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**APPENDIX A**

**THE SURVEY RESULTS OF SOLID WASTE  
GENERATION**

**Table A.1** Residential Solid Waste Generation (unit : kg/day)

NO.	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVG.
1	2.8	1.5	2	4.6	2.1	3.3	1.6	2.6
2	-	1.6	1.4	1	0.6	3.7	0.5	1.5
3	0.8	0.9	0.9	1.5	0.9	1	0.5	0.9
4	2.9	5	1.4	2.3	2.5	1.4	5.5	3.0
5	1.6	0.9	0.3	0.2	0.4	1.2	1.4	0.9
6	1.6	1.3	0.6	1.9	0.8	0.7	1.3	1.2
7	-	7.1	0.8	1.1	2	2.1	0.5	2.3
8	0.4	0.3	0.9	0.8	0.7	0.8	1	0.7
9	5.0	2.1	2.8	5.7	2.9	3.6	2.1	3.5
10	0.6	0.2	1	0.3	0.5	1.3	2.6	0.9
11	1.1	0.5	0.8	0.6	0.9	2.1	2.4	1.2
12	0.2	3.3	3.8	2.4	3.3	4.5	2.6	2.9
13	-	2.8	2.6	0.7	1.6	1.8	0.8	1.7
14	3.2	3.6	3	1.9	2.3	3.3	2.1	2.8
15	2.1	2.3	2.2	2.1	0.8	2.2	2.9	2.1
16	1.2	0.5	1.5	1.3	1.5	1.6	2.4	1.4
17	1.6	1.1	1	0.3	1.1	1.1	1.8	1.1
18	0.3	2.1	1	1.2	0.9	1.4	1.6	1.2
19	-	2.7	3.3	1.4	1.6	1.9	2.2	2.2
20	0.5	1.7	0.4	1.1	1.9	2.1	0.6	1.2
21	-	0.7	0.2	0.6	0.9	0.4	2.9	1.0
22	2.1	-	0.6	0.8	1.2	0.2	0.9	1.0
23	-	1.6	0.8	2.6	0.9	1.2	0.4	1.3
24	0.5	0.6	1.1	0.8	0.2	1.1	0.5	0.7
25	0.6	0.7	2.9	0.6	0.3	0.2	0.5	0.8
26	0.9	1	0.2	0.6	0.8	2.3	0.6	0.9
27	3.6	-	0.6	0.4	0.6	2.2	0.5	1.3
28	1.4	0.9	0.3	1.4	1.5	1.8	1.5	1.3
29	1.7	3.2	1.2	0.3	0.3	0.6	0.7	1.1
30	2.6	-	2.1	4.1	2.2	3.1	2.4	2.8
31	4.9	2.6	1.8	3.5	1.6	1.4	3.6	2.8
32	-	2.2	1.1	-	0.9	-	0.9	1.3
33	-	1.7	3	1	0.9	2	0.7	1.6
34	1.5	0.7	0.7	0.8	1.2	0.6	1.2	1.0
35	1.7	-	1.5	-	2.1	1.4	1.5	1.6
36	3.0	1.8	5.1	3.2	3.6	4.6	5.8	3.9
37	0.3	-	0.8	-	0.3	0.3	0.6	0.5
38	-	1.2	-	0.8	0.6	0.7	-	0.8
39	1.0	0.8	0.8	0.6	0.7	0.9	1.1	0.8
40	0.5	0.6	0.9	0.6	1.1	1.2	2.2	1.0
41	1.2	1.3	1.4	-	1.2	1.9	0.5	1.3
42	2.5	1	1.6	1.1	0.6	1.7	-	1.4
43	2.4	2.1	1.8	2.1	2.9	2	1.8	2.2
44	2.5	1.1	1.1	0.9	1	1.5	1.2	1.3
45	0.7	0.5	0.4	0.6	0.2	0.6	0.2	0.5
46	0.6	0.6	0.6	0.7	0.8	0.8	0.5	0.7
47	0.5	0.8	0.4	0.3	0.3	0.6	0.8	0.5
48	1.8	2.3	2.9	-	4.8	1.9	2.2	2.7
49	2.9	0.9	2.6	1.4	3.7	1	3.6	2.3
50	1.8	1.2	3.3	2.9	-	2.1	-	2.3

Note:

AVG. = Average

**Table A.1 Residential Solid Waste Generation (unit : kg/day) (continue)**

NO.	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVG.
51	1.3	-	-	0.8	0.8	1	1	1.0
52	1.7	1.9	3.3	2.4	1.9	4.1	2.7	2.6
53	2.5	1.4	1.3	0.4	0.5	2.2	1.2	1.4
54	3.8	3.4	1.2	-	-	3	2.9	2.9
55	1.7	-	1.6	0.3	0.3	-	1	1.0
56	0.2	0.3	0.4	0.3	0.2	1.8	0.3	0.5
57	1.5	-	0.5	0.7	-	0.6	0.5	0.8
58	2.6	1.3	2.1	3.9	1.9	1.6	1.7	2.2
59	-	0.9	0.5	0.5	0.4	0.6	0.4	0.6
60	2.4	0.5	1.8	-	1.6	-	0.4	1.3
61	2.8	2.5	2.7	4	4.7	6	3.3	3.7
62	0.2	-	-	-	-	0.5	0.3	0.3
63	0.3	-	0.3	2.2	0.8	0.7	0.2	0.8
64	3.0	1.6	0.6	-	1.5	2.9	1.9	1.9
65	1.4	2.8	2.5	0.8	2	1.1	1.6	1.7

Note:

AVG. = Average

**Table A.2 Food Operations Solid Waste Generation (unit : kg/day)**

NO.	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	3	3	2	3	2	2.6
2	3	3	3	3	5	3.4
3	236	0	0	0	0	47.2
4	2	1	2	2	2	1.8
5	2	4	5	6	4.5	4.3
6	47	25	89	30	48	47.8

**Table A.3 Machinery Operations Solid Waste Generation (unit : kg/day)**

NO.	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	30	25	29	25.5	28	27.5
2	19	24	26	27	24	24.0
3	12	10	11	12	10	11.0
4	55	70	92	44	79	68.0
5	8	8.5	5	10	9.5	8.2

**Table A.4 Transportation Operations Solid Waste Generation (unit : kg/day)**

NO.	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	16	7	4	3	8	7.6
2	6	3	3	6	2	4.0
3	19	6	8	7	7	9.4
4	17	12	15	34	20	19.6
5	50	32	85	46	61	54.8
6	177	0	0	0	0	35.4

**Table A.5** Textile Operations Solid Waste Generation (unit : kg/day)

NO.	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	11	34.5	5	14	6	14.1
2	20	18	16	20	16	18.0
3	6	16	10	16	17	13.0
4	54	0	0	0	36	18.0
5	373	222	415	305	364	335.8
6	835	767	910	986	974	894.4

**Table A.6** Wood Furniture Operations Solid Waste Generation (unit : kg/day)

NO.	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	300	276	330	343	263	302.4
2	6	9	7	8	7	7.4
3	92	75	88	79	71	81.0
4	160	136	133	140	154	144.6
5	24	26	27	30	28	27.0
6	41	36	39	50	32	39.6

**Table A.7** Store Solid Waste Generation (unit : kg/day)

NO.	23-Oct-95 1	24-Oct-95 2	25-Oct-95 3	26-Oct-95 4	27-Oct-95 5	28-Oct-95 6	AVERAGE
1	0.2	0.1	0.2	0.3	0.1	0.7	0.3
2	0.2	0.4	0.4	0.3	0.2	0.1	0.3
3	0.3	-	0.2	0.3	0.8	0.9	0.5
4	0.6	0.4	1.4	0.9	0.3	1.3	0.8
5	0.7	0.5	0.3	0.3	0.3	0.9	0.5
6	0.5	0.5	0.2	0.2	0.4	0.4	0.4
7	2.8	3.1	2.7	2.4	1.9	2.0	2.5
8	0.4	0.6	0.4	0.7	0.5	0.6	0.5
9	0.4	0.6	1.0	0.4	0.5	0.7	0.6
10	0.5	2.2	0.8	0.7	0.7	0.7	0.9
11	1.0	-	1.7	0.9	1.1	0.6	1.1
12	0.4	0.9	0.2	0.4	0.6	1.0	0.6
13	0.4	-	0.3	0.4	0.3	0.5	0.4
14	0.4	0.4	0.5	-	0.3	0.4	0.4
15	0.3	0.5	0.2	0.6	0.3	0.4	0.4
16	0.5	0.5	0.1	-	0.3	0.2	0.3
17	0.4	0.3	0.4	0.5	0.6	0.5	0.5
18	0.3	0.4	0.2	0.4	0.3	0.2	0.3
19	0.9	0.7	1.5	0.8	0.7	0.9	0.9
20	-	0.5	0.7	0.6	0.3	0.2	0.5
21	2.1	1.9	1.5	2.0	2.3	1.7	1.9
22	0.4	0.6	-	1.4	0.9	0.3	0.7
23	0.3	0.7	-	0.3	0.8	0.4	0.5
24	0.6	0.2	0.5	0.3	0.5	0.2	0.4
25	2.2	-	1.0	1.9	2.4	1.2	1.7
26	0.4	0.6	0.6	0.2	0.3	0.4	0.4
27	1.2	1.6	0.5	0.7	0.9	0.7	0.9
28	0.4	0.9	0.7	0.5	0.6	1.2	0.7
29	0.9	0.4	0.4	0.5	1.8	0.2	0.7
30	-	0.3	0.4	0.2	0.2	0.5	0.3

**Table A.8** Office Solid Waste Generation (unit : kg/day)

NO.	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	11.51	7.5	5.4	6	8.6	7.8
2	5.15	5.8	6.2	5.2	2.7	5.0
3	0.2	0.5	0.5	0.6	0.6	0.5
4	9.2	3.5	2.6	4.3	2.2	4.4
5	4.1	5.5	4.9	5.8	6.5	5.4
6	4.1	6.6	5.2	3.5	5.5	5.0
7	2.1	2.1	1.8	1.4	1.8	1.8
8	4.4	1.8	1.4	1.8	1.7	2.2
9	12.8	8.8	11.8	7.7	13.1	10.8
10	0.7	0.3	0.2	0.4	0.3	0.4
11	5.2	2.2	1.9	2.2	1.3	2.6
12	3.1	3.3	2.4	4.7	2.6	3.2
13	4.7	3.2	4.9	4.5	3.1	4.1
14	0.6	0.4	0.6	0.5	0.7	0.6
15	0.9	0.7	0.4	0.5	0.9	0.7

**Table A.9** Hotel Solid Waste Generation (unit : kg/day)

NO.	12-Sep-38 1	22-Sep-38 2	23-Sep-38 3	24-Sep-38 4	25-Sep-38 5	AVERAGE
1	622	585	713	577	769	653.2
2	416	546	584	530	580	531.2
3	75	81	113	69	86	84.8
4	521	724	514	433	525	543.4
5	257	170	290	168	167	210.5
6	210	139	238	138	137	172.3
7	50	40	34	28	60	42.4
8	42	50	27	50	35	40.8
9	23	64	67	20	69	48.6
10	26	28	39	33	15	28.2
11	65	102	60	55	75	71.4
12	29	22	12	17	23	20.6
13	32	37	32	50	28	35.8
14	55	42	19	71	67	50.8
15	18	12	26	11	9	15.2

