
	X3	18	18	18
	X4	18	18	18
	X5	18	18	18
	X6	18	18	18
	X7	18	18	18
	X8	18	18	18
	X9	18	18	18
	X10	18	18	18
	X11	18	18	18
	X12	18	18	18

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	X12, X10, X2, X4, X3, X6, X1, X5, X8, X11 <sup>a</sup> , X7, X9		Enter
2		X11	Backward (criterion: Probability of F-to-remove >= .100).
3		X1	Backward (criterion: Probability of F-to-remove >= .100).
4		X9	Backward (criterion: Probability of F-to-remove >= .100).
5		X3	Backward (criterion: Probability of F-to-remove >= .100).

a. All requested variables entered.

b. Dependent Variable: Y

**Model Summary<sup>f</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 <sup>a</sup>	1.000	.999	28.0910	
2	1.000 <sup>b</sup>	1.000	.999	26.4685	
3	1.000 <sup>c</sup>	1.000	.999	25.5721	
4	1.000 <sup>d</sup>	1.000	.999	24.8546	
5	1.000 <sup>e</sup>	1.000	.999	25.6913	1.706

a. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X1, X5, X8, X11, X7, X9

b. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X1, X5, X8, X7, X9

c. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X5, X8, X7, X9

d. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X5, X8, X7

e. Predictors: (Constant), X12, X10, X2, X4, X6, X5, X8, X7

f. Dependent Variable: Y



ANOVA<sup>f</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18393636	12	1532802.961	1942.462	.000 <sup>a</sup>
	Residual	3945.515	5	789.103		
	Total	18397581	17			
2	Regression	18393378	11	1672125.233	2386.769	.000 <sup>b</sup>
	Residual	4203.487	6	700.581		
	Total	18397581	17			
3	Regression	18393004	10	1839300.353	2812.681	.000 <sup>c</sup>
	Residual	4577.520	7	653.931		
	Total	18397581	17			
4	Regression	18392639	9	2043626.559	3308.161	.000 <sup>d</sup>
	Residual	4942.024	8	617.753		
	Total	18397581	17			
5	Regression	18391641	8	2298955.085	3483.049	.000 <sup>e</sup>
	Residual	5940.369	9	660.041		
	Total	18397581	17			

- a. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X1, X5, X8, X11, X7, X9
- b. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X1, X5, X8, X7, X9
- c. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X5, X8, X7, X9
- d. Predictors: (Constant), X12, X10, X2, X4, X3, X6, X5, X8, X7
- e. Predictors: (Constant), X12, X10, X2, X4, X6, X5, X8, X7
- f. Dependent Variable: Y

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-11.054	29.967		-.369	.727
	X1	1.791	2.557	.015	.700	.515
	X2	2.103	1.045	.041	2.012	.100
	X3	1.041	1.108	.027	.939	.391
	X4	.785	.128	.173	6.130	.002
	X5	1.275	.261	.218	4.883	.005
	X6	1.159	.172	.118	6.732	.001
	X7	1.310	.204	.216	6.434	.001
	X8	1.204	.346	.086	3.476	.018
	X9	-.863	1.304	-.031	-.662	.537
	X10	.977	.077	.269	12.742	.000
	X11	.695	1.215	.019	.572	.592
	X12	.886	.728	.018	1.217	.278
2	(Constant)	-15.686	27.185		-.577	.585
	X1	1.760	2.409	.014	.731	.493
	X2	2.295	.932	.045	2.461	.049
	X3	1.366	.897	.036	1.523	.178
	X4	.784	.121	.173	6.498	.001
	X5	1.354	.209	.232	6.485	.001
	X6	1.131	.156	.115	7.272	.000
	X7	1.320	.191	.218	6.906	.000
	X8	1.290	.293	.092	4.399	.005
	X9	-1.056	1.187	-.038	-.890	.408
	X10	.968	.070	.266	13.729	.000
	X12	1.070	.616	.021	1.737	.133
	3	(Constant)	-20.839	25.365		-.822
X2		2.864	.496	.056	5.778	.001
X3		1.202	.839	.031	1.433	.195
X4		.796	.115	.176	6.898	.000
X5		1.333	.200	.228	6.672	.000
X6		1.119	.149	.113	7.489	.000
X7		1.395	.156	.230	8.961	.000
X8		1.248	.278	.089	4.493	.003
X9		-.825	1.105	-.030	-.747	.480
X10		.978	.067	.269	14.692	.000
X12		.781	.456	.016	1.713	.130

