LAMPIRAN

Lampiran 1

Data penjualan harian "Suara Merdeka" (per 1000 eksemplar pada beberapa daerah di Jawa Tengah)

No	Pengukuran pada ukuran sampel (m=5)					Perhitungan yang diperlukan		
	Purwokerto X_1	Pekalongan X_2	Tegal X_3	Salatiga X_4	Magelang X_5	Jumlah	Rata-rata (X bar)	Range (R)
1	16,567	16,652	17,430	15,049	15,932	81,630	16,3260	2,381
2	16,396	16,411	17,222	16,983	15,765	82,777	16,5554	1,457
3	17,059	16,522	17,528	16,240	15,782	83,131	16,6262	1,746
4	16,476	16,411	17,394	16,042	15,797	82,120	16,4240	1,597
5	16,320	16,375	17,161	15,998	15,723	81,577	16,3154	1,438
6	16,322	16,294	17,083	15,977	15,680	81,356	16,2712	1,403
7	16,038	15,952	16,917	15,846	15,553	80,306	16,0612	1,364
8	15,979	15,859	16,823	15,747	15,428	79,836	15,9672	1,395
9	15,980	15,950	16,887	15,822	15,427	80,066	16,0132	1,460
10	15,790	15,851	16,683	15,707	15,308	79,339	15,8678	1,376
11	15,579	15,742	16,504	15,567	15,158	78,550	15,7100	1,346
12	15,584	15,770	16,453	15,641	15,093	78,541	15,7082	1,360
13	15,667	15,951	16,502	15,744	15,150	79,014	15,8028	1,352
14	15,783	16,063	16,601	15,845	15,224	79,516	15,9032	1,377
	S_1=0,4313	S_2=0,3042	S_3=0,3677	S_4=0,4218	S_5=0,2823	Σ=1127,759	$\overline{\overline{X}}$=16,1108	$\overline{R}$=1,5036

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
X1	14	16.11000	.43125	15.579	17.059
X2	14	16.12879	.30420	15.742	16.652
X3	14	16.94200	.36772	16.453	17.528
X4	14	15.87200	.42175	15.049	16.983
X5	14	15.50143	.28259	15.093	15.932
X	70	16.11084	.59470	15.049	17.528

One-Sample Kolmogorov-Smirnov Test

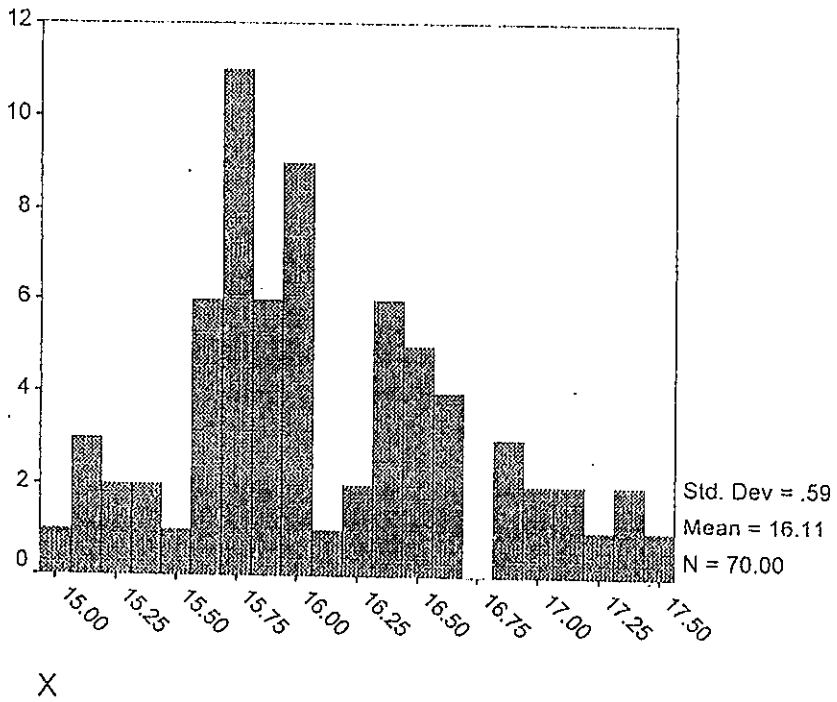
		X1	X2	X3
N		14	14	14
Normal Parameters[a,b]	Mean	16.11000	16.12879	16.94200
	Std. Deviation	.43125	.30420	.36772
Most Extreme Differences	Absolute	.138	.219	.117
	Positive	.138	.219	.117
	Negative	-.115	-.148	-.105
Kolmogorov-Smirnov Z		.515	.821	.436
Asymp. Sig. (2-tailed)		.953	.510	.991