**Table A.8** Office Solid Waste Generation (unit : kg/day)

NO.	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	11.51	7.5	5.4	6	8.6	7.8
2	5.15	5.8	6.2	5.2	2.7	5.0
3	0.2	0.5	0.5	0.6	0.6	0.5
4	9.2	3.5	2.6	4.3	2.2	4.4
5	4.1	5.5	4.9	5.8	6.5	5.4
6	4.1	6.6	5.2	3.5	5.5	5.0
7	2.1	2.1	1.8	1.4	1.8	1.8
8	4.4	1.8	1.4	1.8	1.7	2.2
9	12.8	8.8	11.8	7.7	13.1	10.8
10	0.7	0.3	0.2	0.4	0.3	0.4
11	5.2	2.2	1.9	2.2	1.3	2.6
12	3.1	3.3	2.4	4.7	2.6	3.2
13	4.7	3.2	4.9	4.5	3.1	4.1
14	0.6	0.4	0.6	0.5	0.7	0.6
15	0.9	0.7	0.4	0.5	0.9	0.7

**Table A.9** Hotel Solid Waste Generation (unit : kg/day)

NO.	12-Sep-38 1	22-Sep-38 2	23-Sep-38 3	24-Sep-38 4	25-Sep-38 5	AVERAGE
1	622	585	713	577	769	653.2
2	416	546	584	530	580	531.2
3	75	81	113	69	86	84.8
4	521	724	514	433	525	543.4
5	257	170	290	168	167	210.5
6	210	139	238	138	137	172.3
7	50	40	34	28	60	42.4
8	42	50	27	50	35	40.8
9	23	64	67	20	69	48.6
10	26	28	39	33	15	28.2
11	65	102	60	55	75	71.4
12	29	22	12	17	23	20.6
13	32	37	32	50	28	35.8
14	55	42	19	71	67	50.8
15	18	12	26	11	9	15.2



**Table A.10** Restaurant Solid Waste Generation (unit : kg/day)

NO.	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	15	13	12	32	16	10	12	15.7
2	25	24	14	16	23	11	-	18.8
3	4	6	4	5	3	6	4	4.6
4	13	19	14	7	5	8	17	11.9
5	19	14	20	18	17	13	19	17.1
6	39	36	22	23	40	10	29	29.3
7	24	24	29	31	40	29	28	29.3
8	14	14	9	17	17	16	12	14.1
9	20	17	15	8	20	25	18	17.6
10	37	40	49	49	49	69	59	50.3
11	139	121	156	207	135	164	154	153.7
12	14	9	8	12	15	6	11	10.7
13	77	50	62	45	83	64	64	63.6
14	277	262	273	260	284	282	260	271.1

**Table A.11** Theater Solid Waste Generation (unit : kg/day)

NO.	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	6.2	7.8	6.0	8.0	13.0	9.5	7.0	8.2
2	5.7	5.3	4.5	1.5	2.5	3.5	2.5	3.6
3	5.2	4.4	4.0	3.0	7.0	4.5	4.2	4.6
4	6.6	5.9	6.1	4.2	7.0	7.7	4.0	5.9
5	5.0	3.0	4.9	2.8	10.6	11.8	5.5	6.2
6	3.3	4.8	2.7	6.5	15.1	11.0	10.5	7.7
7	4.8	4.0	5.0	6.0	6.5	4.5	4.0	5.0

**Table A.12** Market Solid Waste Generation (unit : kg/day)

NO.	NAME	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	06-Oct-95 6	07-Oct-95 7	AVERAGE
1	T1	2,340	2,700	2,220	2,020	2,820	2,180	2,400	2,382.9
2	T2	3,210	3,510	3,210	3,520	3,450	3,220	3,430	3,364.3
3	T3	3,010	3,430	2,720	3,190	3,350	2,960	2,890	3,078.6
4	BANG	4,310	4,130	5,220	4,340	5,170	4,730	4,560	4,637.1

Note :

- T1 = Tessabal 1 Market  
T2 = Tessabal 2& Au-Jira Market  
T3 = Tessabal 3 Market  
BANG = Banglumphu Market

**Table A.13** Large Store Solid Waste Generation (unit : kg/day)

NO.	20-Oct-95 1	21-Oct-95 2	22-Oct-95 3	AVERAGE
1	332	367	321	340.0
2	76	83	60	73.0
3	17	29	28	24.7
4	109	120	118	115.7

**Table A.14** Kindergarten Solid Waste Generation (unit : kg/day)

NO.	25-Sep-95 1	26-Sep-95 2	27-Sep-95 3	28-Sep-95 4	29-Sep-95 5	AVERAGE
1	41.0	60.0	58.0	38.0	24.0	44.2
2	13.0	18.0	12.0	12.0	15.0	14.0
3	6.0	3.8	5.8	4.5	6.5	5.3
4	20.0	23.0	32.0	21.0	33.0	25.8
5	14.0	14.0	6.9	8.0	6.8	9.9

**Table A.15** Primary School Solid Waste Generation (unit : kg/day)

NO.	06-Nov-95 1	07-Nov-95 2	08-Nov-95 3	09-Nov-95 4	10-Nov-95 5	AVERAGE
1	95	100	80	108	98	96.2
2	90	74	90	115	92	92.2
3	74	81	90	115	92	90.4
4	58	60	63	70	51	60.4
5	50	53	46	41	58	49.6
6	41	65	36	42	52	47.2
7	60	115	67	98	64	80.8
8	120	148	89	132	104	118.6
9	28	18	56	22	24	29.6
10	53	14	40	37	36	36.0
11	102	142	113	192	129	135.6
12	20	32	28	26	24	26.0

**Table A.16** Secondary School & Collage Solid Waste Generation (unit : kg/day)

NO.	06-Nov-95 1	07-Nov-95 2	08-Nov-95 3	09-Nov-95 4	10-Nov-95 5	AVERAGE
1	94.5	120	94	131	158	119.5
2	102	231	263	283	202	216.2
3	154	146	183	176	164	164.6
4	20	31	30	63	36	36.0
5	42	40	35	36	37	38.0
6	140	161	156	144	167	153.6
7	260	277	287	264	255	268.6
8	278	155	218	114	192	191.4

**Table A.17** Hospital Solid Waste Generation (unit : kg/day)

NO.	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	AVERAGE
1	1610	3324	3840	2240	4530	3108.8
2	1122	1260	2278	1668	1748	1615.2
3	64	110	91	72	85	84.4
4	3	6	7	5	3	4.8
5	59	13	11	9	18	22.0
6	140	346	120	120	180	181.2

**Table A.18** Government Office Solid Waste Generation (unit : kg/day)

NO.	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	5.6	2.9	2.8	2.8	3.2	3.5
2	12.4	13.7	10.4	18.2	11.9	13.3
3	4.5	8.9	5.7	2.6	1.6	4.7
4	10.3	8.2	13.5	6.4	6.2	8.9
5	7.8	3.2	2.9	2.4	2.9	3.8
6	0.9	0.8	1.1	0.7	1.9	1.1
7	1.2	1.7	1.2	1.3	2.6	1.6
8	0.5	0.2	0.2	0.4	0.4	0.3
9	6.7	2.2	3.1	2.5	2.0	3.3
10	7.6	4.5	2.5	2.3	8.1	5.0
11	5.3	4.7	3.5	7.6	1.4	4.5
12	0.7	1.1	1.0	0.6	0.3	0.7
13	2.0	1.9	1.5	1.2	1.7	1.7
14	2.8	2.4	3.5	2.5	3.8	3.0
15	7.3	4.7	4.7	3.0	3.6	4.7
16	4.4	2.7	3.1	1.3	2.5	2.8
17	3.1	2.2	2.3	2.1	1.1	2.2
18	0.9	1.2	0.5	0.2	0.4	0.6
19	5.4	4.0	4.5	3.7	4.4	4.4
20	0.4	1.9	0.6	0.9	1.1	1.0
21	3.1	6.1	4.7	3.9	3.0	4.2
22	0.8	0.7	0.4	0.5	0.5	0.6
23	3.3	2.0	1.0	1.6	1.8	1.9
24	1.3	0.4	0.2	1.1	0.9	0.8
25	1.8	0.9	0.5	1.3	1.0	1.1

**Table A.19** Street Solid Waste Generation (unit : kg/day)

NO.	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	11.3	9.4	10.0	8.5	10.6	10.3	7.8	9.7
2	6.0	13.4	8.0	8.6	7.7	10.0	12.0	9.4
3	6.4	5.6	4.0	5.2	6.8	6.2	4.0	5.5
4	11.5	9.6	12.0	10.5	14.4	10.4	13.6	11.7
5	7.0	5.6	5.2	5.5	5.7	9.4	5.6	6.3
6	3.2	2.0	1.8	2.0	2.8	2.1	2.5	2.3
7	6.0	4.8	4.0	5.2	6.8	6.3	4.2	5.3

**Table A.20** Park Solid Waste Generation (unit : kg/day)

NO.	19-Oct-95 1	21-Oct-95 2	22-Oct-95 3	AVERAGE
1	110	241	256	202.3
2	17	23	26	22.0

**Table A.21** University Solid Waste Generation

No.	Month/Year	kg/month	kg./day
1	Dec./1993	190,960	6,160
2	Jan./1994	176,190	5,684
3	Feb./1994	174,460	6,231
4	Mar./1994	189,220	6,104
5	Apr./1994	177,658	5,922
6	May./1994	231,775	6,896
7	Jun./1994	265,320	8,844
8	Jul./1994	232,612	4,504
9	Aug./1994	235,101	7,584
10	Sep./1994	218,965	7,299
11	Oct./1994	181,350	5,850
12	Nov./1994	210,791	7,026
Average		207,034	6,509

Source: Solid Waste Management in Khon Kaen University,  
1995. by Pasawadee Churbundit

**APPENDIX B**

**THE SURVEY RESULTS OF SOLID WASTE  
COMPOSITION**

**Table B.1 High Income Residential Solid Waste Composition (% in wet basis)**

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	61.35	57.10	54.10	66.06	60.00	61.17	59.08	59.84
2	PAPER	14.73	11.50	13.36	9.48	8.00	11.73	10.74	11.36
3	PLASTIC	12.80	14.10	19.52	9.48	11.67	14.25	14.32	13.73
4	RUBBER	0.00	0.00	0.00	0.61	0.00	0.00	0.26	0.12
5	LEATHER	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.03
6	WOOD	4.35	10.90	4.45	7.34	6.67	3.63	9.97	6.76
7	TEXTILE	1.69	0.30	0.68	0.92	5.33	2.79	2.05	1.97
8	GLASS	3.14	2.90	4.79	3.36	3.67	3.91	1.79	3.37
9	METAL	0.97	0.90	3.08	2.14	2.67	1.68	1.28	1.82
10	STONE	0.48	0.30	0.00	0.00	0.00	0.00	0.00	0.11
11	MISCELLANEOUS	0.24	2.10	0.00	0.61	2.00	0.84	0.50	0.90
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.2 High Income Residential Solid Waste Composition (% in dry basis)**