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
4	(Constant)	-14.065	23.022		-.611	.558
	X2	2.709	.438	.053	6.190	.000
	X3	.945	.743	.025	1.271	.239
	X4	.872	.054	.192	16.138	.000
	X5	1.201	.091	.206	13.205	.000
	X6	1.056	.120	.107	8.783	.000
	X7	1.366	.147	.225	9.317	.000
	X8	1.154	.241	.083	4.788	.001
	X10	.984	.064	.271	15.332	.000
	X12	.740	.440	.015	1.683	.131
	5	(Constant)	-19.120	23.440		-.816
X2		2.977	.397	.059	7.500	.000
X4		.875	.056	.193	15.670	.000
X5		1.201	.094	.206	12.770	.000
X6		1.081	.123	.110	8.813	.000
X7		1.496	.109	.247	13.727	.000
X8		1.210	.245	.087	4.934	.001
X10		.957	.062	.263	15.323	.000
X12		.897	.436	.018	2.058	.070

Coefficients<sup>a</sup>

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	X1	.100	10.024
	X2	.101	9.892
	X3	.051	19.534
	X4	.054	18.612
	X5	.021	46.634
	X6	.141	7.113
	X7	.038	26.283
	X8	.070	14.309
	X9	.019	51.387
	X10	.096	10.373
	X11	.039	25.401
	X12	.202	4.958
2	(Constant)		
	X1	.100	10.019
	X2	.113	8.867
	X3	.069	14.401
	X4	.054	18.609
	X5	.030	33.578
	X6	.153	6.538
	X7	.038	26.090
	X8	.086	11.563
	X9	.021	47.955
	X10	.101	9.865
	X12	.250	3.994
	3	(Constant)	
X2		.372	2.685
X3		.074	13.504
X4		.055	18.248
X5		.030	32.939
X6		.155	6.454
X7		.054	18.544
X8		.090	11.105
X9		.022	44.560
X10		.106	9.435
X12		.427	2.341

Coefficients<sup>a</sup>

Model		Collinearity Statistics	
		Tolerance	VIF
4	(Constant)		
	X2	.451	2.216
	X3	.089	11.214
	X4	.236	4.231
	X5	.138	7.228
	X6	.226	4.429
	X7	.057	17.421
	X8	.113	8.859
	X10	.108	9.288
	X12	.433	2.308
5	(Constant)		
	X2	.586	1.705
	X4	.237	4.225
	X5	.138	7.228
	X6	.232	4.312
	X7	.111	9.004
	X8	.117	8.572
	X10	.122	8.221
	X12	.471	2.125

a. Dependent Variable: Y

Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Eigenvalue	Condition Index
1	1	11.326	1.000
	2	.900	3.547
	3	.226	7.075
	4	.178	7.970
	5	.110	10.138
	6	8.478E-02	11.558
	7	7.181E-02	12.558
	8	4.809E-02	15.347
	9	2.308E-02	22.152
	10	1.751E-02	25.432
	11	6.514E-03	41.697
	12	5.209E-03	46.628
	13	2.598E-03	66.023
2	1	10.358	1.000
	2	.887	3.418
	3	.223	6.822
	4	.178	7.633
	5	.108	9.771
	6	8.442E-02	11.077
	7	6.793E-02	12.348
	8	4.779E-02	14.722
	9	2.128E-02	22.064
	10	1.686E-02	24.787
	11	5.362E-03	43.952
	12	3.364E-03	55.489
3	1	9.455	1.000
	2	.868	3.300
	3	.199	6.896
	4	.176	7.320
	5	9.071E-02	10.209
	6	7.765E-02	11.035
	7	5.716E-02	12.861
	8	4.057E-02	15.265
	9	2.085E-02	21.296
	10	1.119E-02	29.062
	11	3.491E-03	52.045
4	1	8.563	1.000
	2	.836	3.201
	3	.194	6.639
	4	.140	7.813
	5	8.139E-02	10.257
	6	7.562E-02	10.641
	7	4.198E-02	14.283
	8	3.545E-02	15.542
	9	2.050E-02	20.440
	10	1.119E-02	27.663

Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Eigenvalue	Condition Index
5	1	7.623	1.000
	2	.829	3.033
	3	.167	6.761
	4	.140	7.373
	5	7.638E-02	9.991
	6	7.297E-02	10.221
	7	4.198E-02	13.476
	8	3.060E-02	15.784
	9	1.898E-02	20.043

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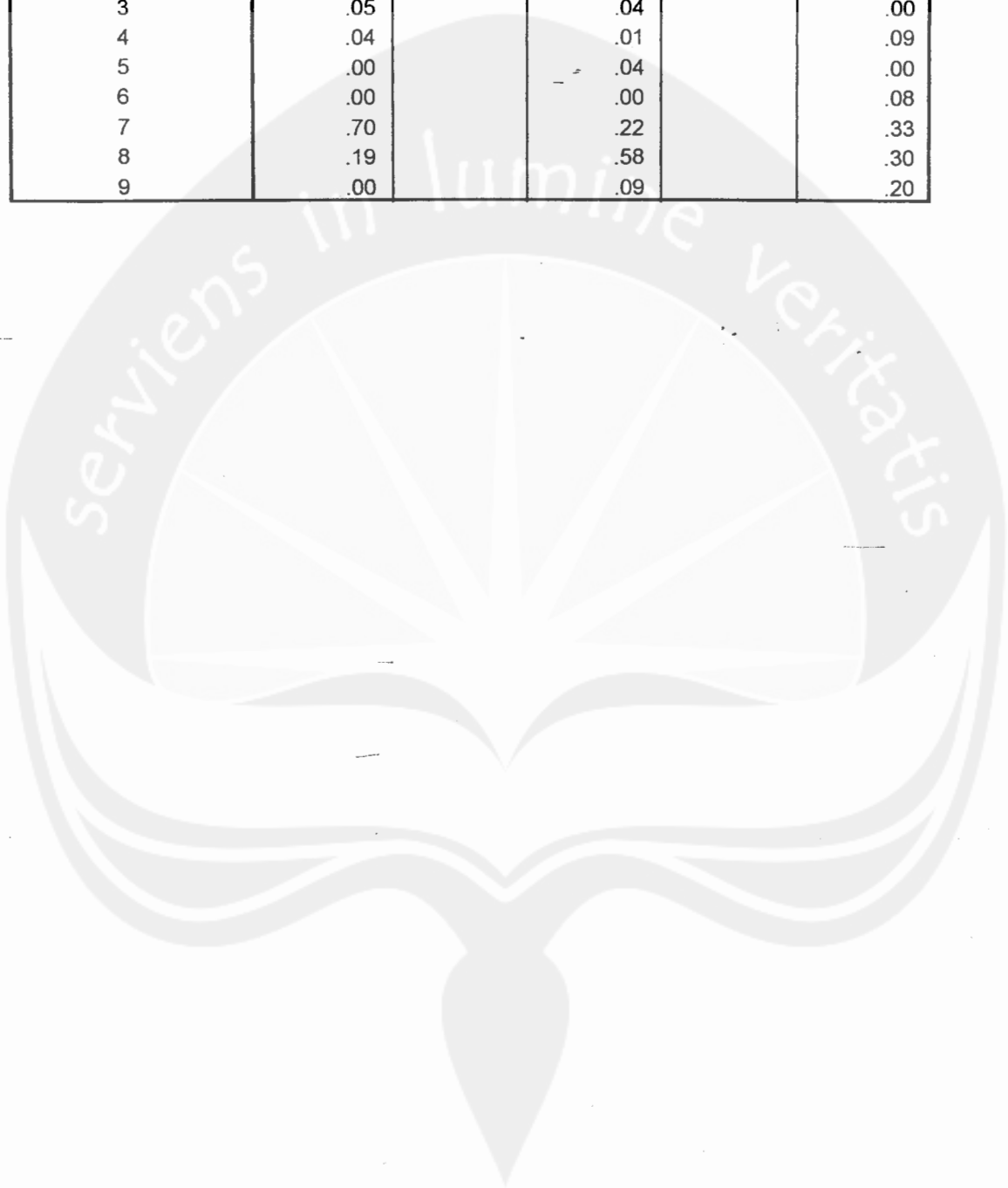
Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Variance Proportions				
		(Constant)	X1	X2	X3	X4
1	1	.00	.00	.00	.00	.00
	2	.01	.00	.00	.00	.00
	3	.02	.01	.00	.01	.00
	4	.01	.00	.00	.00	.02
	5	.06	.04	.00	.01	.00
	6	.00	.00	.00	.00	.00
	7	.00	.02	.00	.00	.02
	8	.49	.02	.01	.00	.02
	9	.04	.04	.01	.00	.03
	10	.00	.13	.02	.32	.01
	11	.00	.00	.01	.12	.38
	12	.22	.72	.88	.10	.01
	13	.16	.02	.06	.44	.51
2	1	.00	.00	.00	.00	.00
	2	.01	.00	.00	.00	.00
	3	.02	.01	.00	.01	.00
	4	.01	.00	.00	.00	.02
	5	.06	.04	.00	.01	.00
	6	.00	.01	.00	.00	.00
	7	.00	.02	.00	.00	.02
	8	.53	.02	.01	.00	.03
	9	.06	.02	.01	.02	.06
	10	.01	.16	.04	.49	.00
	11	.25	.65	.92	.20	.04
	12	.06	.08	.00	.27	.83
3	1	.00		.00	.00	.00
	2	.01		.01	.00	.00
	3	.05		.02	.01	.00
	4	.00		.01	.00	.02
	5	.01		.02	.00	.00
	6	.00		.00	.01	.01
	7	.05		.04	.01	.03
	8	.64		.31	.01	.01
	9	.03		.00	.08	.06
	10	.06		.37	.69	.01
	11	.14		.23	.17	.86
4	1	.00		.00	.00	.00
	2	.01		.02	.00	.00
	3	.05		.03	.02	.00
	4	.04		.00	.00	.09
	5	.00		.03	.02	.02
	6	.00		.02	.00	.01
	7	.68		.17	.00	.33
	8	.11		.28	.08	.40
	9	.04		.00	.07	.10
	10	.07		.46	.82	.05