One-Sample Kolmogorov-Smirnov Test

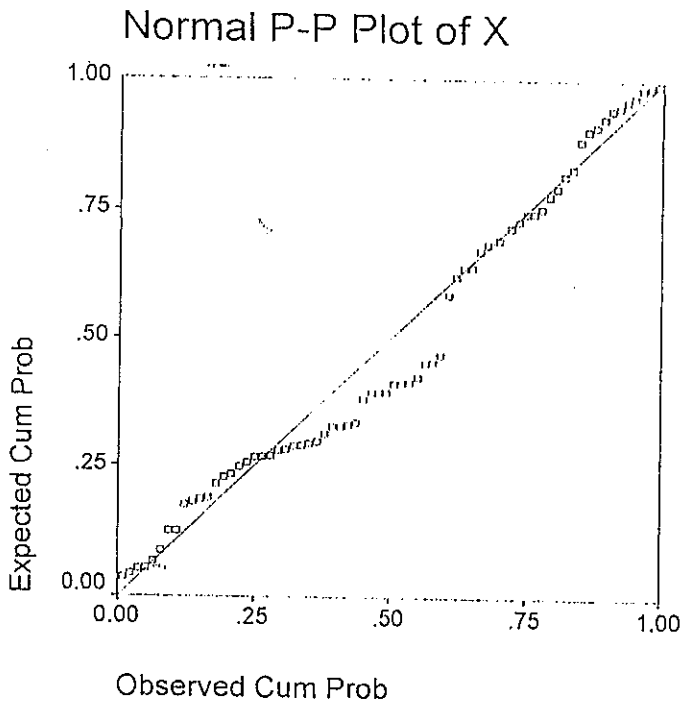
		X4	X5	X
N		14	14	70
Normal Parameters[a,b]	Mean	15.87200	15.50143	16.11084
	Std. Deviation	.42175	.28259	.59470
Most Extreme Differences	Absolute	.201	.165	.132
	Positive	.201	.123	.132
	Negative	-.163	-.165	-.060
Kolmogorov-Smirnov Z		.751	.617	1.108
Asymp. Sig. (2-tailed)		.626	.841	.172

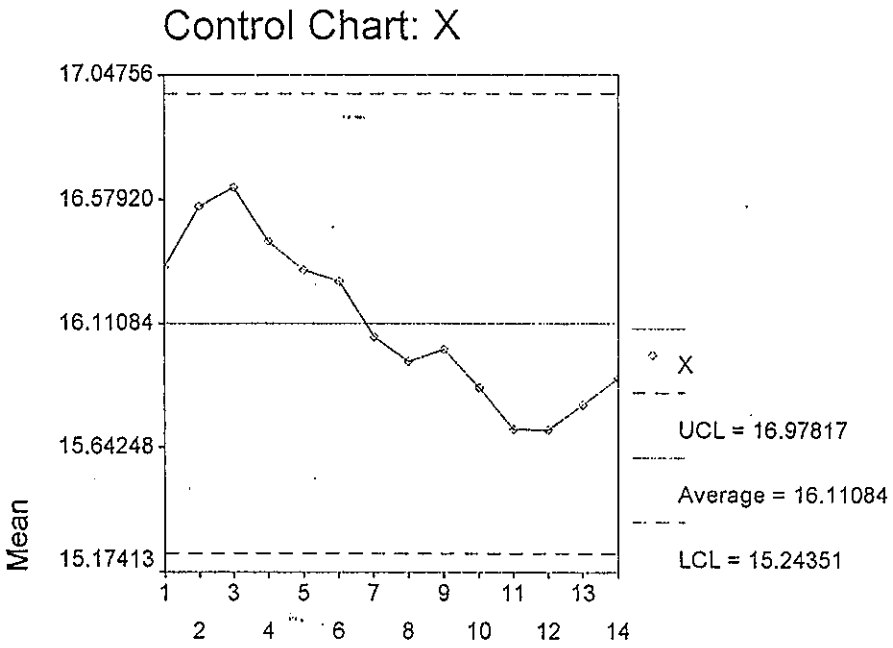
a. Test distribution is Normal.

b. Calculated from data.