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	42.93	25.04	31.00	49.54	32.18	28.37	35.01	34.87
2	PAPER	24.39	14.24	22.13	14.22	16.56	20.71	20.98	19.03
3	PLASTIC	17.31	13.92	24.75	13.44	16.40	23.79	17.28	18.13
4	RUBBER	0.00	0.00	0.00	1.40	0.00	0.00	0.62	0.29
5	LEATHER	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.07
6	WOOD	2.71	22.10	3.43	6.11	6.22	4.24	11.47	8.04
7	TEXTILE	2.84	0.75	1.48	1.97	9.33	7.06	5.24	4.09
8	GLASS	6.12	12.40	10.53	7.72	9.44	10.33	5.03	8.79
9	METAL	1.86	3.78	6.67	4.71	6.06	3.83	3.49	4.34
10	STONE	0.95	1.28	0.00	0.00	0.00	0.00	0.00	0.32
11	MISCELLANEOUS	0.42	6.49	0.00	0.90	3.82	1.68	0.88	2.03
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.3** Medium Income Residential Solid Waste Composition (% in wet basis)

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	47.41	44.11	43.73	57.99	53.08	53.16	42.69	48.88
2	PAPER	13.51	11.78	11.95	9.67	8.90	9.74	13.46	11.29
3	PLASTIC	16.09	19.53	14.58	17.84	13.01	13.42	18.08	16.08
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	11.49	6.73	15.45	6.32	7.19	15.26	11.92	10.62
7	TEXTILE	1.15	4.04	5.25	1.12	4.45	1.58	5.00	3.23
8	GLASS	5.17	10.44	3.50	3.35	8.22	5.00	5.00	5.81
9	METAL	3.45	1.68	4.66	1.86	1.71	1.32	2.31	2.43
10	STONE	0.57	0.00	0.00	0.00	0.00	0.26	0.38	0.17
11	MISCELLANEOUS	1.15	1.68	0.87	1.86	3.42	0.26	1.15	1.49
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.4** Medium Income Residential Solid Waste Composition (% in dry basis)

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	28.73	22.89	24.73	41.05	17.26	31.90	18.00	26.37
2	PAPER	17.59	15.20	18.51	12.21	14.83	14.25	20.36	16.14
3	PLASTIC	24.46	23.56	17.60	25.10	17.09	20.07	23.00	21.55
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	6.96	6.42	9.84	6.56	9.25	14.37	13.67	9.58
7	TEXTILE	2.14	7.43	10.77	1.52	6.71	2.53	7.78	5.55
8	GLASS	10.12	18.81	7.31	7.13	21.49	12.45	10.03	12.48
9	METAL	6.66	3.02	9.60	3.84	4.39	3.15	4.53	5.03
10	STONE	1.13	0.00	0.00	0.00	0.00	0.65	0.77	0.36
11	MISCELLANEOUS	2.21	2.67	1.64	2.59	8.98	0.64	1.86	2.94
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.5** Low Income Residential Solid Waste Composition (% in wet basis)

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	46.67	58.30	57.04	63.23	58.85	58.94	61.92	57.85
2	PAPER	7.18	8.12	7.22	5.83	7.41	6.74	7.62	7.16
3	PLASTIC	21.03	11.44	15.12	18.83	20.99	15.25	14.57	16.75
4	RUBBER	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.05
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	14.36	5.17	10.31	8.97	9.88	3.81	5.96	8.35
7	TEXTILE	1.54	2.95	0.00	0.45	0.82	1.17	1.32	1.18
8	GLASS	4.10	11.44	7.22	1.79	1.23	6.74	7.28	5.69
9	METAL	3.59	0.74	1.37	0.90	0.82	2.05	1.32	1.54
10	STONE	0.00	0.00	1.72	0.00	0.00	4.11	0.00	0.83
11	MISCELLANEOUS	1.54	1.48	0.00	0.00	0.00	1.17	0.00	0.60
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.6** Low Income Residential Solid Waste Composition (% in drybasis)

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	21.05	29.21	31.85	38.17	36.61	21.81	27.96	29.52
2	PAPER	10.59	13.95	12.38	8.94	15.34	11.63	14.57	12.49
3	PLASTIC	32.73	12.33	21.27	36.21	30.70	23.05	24.93	25.89
4	RUBBER	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.11
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	12.25	6.16	10.26	8.04	11.56	4.15	5.48	8.27
7	TEXTILE	3.45	6.02	0.00	0.91	0.61	2.18	3.11	2.33
8	GLASS	9.23	26.58	16.96	5.25	3.11	18.49	20.32	14.28
9	METAL	8.18	1.71	3.22	2.49	2.07	5.27	3.64	3.80
10	STONE	0.00	0.00	4.06	0.00	0.00	11.27	0.00	2.19
11	MISCELLANEOUS	2.53	3.24	0.00	0.00	0.00	2.14	0.00	1.13
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table B.7** Food Operation Factory Solid Waste Composition (% in wet basis)

NO.	COM/DATE	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	GARBAGE	28.85	35.71	48.89	20.00	33.78	33.45
2	PAPER	5.77	0.00	8.89	5.45	6.76	5.37
3	PLASTIC	3.85	30.95	8.89	27.27	10.81	16.35
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	61.54	9.52	24.44	20.00	24.32	27.97
7	TEXTILE	0.00	0.00	0.00	0.00	0.00	0.00
8	GLASS	0.00	0.00	8.89	27.27	13.51	9.94
9	METAL	0.00	0.00	0.00	0.00	0.00	0.00
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	23.81	0.00	0.00	10.81	6.92
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.8** Food Operation Factory Solid Waste Composition (% in dry basis)

NO.	COM/DATE	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	GARBAGE	23.28	22.96	9.97	7.93	8.52	14.53
2	PAPER	9.46	0.00	20.63	4.89	9.45	8.89
3	PLASTIC	7.54	36.55	19.84	35.67	17.96	23.51
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	59.71	6.50	22.40	7.99	14.55	22.23
7	TEXTILE	0.00	0.00	0.00	0.00	0.00	0.00
8	GLASS	0.00	0.00	27.16	43.52	31.89	20.51
9	METAL	0.00	0.00	0.00	0.00	0.00	0.00
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	33.99	0.00	0.00	17.63	10.32
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.9 Machinery Operation Factory Solid Waste Composition (% in wet basis)**

NO.	COM/DATE	15-Dec-95	16-Dec-95	18-Dec-95	19-Dec-95	20-Dec-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	0.00	7.25	6.12	0.00	5.71	3.82
2	PAPER	25.53	21.74	14.29	26.09	25.71	22.67
3	PLASTIC	6.38	4.35	8.16	10.87	10.00	7.95
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	0.00	0.00	0.00	0.00	0.00	0.00
7	TEXTILE	0.00	0.00	0.00	0.00	0.00	0.00
8	GLASS	0.00	5.80	0.00	0.00	0.00	1.16
9	METAL	68.09	60.87	71.43	63.04	58.57	64.40
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.10 Transportation Operation Factory Solid Waste Composition (% in wet basis)**

NO.	COM/DATE	15-Dec-95	16-Dec-95	18-Dec-95	19-Dec-95	20-Dec-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	0.55	6.28	3.03	2.44	1.33	2.73
2	PAPER	13.81	32.46	19.70	17.07	38.67	24.34
3	PLASTIC	14.92	5.76	2.27	6.10	5.33	6.88
4	RUBBER	6.63	0.00	0.76	0.00	0.00	1.48
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	3.31	0.00	0.00	0.00	1.33	0.93
7	TEXTILE	0.55	0.00	0.00	0.00	1.33	0.38
8	GLASS	0.55	10.47	9.09	7.32	6.67	6.82
9	METAL	56.91	33.51	65.15	65.85	45.33	53.35
10	STONE	0.00	0.00	0.00	1.22	0.00	0.24
11	MISCELLANEOUS	2.76	11.52	0.00	0.00	0.00	2.86
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.11** Textile Operation Factory Solid Waste Composition (% in wet basis)

NO.	COM/DATE	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	GARBAGE	25.52	14.10	13.64	22.12	17.31	18.54
2	PAPER	12.41	14.10	2.73	4.42	7.69	8.27
3	PLASTIC	18.62	33.33	61.82	53.10	48.08	42.99
4	RUBBER	2.07	0.00	0.00	0.88	0.00	0.59
5	LEATHER	1.38	0.00	0.00	0.00	0.00	0.28
6	WOOD	2.07	5.13	8.18	0.00	4.81	4.04
7	TEXTILE	23.45	23.08	9.09	13.27	13.46	16.47
8	GLASS	6.21	6.41	4.55	1.77	4.81	4.75
9	METAL	4.83	3.85	0.00	4.42	3.85	3.39
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	3.45	0.00	0.00	0.00	0.00	0.69
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.12** Wood Furniture Operation Factory Solid Waste Composition (% in wet basis)

NO.	COM/DATE	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	GARBAGE	0.00	0.00	0.00	0.00	0.00	0.00
2	PAPER	0.00	0.00	0.00	0.00	0.00	0.00
3	PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	100.00	100.00	100.00	100.00	100.00	100.00
7	TEXTILE	0.00	0.00	0.00	0.00	0.00	0.00
8	GLASS	0.00	0.00	0.00	0.00	0.00	0.00
9	METAL	0.00	0.00	0.00	0.00	0.00	0.00
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.13** Store Solid Waste Composition (% in wet basis)

NO.	COM/DATE	23-Oct-95	24-Oct-95	25-Oct-95	26-Oct-95	27-Oct-95	28-Oct-95	AVERAGE
		1	2	3	4	5	6	
1	GARBAGE	11.68	7.58	6.84	11.52	7.55	8.50	8.94
2	PAPER	44.67	45.96	38.42	42.41	45.75	43.00	43.37
3	PLASTIC	26.40	27.27	33.68	34.03	26.89	32.50	30.13
4	RUBBER	0.51	0.00	0.53	0.00	0.00	4.00	0.84
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	4.57	1.52	6.32	0.52	2.36	0.00	2.55
7	TEXTILE	1.02	2.53	2.63	3.66	0.94	2.00	2.13
8	GLASS	2.03	6.06	5.26	1.57	1.89	2.50	3.22
9	METAL	6.09	6.06	5.79	5.24	10.85	1.50	5.92
10	STONE	0.00	0.00	0.00	0.00	1.42	0.00	0.24
11	MISCELLANEOUS	3.05	3.03	0.53	1.05	2.36	6.00	2.67
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.14** Store Solid Waste Composition (% in dry basis)