**Collinearity Diagnostics<sup>a</sup>**

Model	Dimension	Variance Proportions				
		(Constant)	X1	X2	X3	X4
5	1	.00		.00		.00
	2	.01		.02		.00
	3	.05		.04		.00
	4	.04		.01		.09
	5	.00		.04		.00
	6	.00		.00		.08
	7	.70		.22		.33
	8	.19		.58		.30
	9	.00		.09		.20



Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Variance Proportions				
		X5	X6	X7	X8	X9
1	1	.00	.00	.00	.00	.00
	2	.00	.00	.00	.00	.00
	3	.00	.00	.00	.00	.00
	4	.00	.05	.01	.00	.01
	5	.00	.11	.02	.01	.00
	6	.03	.01	.00	.11	.01
	7	.01	.23	.00	.00	.01
	8	.00	.09	.02	.04	.00
	9	.03	.02	.12	.27	.00
	10	.01	.00	.06	.12	.00
	11	.00	.43	.12	.02	.13
	12	.00	.01	.63	.01	.03
	13	.92	.06	.00	.41	.80
2	1	.00	.00	.00	.00	.00
	2	.00	.00	.00	.00	.00
	3	.00	.00	.00	.00	.00
	4	.00	.05	.00	.00	.01
	5	.01	.10	.02	.01	.00
	6	.03	.00	.00	.13	.01
	7	.01	.33	.01	.01	.01
	8	.00	.07	.02	.05	.00
	9	.07	.07	.09	.46	.00
	10	.00	.01	.11	.05	.00
	11	.01	.04	.75	.01	.00
	12	.86	.32	.00	.27	.95
3	1	.00	.00	.00	.00	.00
	2	.00	.00	.00	.00	.00
	3	.00	.00	.01	.00	.00
	4	.00	.04	.01	.00	.01
	5	.02	.13	.01	.10	.01
	6	.02	.32	.04	.05	.00
	7	.00	.01	.00	.02	.02
	8	.00	.05	.02	.04	.00
	9	.07	.06	.08	.55	.00
	10	.01	.04	.77	.00	.00
	11	.87	.34	.06	.23	.95
4	1	.00	.00	.00	.00	
	2	.00	.00	.00	.00	
	3	.01	.01	.02	.00	
	4	.00	.09	.00	.03	
	5	.04	.42	.04	.03	
	6	.28	.19	.01	.15	
	7	.01	.01	.03	.04	
	8	.13	.15	.00	.01	
	9	.50	.05	.07	.73	
	10	.02	.07	.83	.00	

Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Variance Proportions				
		X5	X6	X7	X8	X9
5	1	.00	.00	.00	.00	
	2	.00	.00	.00	.00	
	3	.01	.03	.04	.01	
	4	.00	.10	.00	.03	
	5	.31	.00	.00	.20	
	6	.01	.66	.17	.00	
	7	.01	.01	.06	.04	
	8	.22	.09	.08	.01	
	9	.42	.11	.64	.71	



Collinearity Diagnostics<sup>a</sup>

Model	Dimension	Variance Proportions		
		X10	X11	X12
1	1	.00	.00	.00
	2	.01	.00	.01
	3	.05	.00	.04
	4	.02	.00	.02
	5	.00	.00	.04
	6	.10	.00	.01
	7	.06	.00	.05
	8	.02	.00	.06
	9	.30	.03	.21
	10	.32	.01	.17
	11	.00	.50	.10
	12	.00	.07	.15
	13	.12	.38	.13
2	1	.00		.00
	2	.01		.01
	3	.05		.06
	4	.02		.04
	5	.00		.04
	6	.12		.02
	7	.05		.09
	8	.02		.10
	9	.46		.10
	10	.19		.23
	11	.00		.27
	12	.07		.04
3	1	.00		.00
	2	.02		.02
	3	.06		.09
	4	.04		.04
	5	.07		.01
	6	.01		.03
	7	.08		.68
	8	.00		.06
	9	.61		.04
	10	.05		.03
	11	.05		.00
4	1	.00		.00
	2	.02		.02
	3	.08		.05
	4	.06		.18
	5	.00		.22
	6	.01		.04
	7	.04		.02
	8	.04		.38
	9	.69		.07
	10	.05		.03

**Collinearity Diagnostics<sup>a</sup>**

Model	Dimension	Variance Proportions		
		X10	X11	X12
5	1	.00		.00
	2	.02		.02
	3	.11		.14
	4	.08		.18
	5	.01		.16
	6	.01		.02
	7	.04		.02
	8	.25		.42
	9	.48		.04

a. Dependent Variable: Y

**Excluded Variables<sup>e</sup>**

Model		Beta In	t	Sig.	Partial Correlation
2	X11	.019 <sup>a</sup>	.572	.592	.248
3	X11	.018 <sup>b</sup>	.583	.581	.231
	X1	.014 <sup>b</sup>	.731	.493	.286
4	X11	.023 <sup>c</sup>	.797	.452	.288
	X1	.010 <sup>c</sup>	.520	.619	.193
	X9	-.030 <sup>c</sup>	-.747	.480	-.272
5	X11	.033 <sup>d</sup>	1.328	.221	.425
	X1	.006 <sup>d</sup>	.319	.758	.112
	X9	-.006 <sup>d</sup>	-.161	.876	-.057
	X3	.025 <sup>d</sup>	1.271	.239	.410

**Excluded Variables<sup>e</sup>**

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
2	X11	3.937E-02	25.401	1.946E-02
3	X11	3.938E-02	25.390	2.078E-02
	X1	9.981E-02	10.019	2.085E-02
4	X11	4.254E-02	23.505	4.254E-02
	X1	.107	9.310	3.845E-02
	X9	2.244E-02	44.560	2.244E-02
5	X11	5.464E-02	18.300	5.464E-02
	X1	.110	9.098	6.644E-02
	X9	2.702E-02	37.004	2.702E-02
	X3	8.917E-02	11.214	5.740E-02