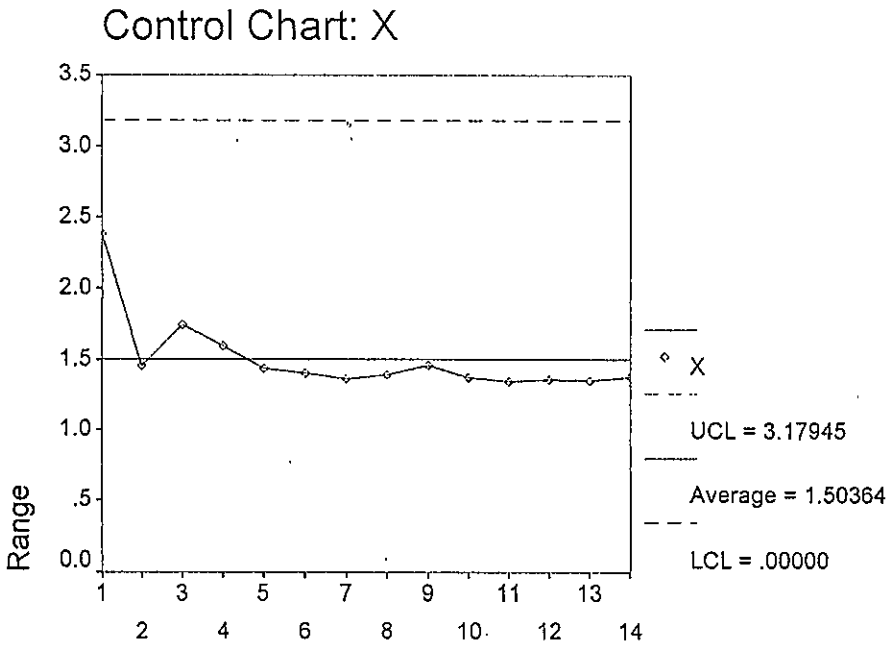

12
10
8
6
4
2
0
Std. Dev = .59
Mean = 16.11
N = 70.00
15.00
15.25
15.50
15.75
16.00
16.25
16.50
16.75
17.00
17.25
17.50
X

PPlot


Normal P-P Plot of X
1.00
.75
.50
.25
0.00
Expected Cum Prob
0.00
.25
.50
.75
1.00
Observed Cum Prob



Sigma level: 3



Sigma level: 3

Lampiran 3

Daftar Nilai Koefisien Dalam Perhitungan Batas-batas Peta Kendali X-Bar dan R serta Indeks Kapabilitas

Ukuran Sampel	Koefisien untuk Batas Kendali	Koefisien untuk Batas Kendali R		Koefisien untuk menduga Simpangan Baku, s X-Bar
m	A_2	D_3	D_4	d_2
2	1,880	0	3,267	1,128
3	1,023	0	2,574	1,693
4	0,729	0	2,282	2,059
5	0,577	0	2,114	2,326
6	0,483	0	2,004	2,534
7	0,419	0,076	1,924	2,704
8	0,373	0,136	1,864	2,847
9	0,337	0,184	1,816	2,970
10	0,308	0,223	1,777	3,078
11	0,285	0,256	1,744	3,173
12	0,266	0,283	1,717	3,258
13	0,249	0,307	1,693	3,336
14	0,235	0,328	1,672	3,407
15	0,223	0,347	1,653	3,472
16	0,212	0,363	1,637	3,532
17	0,203	0,378	1,622	3,588
18	0,194	0,391	1,608	3,640
19	0,187	0,403	1,597	3,689
20	0,180	0,415	1,585	3,735
21	0,173	0,425	1,575	3,778
22	0,167	0,434	1,566	3,819
23	0,162	0,443	1,557	3,858
24	0,157	0,451	1,548	3,895
25	0,153	0,459	1,541	3,931

Sumber: Gaspersz, 2001

Lampiran 4

Tabel ukuran sampel dan penentuan nilai kritis untuk test H_0 : $Cp = Cp_0$

Ukuran Sampel	$\alpha = \beta = 0{,}10$		$\alpha = \beta = 0{,}05$	
	Cp(high)/ Cp (low)	C/Cp(low)	Cp(high)/ Cp (low)	C/Cp(low)
10	1,88	1,27	2,26	1,37
20	1,53	1,20	1,73	1,26
30	1,41	1,16	1,55	1,21
40	1,34	1,14	1,46	1,18
50	1,30	1,13	1,40	1,16
60	1,27	1,11	1,36	1,15
70	1,25	1,10	1,33	1,14
80	1,23	1,10	1,30	1,13
90	1,21	1,10	1,28	1,12
100	1,20	1,09	1,26	1,11