NO.	COM/DATE	23-Oct-95	24-Oct-95	25-Oct-95	26-Oct-95	27-Oct-95	28-Oct-95	AVERAGE
		1	2	3	4	5	6	
1	GARBAGE	2.96	2.16	3.64	5.90	2.15	3.75	3.43
2	PAPER	51.38	48.30	39.98	43.36	48.46	40.36	45.31
3	PLASTIC	29.26	29.97	38.23	37.43	29.30	37.96	33.69
4	RUBBER	0.62	0.00	0.61	0.00	0.00	4.73	0.99
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	1.73	0.33	1.42	0.24	0.86	0.00	0.76
7	TEXTILE	1.22	2.70	2.82	4.20	1.02	2.26	2.37
8	GLASS	2.46	6.75	6.10	1.81	2.11	2.37	3.60
9	METAL	7.26	6.62	6.61	5.91	12.12	1.75	6.71
10	STONE	0.00	0.00	0.00	0.00	1.55	0.00	0.26
11	MISCELLANEOUS	3.12	3.16	0.58	1.14	2.43	6.84	2.88
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.15 Office Solid Waste Composition (% in wet basis)**

NO.	COM/DATE	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	GARBAGE	31.27	19.92	21.31	21.59	27.71	24.36
2	PAPER	51.05	64.18	60.36	60.08	56.59	58.45
3	PLASTIC	7.36	8.62	7.37	11.00	7.36	8.34
4	RUBBER	0.73	0.00	0.00	0.00	0.00	0.15
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	0.15	3.07	5.98	0.61	2.71	2.50
7	TEXTILE	0.29	0.38	0.40	0.20	0.39	0.33
8	GLASS	4.51	2.87	3.59	5.50	3.10	3.91
9	METAL	2.62	0.96	1.00	1.02	1.74	1.47
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	2.04	0.00	0.00	0.00	0.39	0.48
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.16 Office Solid Waste Composition (% in dry basis)**

NO.	COM/DATE	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	GARBAGE	11.75	8.27	7.60	9.82	12.05	9.90
2	PAPER	64.78	75.03	75.25	68.61	70.50	70.83
3	PLASTIC	9.31	9.65	7.80	12.60	8.72	9.62
4	RUBBER	1.03	0.00	0.00	0.00	0.00	0.21
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	0.07	1.26	2.99	0.24	0.96	1.10
7	TEXTILE	0.43	0.52	0.20	0.23	0.44	0.36
8	GLASS	6.66	4.01	4.86	7.25	4.49	5.45
9	METAL	3.85	1.26	1.31	1.25	2.35	2.00
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	2.11	0.00	0.00	0.00	0.49	0.52
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.17** Hotel Solid Waste Composition (% in wet basis)

NO.	COM/DATE	12-Sep-95	22-Sep-95	23-Sep-95	24-Sep-95	25-Sep-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	54.48	56.48	62.60	42.47	51.47	53.50
2	PAPER	18.28	18.65	13.55	18.52	23.53	18.51
3	PLASTIC	8.60	11.66	8.13	9.88	4.71	8.59
4	RUBBER	0.36	0.00	1.36	0.25	0.00	0.39
5	LEATHER	0.00	0.00	0.00	0.49	0.00	0.10
6	WOOD	1.43	1.81	1.63	5.93	1.47	2.45
7	TEXTILE	2.87	1.55	1.36	8.15	0.88	2.96
8	GLASS	8.24	6.99	5.96	10.37	14.12	9.14
9	METAL	1.43	1.55	2.17	0.74	2.06	1.59
10	STONE	1.08	0.52	2.71	1.48	0.00	1.16
11	MISCELLANEOUS	1.08	0.78	0.54	1.73	1.76	1.18
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.18** Hotel Solid Waste Composition (% in dry basis)

NO.	COM/DATE	12-Sep-95	22-Sep-95	23-Sep-95	24-Sep-95	25-Sep-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	24.65	23.74	25.72	22.17	20.26	23.31
2	PAPER	27.75	26.66	21.98	23.00	32.13	26.30
3	PLASTIC	15.43	23.99	15.70	15.41	8.66	15.84
4	RUBBER	0.85	0.00	3.74	0.50	0.00	1.02
5	LEATHER	0.00	0.00	0.00	0.94	0.00	0.19
6	WOOD	0.81	0.90	1.06	2.86	0.82	1.29
7	TEXTILE	3.94	2.91	1.88	7.13	1.73	3.52
8	GLASS	19.68	16.24	16.52	21.33	31.71	21.10
9	METAL	3.33	3.51	5.04	1.48	4.20	3.51
10	STONE	2.45	1.20	6.97	2.79	0.00	2.68
11	MISCELLANEOUS	1.11	0.85	1.39	2.39	0.48	1.24
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00



**Table B.19** Restaurant Solid Waste Composition (% in wet basis)

NO.	COM/DATE	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	GARBAGE	58.06	57.14	64.29	78.37	75.60	67.49	58.82	66.95
2	PAPER	4.86	6.88	6.12	2.40	2.87	3.70	2.94	4.15
3	PLASTIC	16.67	10.58	16.33	6.25	5.74	9.47	14.29	10.44
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	3.47	5.29	4.08	0.48	4.78	1.23	0.42	2.72
7	TEXTILE	0.00	0.53	0.00	0.48	0.00	0.00	0.84	0.31
8	GLASS	5.56	11.64	5.10	5.77	8.61	11.52	8.82	8.58
9	METAL	1.39	1.06	2.04	1.44	0.00	3.29	4.20	2.01
10	STONE	0.00	6.88	2.04	4.81	2.39	3.29	9.66	4.85
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.20** Restaurant Solid Waste Composition (% in dry basis)

NO.	COM/DATE	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	GARBAGE	36.49	22.79	42.23	56.20	53.41	36.85	31.79	40.54
2	PAPER	7.56	10.97	6.73	2.95	3.79	5.47	3.72	5.61
3	PLASTIC	23.93	11.24	18.78	6.64	6.08	11.14	13.62	11.25
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	5.23	4.41	7.11	0.79	3.92	1.12	0.57	2.99
7	TEXTILE	0.00	0.54	0.00	0.42	0.00	0.00	0.93	0.32
8	GLASS	21.61	29.58	14.56	17.02	26.51	29.63	25.71	23.83
9	METAL	5.18	2.41	5.47	4.04	0.00	7.60	9.94	4.91
10	STONE	0.00	18.05	5.12	11.94	6.29	8.20	13.73	10.55
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.21 Theater Solid Waste Composition (% in wet basis)**

NO.	COM/DATE	21-Nov-95	22-Nov-95	23-Nov-95	24-Nov-95	25-Nov-95	26-Nov-95	27-Nov-95	AVERAGE
		1	2	3	4	5	6	7	
1	GARBAGE	8.33	4.08	12.61	11.00	8.70	7.55	17.35	10.21
2	PAPER	13.10	20.41	10.81	6.00	12.17	9.43	12.24	11.85
3	PLASTIC	54.76	54.08	55.86	52.00	56.52	64.15	54.08	56.12
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	1.19	0.00	0.00	1.00	0.87	0.94	1.02	0.64
7	TEXTILE	0.00	1.02	0.00	3.00	0.87	0.94	0.00	0.97
8	GLASS	11.90	10.20	9.01	13.00	3.48	0.00	1.02	6.12
9	METAL	9.52	7.14	9.01	9.00	10.43	10.38	6.12	8.68
10	STONE	0.00	0.00	0.00	0.00	0.00	0.94	0.00	0.16
11	MISCELLANEOUS	1.19	3.06	2.70	5.00	6.96	5.66	8.16	5.26
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.22 Theater Solid Waste Composition (% in dry basis)**

NO.	COM/DATE	21-Nov-95	22-Nov-95	23-Nov-95	24-Nov-95	25-Nov-95	26-Nov-95	27-Nov-95	AVERAGE
		1	2	3	4	5	6	7	
1	GARBAGE	3.79	0.83	3.26	2.37	2.91	2.31	7.33	3.17
2	PAPER	11.36	19.09	10.20	5.11	11.00	8.98	11.33	10.95
3	PLASTIC	54.01	50.84	54.42	54.80	55.04	65.71	61.44	57.04
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	1.19	0.00	0.00	0.70	1.18	1.21	1.22	0.72
7	TEXTILE	0.00	1.03	0.00	2.09	0.84	0.78	0.00	0.79
8	GLASS	16.62	15.06	15.24	19.51	5.84	0.00	1.47	9.52
9	METAL	12.20	9.48	14.86	12.30	16.24	13.18	8.29	12.39
10	STONE	0.00	0.00	0.00	0.00	0.00	1.40	0.00	0.23
11	MISCELLANEOUS	0.84	3.68	2.03	3.12	6.95	6.43	8.92	5.19
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table B.23** Market Solid Waste Composition (% in wet basis)

NO.	COM/DATE	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	06-Oct-95 6	07-Oct-95 7	AVERAGE
1	GARBAGE	61.84	54.24	54.57	42.76	51.31	47.80	56.48	51.19
2	PAPER	11.31	7.80	11.99	23.57	11.01	10.34	14.62	13.22
3	PLASTIC	16.25	16.95	23.97	18.52	25.91	22.22	15.78	20.56
4	RUBBER	0.71	1.02	0.00	0.00	0.00	2.58	1.33	0.82
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.04
6	WOOD	8.48	15.59	4.10	4.04	9.01	11.11	8.64	8.75
7	TEXTILE	0.00	0.34	0.32	0.34	0.25	2.84	0.00	0.68
8	GLASS	0.71	0.68	1.89	6.40	2.25	0.52	2.16	2.32
9	METAL	0.71	2.71	3.15	4.38	0.25	2.33	1.00	2.30
10	STONE	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.11
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.24** Market Solid Waste Composition (% in dry basis)

NO.	COM/DATE	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	06-Oct-95 6	07-Oct-95 7	AVERAGE
1	GARBAGE	37.22	34.69	27.70	12.57	21.01	23.47	20.21	23.28
2	PAPER	17.44	11.28	13.24	32.54	14.43	13.40	25.08	18.33
3	PLASTIC	28.24	27.29	33.05	22.40	44.46	28.99	26.63	30.47
4	RUBBER	2.97	3.34	0.00	0.00	0.00	8.98	4.80	2.85
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.12
6	WOOD	8.07	9.54	3.89	2.48	8.87	10.41	10.18	7.56
7	TEXTILE	0.00	0.85	0.54	0.23	0.55	3.44	0.00	0.94
8	GLASS	3.05	2.24	8.17	17.88	9.67	1.97	9.14	8.18
9	METAL	3.01	8.52	13.41	11.91	1.00	8.62	3.96	7.90
10	STONE	0.00	2.24	0.00	0.00	0.00	0.00	0.00	0.37
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.25** Large Store Solid Waste Composition (% in wet basis)

NO.	COM/DATE	20-Oct-95	21-Oct-95	22-Oct-95	AVERAGE
		1	2	3	
1	GARBAGE	48.76	47.06	46.91	46.98
2	PAPER	16.92	13.24	19.59	16.41
3	PLASTIC	12.94	13.24	21.13	17.18
4	RUBBER	0.00	0.49	0.00	0.25
5	LEATHER	0.00	0.00	0.00	0.00
6	WOOD	4.48	7.35	0.52	3.93
7	TEXTILE	0.50	2.45	0.52	1.48
8	GLASS	8.96	4.90	10.82	7.86
9	METAL	1.49	2.45	0.52	1.48
10	STONE	4.48	4.90	0.00	2.45
11	MISCELLANEOUS	1.49	3.92	0.00	1.96
TOTAL		100.00	100.00	100.00	100.00