- a. Predictors in the Model: (Constant), X12, X10, X2, X4, X3, X6, X1, X5, X8, X7, X9
- b. Predictors in the Model: (Constant), X12, X10, X2, X4, X3, X6, X5, X8, X7, X9
- c. Predictors in the Model: (Constant), X12, X10, X2, X4, X3, X6, X5, X8, X7
- d. Predictors in the Model: (Constant), X12, X10, X2, X4, X6, X5, X8, X7
- e. Dependent Variable: Y

**Residuals Statistics<sup>a</sup>**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	339.2565	4143.3110	1609.6206	1040.1256	18
Std. Predicted Value	-1.221	2.436	.000	1.000	18
Standard Error of Predicted Value	9.1378	24.2486	17.5501	4.8280	18
Adjusted Predicted Value	344.0991	4194.8364	1614.2212	1047.0312	18
Residual	-48.4680	28.6042	-5.84E-13	18.6931	18
Std. Residual	-1.887	1.113	.000	.728	18
Stud. Residual	-2.225	1.241	-.051	1.051	18
Deleted Residual	-83.3204	78.8937	-4.6006	47.5679	18
Stud. Deleted Residual	-3.129	1.285	-.113	1.198	18
Mahal. Distance	1.206	14.200	7.556	4.276	18
Cook's Distance	.000	.939	.247	.334	18
Centered Leverage Value	.071	.835	.444	.252	18

- a. Dependent Variable: Y



*serviens in lumine veritatis*

**LAMPIRAN 4**

Tabel t

EXHIBIT F-2 Critical Values of *t* for Given Probability Levels

d.f.	Level of Significance for One-Tailed Test					
	.10	.05	.025	.01	.005	.0005
	Level of Significance for Two-Tailed Test					
	.20	.10	.05	.02	.01	.001
1	3.078	6.314	12.706	31.821	63.657	636.619
2	1.886	2.920	4.303	6.965	9.925	31.598
3	1.638	2.353	3.182	4.541	5.841	12.941
4	1.533	2.132	2.776	3.747	4.604	8.610
5	1.476	2.015	2.571	3.365	4.032	6.859
6	1.440	1.943	2.447	3.143	3.707	5.959
7	1.415	1.895	2.365	2.998	3.499	5.405
8	1.397	1.860	2.306	2.896	3.355	5.041
9	1.383	1.833	2.262	2.821	3.250	4.781
10	1.372	1.812	2.228	2.764	3.169	4.587
11	1.363	1.796	2.201	2.718	3.106	4.437
12	1.356	1.782	2.179	2.681	3.055	4.318
13	1.350	1.771	2.160	2.650	3.012	4.221
14	1.345	1.761	2.145	2.624	2.977	4.140
15	1.341	1.753	2.131	2.602	2.947	4.073
16	1.337	1.746	2.120	2.583	2.921	4.015
17	1.333	1.740	2.110	2.567	2.898	3.965
18	1.330	1.734	2.101	2.552	2.878	3.922
19	1.328	1.729	2.093	2.539	2.861	3.883
20	1.325	1.725	2.086	2.528	2.845	3.850
21	1.323	1.721	2.080	2.518	2.831	3.819
22	1.321	1.717	2.074	2.508	2.819	3.792
23	1.319	1.714	2.069	2.500	2.807	3.767
24	1.318	1.711	2.064	2.492	2.797	3.745
25	1.316	1.708	2.060	2.485	2.787	3.725
26	1.315	1.706	2.056	2.479	2.779	3.707
27	1.314	1.703	2.052	2.473	2.771	3.690
28	1.313	1.701	2.048	2.467	2.763	3.674
29	1.311	1.699	2.045	2.462	2.756	3.659
30	1.310	1.697	2.042	2.457	2.750	3.646
40	1.303	1.684	2.021	2.423	2.704	3.551
60	1.296	1.671	2.000	2.390	2.660	3.460
120	1.289	1.658	1.980	2.358	2.617	3.373
∞	1.282	1.645	1.960	2.326	2.576	3.291

SOURCE: Abridged from Table III of Fisher and Yates, *Statistical Tables for Biological, Agricultural, and Medical Research*, 6th ed., published by Oliver and Boyd Ltd., Edinburgh, 1963. By permission of the publishers.