Sumber: Montgomery (disesuaikan dari Kane (1986); dengan ijin dari the American Society for Quality Control)

Lampiran 5

Nilai-nilai Target Pengendalian untuk Dua Spesifikasi (USL dan LSL) dan Toleransi Maksimum Standar Deviasi Proses

Target Sigma	S_{maks}	Target Sigma	S_{maks}	Target Sigma	S_{maks}
1,00	0,500000x(USL-LSL)	3,05	0,163934 x(USL-LSL)	5,10	0,098039 x(USL-LSL)
1,05	0,476190 x(USL-LSL)	3,10	0,161290 x(USL-LSL)	5,15	0,097087 x(USL-LSL)
1,10	0,454545 x(USL-LSL)	3,15	0,158730 x(USL-LSL)	5,20	0,096154 x(USL-LSL)
1,15	0,434783 x(USL-LSL)	3,20	0,156250 x(USL-LSL)	5,25	0,095238 x(USL-LSL)
1,20	0,416667 x(USL-LSL)	3,25	0,153846 x(USL-LSL)	5,30	0,094340 x(USL-LSL)
1,25	0,400000 x(USL-LSL)	3,30	0,151515 x(USL-LSL)	5,35	0,093458 x(USL-LSL)
1,30	0,384615 x(USL-LSL)	3,35	0,149254 x(USL-LSL)	5,40	0,092593 x(USL-LSL)
1,35	1,370370 x(USL-LSL)	3,40	0,147059 x(USL-LSL)	5,45	0,091743 x(USL-LSL)
1,40	0,357143 x(USL-LSL)	3,45	0,144928 x(USL-LSL)	5,50	0,090909 x(USL-LSL)
1,45	0,344828 x(USL-LSL)	3,50	0,142857 x(USL-LSL)	5,55	0,090090 x(USL-LSL)
1,50	0,333333 x(USL-LSL)	3,55	0,140845 x(USL-LSL)	5,60	0,089286 x(USL-LSL)
1,55	0,322581 x(USL-LSL)	3,60	0,138889 x(USL-LSL)	5,65	0,088496 x(USL-LSL)
1,60	0,312500 x(USL-LSL)	3,65	0,136986 x(USL-LSL)	5,70	0,087719 x(USL-LSL)
1,65	0,303030 x(USL-LSL)	3,70	0,135135 x(USL-LSL)	5,75	0,086957 x(USL-LSL)
1,70	0,294118 x(USL-LSL)	3,75	0,133333 x(USL-LSL)	5,80	0,086207 x(USL-LSL)
1,75	0,285714 x(USL-LSL)	3,80	0,131579 x(USL-LSL)	5,85	0,085470 x(USL-LSL)
1,80	0,277778 x(USL-LSL)	3,85	0,129870 x(USL-LSL)	5,90	0,084746 x(USL-LSL)
1,85	0,270270 x(USL-LSL)	3,90	0,128205 x(USL-LSL)	5,95	0,084034 x(USL-LSL)
1,90	0,263158 x(USL-LSL)	3,95	0,126582 x(USL-LSL)	6,00	0,083333 x(USL-LSL)
1,95	0,256410 x(USL-LSL)	4,00	0,125000 x(USL-LSL)	6,05	0,082645 x(USL-LSL)
2,00	0,250000 x(USL-LSL)	4,05	0,123457 x(USL-LSL)	6,10	0,081967 x(USL-LSL)
2,05	0,243902 x(USL-LSL)	4,10	0,121951 x(USL-LSL)	6,15	0,081301 x(USL-LSL)
2,10	0,238095 x(USL-LSL)	4,15	0,120482 x(USL-LSL)	6,20	0,080645 x(USL-LSL)
2,15	0,232558 x(USL-LSL)	4,20	0,119048 x(USL-LSL)	6,25	0,080000 x(USL-LSL)
2,20	0,227273 x(USL-LSL)	4,25	0,117649 x(USL-LSL)	6,30	0,079365 x(USL-LSL)
2,25	0,222222 x(USL-LSL)	4,30	0,116279 x(USL-LSL)	6,35	0,078740 x(USL-LSL)
2,30	0,217391 x(USL-LSL)	4,35	0,114943 x(USL-LSL)	6,40	0,078125 x(USL-LSL)
2,35	0,212766 x(USL-LSL)	4,40	0,113636 x(USL-LSL)	6,45	0,077519 x(USL-LSL)
2,40	0,208333 x(USL-LSL)	4,45	0,112360 x(USL-LSL)	6,50	0,076923 x(USL-LSL)
2,45	0,204082 x(USL-LSL)	4,50	0,111111 x(USL-LSL)	6,55	0,076336 x(USL-LSL)
2,50	0,200000 x(USL-LSL)	4,55	0,109890 x(USL-LSL)	6,60	0,075758 x(USL-LSL)
2,55	0,196078 x(USL-LSL)	4,60	0,108696 x(USL-LSL)	6,65	0,075188 x(USL-LSL)
2,60	0,192308 x(USL-LSL)	4,65	0,107527 x(USL-LSL)	6,70	0,074627 x(USL-LSL)
2,65	0,188679 x(USL-LSL)	4,70	0,106383 x(USL-LSL)	6,75	0,074074 x(USL-LSL)
2,70	0,185185 x(USL-LSL)	4,75	0,105263 x(USL-LSL)	6,80	0,073529 x(USL-LSL)
2,75	0,181818 x(USL-LSL)	4,80	0,104167 x(USL-LSL)	6,85	0,072993 x(USL-LSL)
2,80	0,178571 x(USL-LSL)	4,85	0,103093 x(USL-LSL)	6,90	0,072464 x(USL-LSL)
2,85	0,175439 x(USL-LSL)	4,90	0,102041x(USL-LSL)	6,95	0,071942 x(USL-LSL)
2,90	0,172414 x(USL-LSL)	4,95	0,101010 x(USL-LSL)	7,00	0,071429 x(USL-LSL)
2,95	0,169492 x(USL-LSL)	5,00	0,100000 x(USL-LSL)	7,05	0,070922 x(USL-LSL)
3,00	0,166667 x(USL-LSL)	5,05	0,099010 x(USL-LSL)	7,10	0,070423 x(USL-LSL)