**Table B.26** Large Store Solid Waste Composition (% in dry basis)

NO.	COM/DATE	20-Oct-95	21-Oct-95	22-Oct-95	AVERAGE
		1	2	3	
1	GARBAGE	14.70	13.78	13.71	13.74
2	PAPER	27.86	20.29	30.06	25.18
3	PLASTIC	21.73	22.83	35.36	29.09
4	RUBBER	0.00	0.95	0.00	0.47
5	LEATHER	0.00	0.00	0.00	0.00
6	WOOD	2.88	4.30	0.41	2.36
7	TEXTILE	0.84	4.36	0.78	2.57
8	GLASS	17.60	10.43	18.82	14.63
9	METAL	2.91	4.92	0.85	2.88
10	STONE	8.81	9.89	0.00	4.95
11	MISCELLANEOUS	2.67	8.25	0.00	4.13
TOTAL		100.00	100.00	100.00	100.00

**Table B.27** Kindergarten Solid Waste Composition (% in wet basis)

NO.	COM/DATE	25-Sep-95	26-Sep-95	27-Sep-95	28-Sep-95	29-Sep-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	35.85	42.60	35.71	62.74	53.09	48.54
2	PAPER	37.74	39.71	31.25	19.39	23.64	28.50
3	PLASTIC	8.81	10.83	18.75	11.41	12.36	13.34
4	RUBBER	0.00	0.00	0.00	0.00	0.73	0.18
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	13.84	2.17	3.57	2.66	5.09	3.37
7	TEXTILE	3.14	0.72	2.68	0.38	0.36	1.04
8	GLASS	0.00	2.53	3.57	0.76	3.64	2.62
9	METAL	0.63	1.44	3.57	2.28	1.09	2.10
10	STONE	0.00	0.00	0.89	0.00	0.00	0.22
11	MISCELLANEOUS	0.00	0.00	0.00	0.38	0.00	0.10
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.28** Kindergarten Solid Waste Composition (% in dry basis)

NO.	COM/DATE	25-Sep-95	26-Sep-95	27-Sep-95	28-Sep-95	29-Sep-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	16.82	18.38	15.40	33.56	31.80	24.78
2	PAPER	52.52	54.48	38.48	34.22	37.80	41.25
3	PLASTIC	12.12	16.26	28.61	20.23	13.97	19.77
4	RUBBER	0.00	0.00	0.00	0.00	1.53	0.38
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	15.84	1.43	2.53	2.57	4.70	2.81
7	TEXTILE	1.47	1.10	1.82	0.87	0.48	1.07
8	GLASS	0.00	5.40	6.04	2.00	7.63	5.27
9	METAL	1.24	2.96	6.03	5.81	2.09	4.22
10	STONE	0.00	0.00	1.11	0.00	0.00	0.28
11	MISCELLANEOUS	0.00	0.00	0.00	0.73	0.00	0.18
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.31** Secondary School & Collage Solid Waste Composition (% in wet basis)

NO.	COM/DATE	06-Nov-95 1	07-Nov-95* 2	08-Nov-95 3	09-Nov-95 4	10-Nov-95 5	AVERAGE
1	GARBAGE	44.26	21.31	53.47	46.15	34.23	39.89
2	PAPER	21.31	24.59	17.36	13.29	26.13	20.54
3	PLASTIC	23.77	15.57	18.75	32.17	28.53	23.82
4	RUBBER	0.00	0.00	0.00	0.00	0.90	0.18
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	4.92	27.87	2.08	4.90	2.70	8.49
7	TEXTILE	1.64	0.82	3.47	1.40	0.90	1.65
8	GLASS	1.64	3.28	2.08	0.00	2.70	1.94
9	METAL	2.46	3.28	2.08	2.10	1.80	2.34
10	STONE	0.00	0.00	0.00	0.00	1.80	0.36
11	MISCELLANEOUS	0.00	3.28	0.69	0.00	0.00	0.79
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

NOTE: \* Loi Grathong Festival

**Table B.32** Secondary School & Collage Solid Waste Composition (% in dry basis)

NO.	COM/DATE	06-Nov-95 1	07-Nov-95* 2	08-Nov-95 3	09-Nov-95 4	10-Nov-95 5	AVERAGE
1	GARBAGE	23.36	10.51	29.19	20.54	16.13	19.95
2	PAPER	28.45	27.20	22.72	19.85	34.62	26.57
3	PLASTIC	33.80	20.22	30.52	48.04	29.54	32.42
4	RUBBER	0.00	0.00	0.00	0.00	1.51	0.30
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	4.53	26.15	2.38	3.66	3.31	8.01
7	TEXTILE	2.13	0.87	5.72	2.56	1.15	2.49
8	GLASS	3.11	5.52	4.18	0.00	5.95	3.75
9	METAL	4.62	5.49	3.93	5.34	3.86	4.65
10	STONE	0.00	0.00	0.00	0.00	3.94	0.79
11	MISCELLANEOUS	0.00	4.04	1.37	0.00	0.00	1.08
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

NOTE: \* Loi Grathong Festival

**Table B.33** Hospital Solid Waste Composition (% in wet basis)

NO.	COM/DATE	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	AVERAGE
1	GARBAGE	53.34	56.16	30.14	44.36	39.04	42.42
2	PAPER	7.34	10.96	13.70	16.92	16.04	14.40
3	PLASTIC	24.90	23.29	26.03	24.44	26.74	25.12
4	RUBBER	0.79	0.82	2.28	2.26	2.67	2.01
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	5.24	1.64	0.91	0.38	6.95	2.47
7	TEXTILE	1.05	3.01	10.96	2.26	2.14	4.59
8	GLASS	4.72	1.37	13.24	4.51	4.81	5.98
9	METAL	2.62	2.74	2.28	4.89	1.60	2.88
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.46	0.00	0.00	0.11
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.34** Hospital Solid Waste Composition (% in dry basis)

NO.	COM/DATE	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	AVERAGE
1	GARBAGE	24.29	33.03	17.49	23.35	22.20	24.02
2	PAPER	12.72	24.85	13.82	19.99	20.64	19.83
3	PLASTIC	35.21	27.46	26.92	30.20	34.62	29.80
4	RUBBER	1.46	1.58	3.57	4.41	4.35	3.48
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	8.86	1.58	1.32	0.20	4.87	1.99
7	TEXTILE	0.79	2.72	8.24	3.00	1.27	3.81
8	GLASS	10.84	3.09	23.96	9.61	9.15	11.45
9	METAL	5.84	5.69	4.02	9.24	2.91	5.46
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.65	0.00	0.00	0.16
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.33** Hospital Solid Waste Composition (% in wet basis)

NO.	COM/DATE	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	AVERAGE
1	GARBAGE	53.34	56.16	30.14	44.36	39.04	42.42
2	PAPER	7.34	10.96	13.70	16.92	16.04	14.40
3	PLASTIC	24.90	23.29	26.03	24.44	26.74	25.12
4	RUBBER	0.79	0.82	2.28	2.26	2.67	2.01
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	5.24	1.64	0.91	0.38	6.95	2.47
7	TEXTILE	1.05	3.01	10.96	2.26	2.14	4.59
8	GLASS	4.72	1.37	13.24	4.51	4.81	5.98
9	METAL	2.62	2.74	2.28	4.89	1.60	2.88
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.46	0.00	0.00	0.11
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.34** Hospital Solid Waste Composition (% in dry basis)

NO.	COM/DATE	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	AVERAGE
1	GARBAGE	24.29	33.03	17.49	23.35	22.20	24.02
2	PAPER	12.72	24.85	13.82	19.99	20.64	19.83
3	PLASTIC	35.21	27.46	26.92	30.20	34.62	29.80
4	RUBBER	1.46	1.58	3.57	4.41	4.35	3.48
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	8.86	1.58	1.32	0.20	4.87	1.99
7	TEXTILE	0.79	2.72	8.24	3.00	1.27	3.81
8	GLASS	10.84	3.09	23.96	9.51	9.15	11.45
9	METAL	5.84	5.69	4.02	9.24	2.91	5.46
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.65	0.00	0.00	0.16
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.35** Government Office Solid Waste Composition (% in wet basis)

NO.	COM/DATE	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	GARBAGE	28.37	21.03	19.76	17.44	20.35	21.39
2	PAPER	51.35	56.61	51.99	56.82	51.54	53.66
3	PLASTIC	10.79	9.62	13.40	11.67	16.69	12.43
4	RUBBER	0.50	0.00	0.66	0.14	1.02	0.47
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	0.50	4.33	6.76	3.09	1.46	3.23
7	TEXTILE	1.60	1.32	0.80	1.97	0.59	1.25
8	GLASS	2.80	5.29	3.58	6.61	6.15	4.89
9	METAL	1.10	0.96	1.33	0.98	1.61	1.20
10	STONE	0.60	0.00	0.40	0.00	0.00	0.20
11	MISCELLANEOUS	2.40	0.84	1.33	1.27	0.59	1.28
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.36** Government Office Solid Waste Composition (% in dry basis)

NO.	COM/DATE	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	GARBAGE	11.83	8.93	5.47	4.68	7.15	7.61
2	PAPER	64.44	69.43	67.05	67.48	60.04	65.69
3	PLASTIC	12.48	9.62	15.06	12.96	19.81	13.98
4	RUBBER	0.67	0.00	0.90	0.18	1.31	0.61
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	0.20	1.49	2.52	1.45	0.70	1.27
7	TEXTILE	1.81	1.41	0.85	2.31	0.35	1.35
8	GLASS	3.80	6.96	4.88	8.49	7.98	6.42
9	METAL	1.45	1.16	1.78	1.16	2.03	1.52
10	STONE	0.80	0.00	0.51	0.00	0.00	0.26
11	MISCELLANEOUS	2.52	1.00	0.99	1.29	0.63	1.29
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00

**Table B.37** Street Solid Waste Composition (% in wet basis)

NO.	COM/DATE	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	GARBAGE	5.74	4.94	9.43	6.12	8.70	12.71	9.52	8.17
2	PAPER	15.49	14.81	16.98	9.18	10.87	14.41	11.90	13.38
3	PLASTIC	11.47	17.28	19.81	14.29	23.91	15.25	11.90	16.28
4	RUBBER	3.44	0.00	0.00	0.00	0.00	1.69	0.00	0.73
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	9.18	6.17	14.15	21.43	5.43	9.32	23.81	12.79
7	TEXTILE	1.15	1.23	0.94	4.08	1.09	3.39	1.19	1.87
8	GLASS	3.44	2.47	9.43	10.20	6.52	6.78	5.95	6.40
9	METAL	0.75	3.70	2.83	4.08	2.17	2.54	3.57	2.81
10	STONE	43.60	43.21	26.42	27.55	34.78	30.51	26.19	33.18
11	MISCELLANEOUS	5.74	6.17	0.00	3.06	6.52	3.39	5.95	4.41
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

**Table B.38** Street Solid Waste Composition (% in dry basis)

NO.	COM/DATE	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	GARBAGE	1.77	2.01	3.43	2.13	1.33	3.73	4.20	2.66
2	PAPER	14.43	14.83	16.77	9.40	11.72	13.21	12.05	13.20
3	PLASTIC	11.72	16.15	19.12	14.44	24.11	15.21	12.57	16.19
4	RUBBER	3.96	0.00	0.00	0.00	0.00	2.28	0.00	0.89
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	8.53	4.43	12.83	19.09	4.97	8.47	21.69	11.43
7	TEXTILE	1.29	1.13	1.00	4.02	1.13	3.18	1.33	1.87
8	GLASS	3.98	2.95	12.35	12.29	8.14	9.22	7.45	8.05
9	METAL	0.85	4.41	3.66	4.87	2.67	3.28	4.25	3.43
10	STONE	47.67	48.61	30.83	30.65	40.23	38.09	30.97	38.15
11	MISCELLANEOUS	5.80	5.47	0.00	3.11	5.69	3.34	5.49	4.13
TOTAL		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table B.39** Park Solid Waste Composition (% in wet basis)

NO.	COM/DATE	19-Oct-95	21-Oct-95	22-Oct-95	AVERAGE
		1	2	3	
1	GARBAGE	19.05	19.47	13.38	16.42
2	PAPER	10.32	10.62	4.93	7.77
3	PLASTIC	28.57	26.55	28.17	27.36
4	RUBBER	0.00	3.54	1.41	2.47
5	LEATHER	0.00	0.00	0.00	0.00
6	WOOD	2.38	0.00	4.93	2.46
7	TEXTILE	0.00	0.88	0.00	0.44
8	GLASS	33.33	35.40	40.85	38.12
9	METAL	6.35	3.54	3.52	3.53
10	STONE	0.00	0.00	2.82	1.41
11	MISCELLANEOUS	0.00	0.00	0.00	0.00
TOTAL		100.00	100.00	100.00	100.00

**Table B.40** Park Solid Waste Composition (% in dry basis)

NO.	COM/DATE	19-Oct-95	21-Oct-95	22-Oct-95	AVERAGE
		1	2	3	
1	GARBAGE	7.39	3.37	7.20	5.29
2	PAPER	8.02	7.54	3.79	5.67
3	PLASTIC	27.29	27.67	23.92	25.80
4	RUBBER	0.00	4.95	1.65	3.30
5	LEATHER	0.00	0.00	0.00	0.00
6	WOOD	1.33	0.00	2.30	1.15
7	TEXTILE	0.00	0.57	0.00	0.28
8	GLASS	47.16	50.87	53.55	52.21
9	METAL	8.81	5.03	4.52	4.77
10	STONE	0.00	0.00	3.06	1.53
11	MISCELLANEOUS	0.00	0.00	0.00	0.00
TOTAL		100.00	100.00	100.00	100.00

**Table B.41** University Solid Waste Composition (% in wet basis)

NO.	COMPOSITION	AVERAGE
1	GARBAGE	52.06
2	PAPER	21.15
3	PLASTIC	15.72
4	RUBBER/LEATHER	0.06
5	WOOD	4.45
6	TEXTILE	0.22
7	GLASS/STONE	1.78
8	METAL	3.76
9	FOAM	0.41
10	MISCELLANEOUS	0.39
	TOTAL	100.00

Source: Solid Waste Management in Khon Kaen University, 1995.  
by Pasawadee Churbundit

**APPENDIX C**

**THE SURVEY RESULTS OF SOLID WASTE  
MOISTURE CONTENT AND BULK DENSITY**

**Table C.1** High Income Residential Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	64.36	69.84	74.00	67.41	79.31	82.48	78.95	73.76
2	PAPER	15.67	14.69	24.82	34.81	20.17	33.33	30.63	24.87
3	PLASTIC	31.13	32.27	42.47	38.39	45.79	36.93	57.15	40.59
4	RUBBER	0.00	0.00	0.00	0.58	0.00	0.00	13.73	2.04
5	LEATHER	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.14
6	WOOD	68.25	52.63	65.00	63.81	64.00	55.88	59.16	61.25
7	TEXTILE	14.39	41.70	2.29	6.86	32.54	4.59	9.04	15.92
8	GLASS	0.72	0.11	0.34	0.28	0.71	0.27	0.27	0.39
9	METAL	1.95	1.88	1.82	4.39	12.34	13.79	3.20	5.62
10	STONE	0.06	0.42	0.00	0.00	0.00	0.00	0.00	0.07
11	MISCELLANEOUS	11.20	27.79	0.00	36.38	26.40	24.08	38.98	23.55
TOTAL (whole sample)		49.06	52.58	54.62	56.54	61.43	62.23	64.48	57.28
DENSITY (kg/cu.m)		263.16	215.79	247.37	247.37	252.63	273.68	236.84	248.12

**Table C.2** Medium Income Residential Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	69.28	72.11	73.19	66.91	87.60	75.93	79.05	74.17
2	PAPER	33.96	30.67	26.57	40.93	36.50	41.31	24.88	34.99
3	PLASTIC	22.93	35.16	42.74	34.24	49.93	40.03	36.80	37.51
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	69.32	48.80	69.81	51.49	50.93	62.25	43.05	58.77
7	TEXTILE	5.61	1.13	2.71	36.42	42.51	35.80	22.66	20.69
8	GLASS	0.77	3.16	0.92	0.45	0.29	0.18	0.33	0.96
9	METAL	2.09	3.62	2.40	3.48	2.31	4.00	2.57	2.98
10	STONE	0.56	0.00	0.04	0.00	0.00	0.61	0.05	0.20
11	MISCELLANEOUS	2.34	14.66	11.35	34.75	0.00	2.95	19.79	11.01
TOTAL (whole sample)		49.30	46.25	52.58	53.26	61.87	59.90	50.32	53.86
DENSITY (kg/cu.m)		247.37	263.16	273.68	200.00	252.63	252.63	263.16	248.25

**Table C.1 High Income Residential Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	64.36	69.84	74.00	67.41	79.31	82.48	78.95	73.76
2	PAPER	15.67	14.69	24.82	34.81	20.17	33.33	30.63	24.87
3	PLASTIC	31.13	32.27	42.47	38.39	45.79	36.93	57.15	40.59
4	RUBBER	0.00	0.00	0.00	0.58	0.00	0.00	13.73	2.04
5	LEATHER	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.14
6	WOOD	68.25	52.63	65.00	63.81	64.00	55.88	59.16	61.25
7	TEXTILE	14.39	41.70	2.29	6.86	32.54	4.59	9.04	15.92
8	GLASS	0.72	0.11	0.34	0.28	0.71	0.27	0.27	0.39
9	METAL	1.95	1.88	1.82	4.39	12.34	13.79	3.20	5.62
10	STONE	0.06	0.42	0.00	0.00	0.00	0.00	0.00	0.07
11	MISCELLANEOUS	11.20	27.79	0.00	36.38	26.40	24.08	38.98	23.55
TOTAL (whole sample)		49.06	52.58	54.62	56.54	61.43	62.23	64.48	57.28
DENSITY (kg/cu.m)		263.16	215.79	247.37	247.37	252.63	273.68	236.84	248.12

**Table C.2 Medium Income Residential Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	69.28	72.11	73.19	66.91	87.60	75.93	79.05	74.17
2	PAPER	33.96	30.67	26.57	40.93	36.50	41.31	24.88	34.99
3	PLASTIC	22.93	35.16	42.74	34.24	49.93	40.03	36.80	37.51
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	69.32	48.80	69.81	51.49	50.93	62.25	43.05	58.77
7	TEXTILE	5.61	1.13	2.71	36.42	42.51	35.80	22.66	20.69
8	GLASS	0.77	3.16	0.92	0.45	0.29	0.18	0.33	0.96
9	METAL	2.09	3.62	2.40	3.48	2.31	4.00	2.57	2.98
10	STONE	0.56	0.00	0.04	0.00	0.00	0.61	0.05	0.20
11	MISCELLANEOUS	2.34	14.66	11.35	34.75	0.00	2.95	19.79	11.01
TOTAL (whole sample)		49.30	46.25	52.58	53.26	61.87	59.90	50.32	53.86
DENSITY (kg/cu.m)		247.37	263.16	273.68	200.00	252.63	252.63	263.16	248.25

**Table C.3** Low Income Residential Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	13-Nov-95 1	14-Nov-95 2	15-Nov-95 3	16-Nov-95 4	17-Nov-95 5	18-Nov-95 6	19-Nov-95 7	AVERAGE
1	GARBAGE	80.40	78.52	76.39	79.40	75.40	86.58	83.84	80.08
2	PAPER	35.94	26.32	27.47	47.64	18.10	37.46	31.52	32.06
3	PLASTIC	32.38	53.81	40.52	34.38	42.16	45.17	38.77	41.03
4	RUBBER	0.00	8.88	0.00	0.00	0.00	0.00	0.00	1.27
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	62.93	48.84	57.91	69.42	53.74	60.50	67.13	60.07
7	TEXTILE	2.61	12.55	30.84	30.58	70.93	32.53	16.03	28.01
8	GLASS	2.24	0.38	0.58	0.19	0.45	0.58	0.20	0.66
9	METAL	1.01	0.60	0.80	5.19	0.35	6.80	1.72	2.35
10	STONE	0.00	0.00	0.04	0.00	0.00	0.47	0.00	0.07
11	MISCELLANEOUS	28.56	5.80	0.00	0.00	0.00	33.80	0.00	9.74
TOTAL (whole sample)		56.55	57.13	57.71	65.87	60.46	63.73	64.21	60.81
DENSITY (kg/cu.m)		252.63	221.05	226.32	278.95	257.89	278.95	257.89	253.38

**Table C.4** Food Operation Factory Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	GARBAGE	74.90	67.09	93.33	75.16	89.33	79.96
2	PAPER	49.00	0.00	24.04	43.78	40.80	31.53
3	PLASTIC	39.01	39.55	26.95	18.05	29.69	30.65
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	69.82	65.07	70.01	74.98	74.68	70.91
7	TEXTILE	0.00	0.00	0.00	0.00	0.00	0.00
8	GLASS	0.00	0.00	0.00	0.02	0.12	0.03
9	METAL	0.00	0.00	0.00	0.00	0.00	0.00
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	26.91	0.00	0.00	31.00	11.58
TOTAL (whole sample)		68.90	48.81	67.27	37.34	57.68	56.00
DENSITY (kg/cu.m)		152.6	147.4	142.1	194.7	157.9	158.9

**Table C.5 Machinery Operation Factory Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	15-Dec-95	16-Dec-95	18-Dec-95	19-Dec-95	20-Dec-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	0.00	60.75	63.49	0.00	62.45	37.34
2	PAPER	-	-	-	-	-	-
3	PLASTIC	-	-	-	-	-	-
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	0.00	0.00	0.00	0.00	0.00	0.00
7	TEXTILE	0.00	0.00	0.00	0.00	0.00	-
8	GLASS	0.00	0.23	0.00	0.00	0.26	0.10
9	METAL	-	-	-	-	-	-
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.00	-	0.00	0.00
TOTAL (whole sample)		-	-	-	-	-	-
DENSITY (kg/cu.m)		268.4	305.3	284.2	294.7	315.8	293.7