Sumber : nilai-nilai dibangkitkan menggunakan program oleh : Vincent Gaspersz, 2002

Lampiran 6

Tabel Konversi DPMO ke Nilai Sigma

Nilai Sigma	DPMO	Nilai Sigma	DPMO	Nilai Sigma	DPMO
0,00	993.193	2,00	308.537	4,00	6.210
0,05	926.471	2,05	291.160	4,05	5.386
0,10	919.243	2,10	274.253	4,10	4.661
0,15	911.492	2,15	257.846	4,15	4.042
0,20	903.199	2,20	241.964	4,20	3.467
0,25	894.350	2,25	226.627	4,25	2.980
0,30	884.930	2,30	211.856	4,30	2.555
0,35	874.928	2,35	197.663	4,35	2.186
0,40	864.334	2,40	184.060	4,40	1.866
0,45	853.141	2,45	171.056	4,45	1.589
0,50	841.345	2,50	158.655	4,50	1.350
0,55	828.944	2,55	146.859	4,55	1.144
0,60	815.940	2,60	135.666	4,60	968
0,65	802.338	2,65	125.072	4,65	816
0,70	788.145	2,70	115.070	4,70	687
0,75	773.373	2,75	105.650	4,75	577
0,80	758.036	2,80	96.800	4,80	483
0,85	742.154	2,85	88.508	4,85	404
0,90	725.747	2,90	80.757	4,90	337
0,95	708.840	2,95	73.529	4,95	280
1,00	691.462	3,00	66.807	5,00	233
1,05	673.645	3,05	60.571	5,05	193
1,10	655.422	3,10	54.799	5,10	159
1,15	636.831	3,15	49.471	5,15	131
1,20	617.911	3,20	44.565	5,20	108
1,25	598.706	3,25	40.059	5,25	89
1,30	579.260	3,30	35.930	5,30	72
1,35	559.618	3,35	32.157	5,35	59
1,40	539.858	3,40	28.717	5,40	48
1,45	519.939	3,45	25.588	5,45	69
1,50	500.000	3,50	22.750	5,50	62
1,55	480.061	3,55	20.182	5,55	26
1,60	460.172	3,60	17.865	5,60	21
1,65	440.382	3,65	15.778	5,65	17
1,70	420.740	3,70	13.904	5,70	13
1,75	401.294	3,75	12.225	5,75	11
1,80	382.088	3,80	10.724	5,80	9
1,85	363.169	3,85	9.387	5,85	7
1,90	344.578	3,90	8.198	5,90	5
1,95	326.355	3,95	7.143	5,95	4
				6,00	3

Sumber: Vincent Gaspersz, 2001