**Table C.6 Transportation Operation Factory Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	15-Dec-95	16-Dec-95	18-Dec-95	19-Dec-95	20-Dec-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	57.76	80.68	75.78	63.61	63.94	68.35
2	PAPER	-	-	-	-	-	-
3	PLASTIC	-	-	-	-	-	-
4	RUBBER	-	0.00	-	-	-	-
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	-	0.00	-	-	-	-
7	TEXTILE	-	0.00	-	-	-	-
8	GLASS	0.41	0.09	0.47	0.12	0.26	0.27
9	METAL	-	-	-	-	-	-
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	-	-	-	-	-	-
TOTAL (whole sample)		-	-	-	-	-	-
DENSITY (kg/cu.m)		150.0	210.0	194.7	163.2	184.2	180.4

**Table C.7** Textile Operation Factory Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	GARBAGE	91.56	87.80	94.48	82.73	77.92	86.90
2	PAPER	-	20.31	-	-	22.36	21.33
3	PLASTIC	10.46	2.99	3.48	14.97	10.74	8.53
4	RUBBER	-	0.00	0.00	-	0.00	0.00
5	LEATHER	8.97	0.00	0.00	0.00	0.00	1.79
6	WOOD	9.93	10.44	-	0.00	70.97	22.84
7	TEXTILE	4.12	5.36	3.64	1.15	5.02	3.86
8	GLASS	0.13	0.11	0.53	0.25	0.12	0.23
9	METAL	0.87	0.35	0.00	0.83	0.20	0.45
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	31.00	6.20
TOTAL (whole sample)		26.66	18.03	15.39	26.97	24.47	22.31
DENSITY (kg/cu.m)		147.4	205.3	194.7	163.2	142.1	170.5

**Table C.8** Wood Furniture Operation Factory Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	15-Dec-95 1	16-Dec-95 2	18-Dec-95 3	19-Dec-95 4	20-Dec-95 5	AVERAGE
1	GARBAGE	0.00	0.00	0.00	0.00	0.00	0.00
2	PAPER	0.00	0.00	0.00	0.00	0.00	0.00
3	PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	10.49	7.81	13.62	11.37	12.55	11.17
7	TEXTILE	0.00	0.00	0.00	0.00	0.00	0.00
8	GLASS	0.00	0.00	0.00	0.00	0.00	0.00
9	METAL	0.00	0.00	0.00	0.00	0.00	0.00
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL (whole sample)		10.49	7.81	13.62	11.37	12.55	11.17
DENSITY (kg/cu.m)		178.9	141.7	163.2	173.7	178.9	167.3



**Table C.9** Store Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	23-Oct-95 1	24-Oct-95 2	25-Oct-95 3	26-Oct-95 4	27-Oct-95 5	28-Oct-95 6	AVERAGE
1	GARBAGE	79.28	74.42	54.24	55.77	74.68	63.04	66.91
2	PAPER	5.89	5.83	10.52	11.71	5.68	21.30	10.16
3	PLASTIC	9.31	1.53	2.40	5.01	2.96	2.08	3.88
4	RUBBER	0.61	0.00	0.31	0.00	0.00	0.91	0.30
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	69.03	80.24	80.69	60.30	67.46	0.00	59.62
7	TEXTILE	1.48	4.10	7.81	1.02	3.65	5.44	3.92
8	GLASS	0.68	0.25	0.26	0.30	0.47	0.78	0.46
9	METAL	2.51	2.17	1.83	2.55	0.48	2.08	1.94
10	STONE	0.00	0.00	0.00	0.00	2.50	0.00	0.42
11	MISCELLANEOUS	16.30	6.47	4.68	5.95	8.29	4.48	7.69
TOTAL (whole sample)		18.18	10.40	14.01	13.65	10.95	15.66	13.81
DENSITY (kg/cu.m)		84.2	78.9	73.7	78.9	68.4	73.7	76.32

**Table C.10** Office Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	30-Oct-95 1	31-Oct-95 2	01-Nov-95 3	02-Nov-95 4	03-Nov-95 5	AVERAGE
1	GARBAGE	74.63	70.29	73.80	65.57	70.00	70.86
2	PAPER	14.33	16.33	8.43	13.53	14.05	13.33
3	PLASTIC	22.83	19.86	22.28	13.27	18.33	19.31
4	RUBBER	4.03	0.00	0.00	0.00	0.00	0.81
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	67.07	70.68	63.26	69.80	75.47	69.26
7	TEXTILE	0.00	2.63	63.55	14.62	22.02	20.56
8	GLASS	0.33	0.11	0.49	0.20	0.18	0.26
9	METAL	0.71	5.76	3.55	7.04	7.05	4.82
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	29.96	0.00	0.00	0.00	12.23	8.44
TOTAL (whole sample)		33.10	28.43	26.55	24.28	31.01	28.67
DENSITY (kg/cu.m)		76.3	68.4	89.5	68.4	73.7	75.26

**Table C.11** Hotel Solid Waste Moisture Content (%) and Bulk Density

No.	COM/DATE	12-Sep-95 1	22-Sep-95 2	23-Sep-95 3	24-Sep-95 4	25-Sep-95 5	AVERAGE
1	GARBAGE	81.08	81.93	85.23	74.74	82.52	81.10
2	PAPER	36.51	38.55	41.70	39.93	39.33	39.20
3	PLASTIC	24.94	11.52	30.59	24.51	18.25	21.96
4	RUBBER	1.22	0.00	0.70	1.40	0.00	0.66
5	LEATHER	0.00	0.00	0.00	8.24	0.00	1.65
6	WOOD	76.33	78.70	76.60	76.63	75.24	76.70
7	TEXTILE	42.46	19.59	50.22	57.70	12.68	36.53
8	GLASS	0.15	0.15	0.41	0.53	0.22	0.29
9	METAL	2.86	2.91	16.45	3.27	9.39	6.98
10	STONE	4.75	0.19	7.60	8.93	0.00	4.29
11	MISCELLANEOUS	0.00	53.08	7.77	33.11	87.81	36.35
TOTAL (whole sample)		56.02	57.00	64.06	51.63	55.57	56.86
DENSITY (kg/cu.m)		200.00	211.67	220.00	208.33	214.17	210.83

**Table C.12** Restaurant Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	GARBAGE	86.27	84.87	78.19	75.91	77.28	78.79	81.88	80.22
2	PAPER	60.16	39.50	63.48	58.78	57.57	42.67	57.55	53.69
3	PLASTIC	63.24	59.71	61.80	64.32	65.94	54.29	68.04	61.55
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	61.43	68.38	42.14	44.77	73.66	64.88	54.13	59.21
7	TEXTILE	0.00	60.95	0.00	70.63	0.00	18.39	62.99	24.99
8	GLASS	0.42	3.64	5.22	0.88	1.05	0.13	2.31	1.89
9	METAL	4.48	13.64	11.06	5.85	8.52	10.31	20.72	8.98
10	STONE	7.78	0.46	16.77	16.58	15.44	3.22	52.38	10.04
11	MISCELLANEOUS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL (whole sample)		74.40	62.08	66.79	66.40	67.85	61.16	66.47	66.45
DENSITY (kg/cu.m)		289.5	290.0	268.4	305.3	294.7	284.2	252.6	283.5

**Table C.13 Theater Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	GARBAGE	67.42	86.35	84.75	85.64	80.10	79.31	70.83	80.60
2	PAPER	37.88	36.91	44.33	43.36	46.25	35.74	36.11	40.74
3	PLASTIC	29.35	36.58	42.48	29.86	42.08	30.87	21.58	35.20
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	28.46	0.00	0.00	53.45	19.43	13.65	17.73	19.16
7	TEXTILE	0.00	31.91	0.00	53.73	42.86	43.96	0.00	28.74
8	GLASS	0.00	0.44	0.14	0.11	0.09	0.00	0.27	0.13
9	METAL	8.25	10.50	2.64	9.04	7.45	14.30	6.54	8.70
10	STONE	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.02
11	MISCELLANEOUS	49.37	18.92	55.69	58.49	40.61	23.36	24.56	41.07
TOTAL (whole sample)		28.36	32.54	40.96	33.45	40.53	32.51	30.97	34.73
DENSITY (kg/cu.m)		94.7	89.5	105.3	126.3	110.5	100.0	105.3	104.5

**Table C.14 Market Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	01-Oct-95 1	02-Oct-95 2	03-Oct-95 3	04-Oct-95 4	05-Oct-95 5	06-Oct-95 6	07-Oct-95 7	AVERAGE
1	GARBAGE	86.14	80.69	88.35	89.50	90.55	87.18	91.63	87.07
2	PAPER	64.50	56.30	74.66	50.69	69.76	66.16	59.85	63.68
3	PLASTIC	59.99	51.39	68.37	56.80	60.41	65.95	60.50	60.48
4	RUBBER	3.24	0.73	0.00	0.00	0.00	9.33	15.45	2.22
5	LEATHER	0.00	0.00	0.00	0.00	0.00	26.23	0.00	4.37
6	WOOD	78.09	81.53	78.23	78.11	77.28	75.54	72.41	78.13
7	TEXTILE	0.00	24.37	60.74	75.35	49.05	68.42	0.00	46.32
8	GLASS	0.69	0.29	0.96	0.14	0.96	0.58	0.93	0.60
9	METAL	1.97	5.12	2.46	2.82	7.73	3.26	6.95	3.89
10	STONE	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.05
11	MISCELLANEOUS	0.00	26.91	0.00	0.00	0.00	0.00	0.00	4.49
TOTAL (whole sample)		76.98	69.81	77.06	64.28	76.93	73.89	76.60	73.16
DENSITY (kg/cu.m)		290.0	208.3	264.2	247.5	252.4	322.5	220.8	252.6

**Table C.15** Large Store Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	20-Oct-95 1	21-Oct-95 2	22-Oct-95 3	AVERAGE
1	GARBAGE	84.69	86.25	83.27	84.74
2	PAPER	16.35	28.00	12.14	18.83
3	PLASTIC	14.68	19.01	4.23	12.64
4	RUBBER	0.00	9.42	0.00	3.14
5	LEATHER	0.00	0.00	0.00	0.00
6	WOOD	67.30	72.54	53.93	64.59
7	TEXTILE	14.57	16.47	13.01	14.68
8	GLASS	0.18	0.05	0.45	0.22
9	METAL	0.98	5.83	5.27	4.02
10	STONE	0.08	5.24	0.00	1.78
11	MISCELLANEOUS	9.28	1.16	0.00	3.48
TOTAL (whole sample)		49.21	53.04	42.75	48.33
DENSITY (kg/cu.m)		188.9	205.6	194.4	196.3

**Table C.16** Kindergarten Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	25-Sep-95 1	26-Sep-95 2	27-Sep-95 3	28-Sep-95 4	29-Sep-95 5	AVERAGE
1	GARBAGE	77.05	79.96	74.54	79.77	71.54	76.57
2	PAPER	31.94	36.27	27.30	33.28	24.01	30.56
3	PLASTIC	32.69	30.26	9.91	32.95	46.32	30.43
4	RUBBER	0.00	0.00	0.00	0.00	0.00	0.00
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	44.03	69.37	58.18	63.42	56.16	58.23
7	TEXTILE	77.14	29.25	59.99	13.75	37.30	43.49
8	GLASS	0.00	0.78	0.22	0.55	0.32	0.37
9	METAL	3.81	4.70	0.38	3.74	9.02	4.33
10	STONE	0.00	0.00	26.67	0.00	0.00	5.33
11	MISCELLANEOUS	0.00	0.00	0.00	27.27	0.00	5.45
TOTAL (whole sample)		51.10	53.54	40.96	62.19	52.49	52.06
DENSITY (kg/cu.m)		141.7	150.0	125.0	158.3	158.3	146.7

**Table C.17 Primary School Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	06-Oct-95 1	07-Oct-95 2	08-Oct-95 3	09-Oct-95 4	10-Oct-95 5	AVERAGE
1	GARBAGE	77.64	81.65	88.87	73.82	78.78	80.15
2	PAPER	27.77	43.12	28.19	27.66	46.58	34.66
3	PLASTIC	34.88	28.04	19.45	29.12	29.85	28.27
4	RUBBER	0.00	9.08	0.00	0.00	1.01	2.02
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	67.64	43.81	65.87	47.83	53.05	55.64
7	TEXTILE	31.77	36.05	46.39	11.07	39.11	32.88
8	GLASS	0.22	0.20	0.00	0.98	0.70	0.42
9	METAL	0.87	0.58	1.48	1.87	1.88	1.34
10	STONE	0.00	3.26	0.51	0.00	0.00	0.75
11	MISCELLANEOUS	35.19	31.30	53.33	0.00	0.00	23.97
TOTAL (whole sample)		44.51	40.47	43.91	39.21	45.78	42.78
DENSITY (kg/cu.m)		104.2	96.7	93.3	98.3	111.7	100.8

**Table C.18 Secondary School & Collage Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	06-Nov-95 1	07-Nov-95 2	08-Nov-95 3	09-Nov-95 4	10-Nov-95 5	AVERAGE
1	GARBAGE	72.36	70.83	72.77	82.82	78.84	76.32
2	PAPER	30.10	34.59	34.72	42.34	40.48	38.03
3	PLASTIC	25.54	23.25	18.80	42.37	53.97	34.60
4	RUBBER	0.00	0.00	0.00	0.00	24.53	6.13
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	51.72	44.51	43.09	71.11	44.93	50.91
7	TEXTILE	32.02	37.41	17.80	29.33	42.78	31.83
8	GLASS	0.79	0.36	0.00	0.28	1.15	0.45
9	METAL	1.52	0.98	5.98	1.80	3.83	3.15
10	STONE	0.00	0.00	0.00	0.00	1.82	0.45
11	MISCELLANEOUS	0.00	27.20	1.86	0.00	0.00	7.27
TOTAL (whole sample)		47.63	40.87	50.12	61.41	55.08	51.87
DENSITY (kg/cu.m)		100.0	129.2	125.0	110.4	104.2	113.8

**Table C.19** Hospital Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	01-Oct-95	02-Oct-95	03-Oct-95	04-Oct-95	05-Oct-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	80.35	74.07	68.08	75.38	70.64	73.71
2	PAPER	25.22	58.96	44.52	44.72	33.56	41.40
3	PLASTIC	38.99	48.00	43.12	42.20	33.15	41.09
4	RUBBER	19.67	15.38	14.11	8.53	16.05	14.75
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	27.09	57.61	20.57	75.17	63.86	48.86
7	TEXTILE	67.69	60.23	58.66	37.76	69.25	58.72
8	GLASS	0.89	0.57	0.50	0.38	1.87	0.84
9	METAL	3.91	8.43	3.11	11.59	6.37	6.68
10	STONE	0.00	0.00	0.00	0.00	0.00	0.00
11	MISCELLANEOUS	0.00	0.00	21.90	0.00	0.00	4.38
TOTAL (whole sample)		56.85	62.36	45.02	53.23	48.36	53.16
DENSITY (kg/cu.m)		187.5	220.8	183.3	168.8	208.3	193.8

**Table C.20** Government Office Solid Waste Moisture Content (%) and Bulk Density

NO.	COM/DATE	30-Oct-95	31-Oct-95	01-Nov-95	02-Nov-95	03-Nov-95	AVERAGE
		1	2	3	4	5	
1	GARBAGE	69.52	68.18	79.71	79.14	72.97	73.90
2	PAPER	8.25	8.10	5.48	7.68	10.40	7.98
3	PLASTIC	15.45	25.03	17.62	13.73	27.72	19.91
4	RUBBER	1.40	0.00	1.05	1.41	1.61	1.09
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	70.64	74.24	72.73	63.67	63.10	68.88
7	TEXTILE	17.11	19.89	21.29	8.71	53.98	24.19
8	GLASS	0.68	1.43	0.17	0.14	0.25	0.53
9	METAL	3.37	9.44	1.62	8.02	3.23	5.14
10	STONE	1.96	0.00	5.74	0.00	0.00	1.54
11	MISCELLANEOUS	23.30	10.99	45.19	21.05	16.88	23.48
TOTAL (whole sample)		26.88	25.07	26.70	22.27	26.26	25.44
DENSITY (kg/cu.m)		102.6	84.2	100.0	89.5	105.3	96.32

**Table C.21 Street Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	21-Nov-95 1	22-Nov-95 2	23-Nov-95 3	24-Nov-95 4	25-Nov-95 5	26-Nov-95 6	27-Nov-95 7	AVERAGE
1	GARBAGE	73.32	65.94	72.34	71.07	87.71	78.44	64.79	74.80
2	PAPER	19.60	16.31	24.74	15.07	13.63	32.55	19.18	20.31
3	PLASTIC	11.86	21.88	26.45	16.07	19.26	26.69	15.70	20.37
4	RUBBER	0.68	0.00	0.00	0.00	0.63	1.11	0.00	0.40
5	LEATHER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	WOOD	19.81	40.01	30.91	26.05	26.71	33.16	27.25	29.44
7	TEXTILE	2.75	23.61	19.31	18.35	17.12	31.07	10.69	18.70
8	GLASS	0.09	0.08	0.22	0.05	0.10	0.03	0.03	0.09
9	METAL	2.04	0.37	1.57	1.00	1.61	5.20	5.02	1.97
10	STONE	5.64	5.95	11.07	7.65	7.39	8.19	5.58	7.65
11	MISCELLANEOUS	12.81	25.97	0.00	15.77	30.09	27.52	26.41	18.69
TOTAL (whole sample)		13.69	16.41	23.81	17.00	19.93	26.46	20.15	19.55
DENSITY (kg/cu.m)		371.1	326.3	268.4	278.9	252.6	294.7	236.8	289.8

**Table C.22 Park Solid Waste Moisture Content (%) and Bulk Density**

NO.	COM/DATE	19-Oct-95 1	21-Oct-95 2	22-Oct-95 3	AVERAGE
1	GARBAGE	72.72	88.03	59.03	73.26
2	PAPER	45.38	50.89	41.48	45.92
3	PLASTIC	32.86	27.94	35.37	32.05
4	RUBBER	0.00	3.30	11.11	4.81
5	LEATHER	0.00	0.00	0.00	0.00
6	WOOD	60.79	0.00	64.43	41.74
7	TEXTILE	0.00	55.70	0.00	18.57
8	GLASS	0.53	0.65	0.22	0.47
9	METAL	2.40	1.80	2.34	2.18
10	STONE	0.00	0.00	17.24	5.75
11	MISCELLANEOUS	0.00	0.00	0.00	0.00
TOTAL (whole sample)		29.70	30.86	23.90	28.15
DENSITY (kg/cu.m)		105.0	120.8	150.0	125.3

**Table C.23** University Solid Waste Moisture Content (%) and Bulk Density

NO.	SOURCES	DENSITY (kg/cu.m.)	MOISTURE (%)
1	SCHOOL	200	63.23
2	CAFETERIA	270	76.16
3	OFFICE/STUDY AREA	130	55.94
4	RESIDENTIAL AREA	190	65.72
5	DORMITORY	150	66.24
AVERAGE		188	65.46

Source: Solid Waste Management in Khon Kaen University,1995.  
by Pasawadee Churbundit



**APPENDIX D**

**VARIABLES IN EACH SOURCE FOR  
MULTIPLE LINEAR REGRESSION ANALYSIS**

Table D.1 Residential Variables

NO.	WASTE kg/day Yr	NO.OF PEOPLE Xr1	INCOME LEVEL Xr2	DENSITY ZONE Xr3
1	2.6	4	3	3
2	1.5	4	2	3
3	0.9	2	1	3
4	3.0	10	3	2
5	0.9	3	3	2
6	1.2	6	3	1
7	2.3	7	3	1
8	0.7	11	1	1
9	3.5	6	2	1
10	0.9	5	1	1
11	1.2	13	1	1
12	2.9	5	1	1
13	1.7	6	2	2
14	2.8	6	2	1
15	2.1	5	1	2
16	1.4	5	3	2
17	1.1	4	1	3
18	1.2	2	1	3
19	2.2	4	1	3
20	1.2	5	1	3
21	1.0	3	2	3
22	1.0	4	2	2
23	1.3	4	1	2
24	0.7	7	2	2
25	0.8	4	2	2
26	0.9	6	1	1
27	1.3	4	1	1
28	1.3	4	3	3
29	1.1	4	3	2
30	2.8	5	3	1
31	2.8	5	3	2
32	1.3	3	1	1
33	1.6	4	1	1
34	1.0	5	2	1
35	1.6	3	3	1
36	3.9	6	3	1
37	0.5	4	3	1
38	0.8	3	2	1
39	0.8	5	1	1
40	1.0	5	3	1
41	1.3	5	2	1
42	1.4	5	3	1
43	2.2	7	3	2
44	1.3	4	2	1
45	0.5	4	1	2
46	0.7	8	1	2
47	0.5	5	1	2
48	2.7	7	2	2
49	2.3	4	1	1
50	2.3	5	2	1
51	1.0	3	3	1
52	2.6	5	1	1

Table D.1 Residential Variables

NO.	WASTE kg/day Yr	NO.OF PEOPLE Xr1	INCOME LEVEL Xr2	DENSITY ZONE Xr3
1	2.6	4	3	3
2	1.5	4	2	3
3	0.9	2	1	3
4	3.0	10	3	2
5	0.9	3	3	2
6	1.2	6	3	1
7	2.3	7	3	1
8	0.7	11	1	1
9	3.5	6	2	1
10	0.9	5	1	1
11	1.2	13	1	1
12	2.9	5	1	1
13	1.7	6	2	2
14	2.8	6	2	1
15	2.1	5	1	2
16	1.4	5	3	2
17	1.1	4	1	3
18	1.2	2	1	3
19	2.2	4	1	3
20	1.2	5	1	3
21	1.0	3	2	3
22	1.0	4	2	2
23	1.3	4	1	2
24	0.7	7	2	2
25	0.8	4	2	2
26	0.9	6	1	1
27	1.3	4	1	1
28	1.3	4	3	3
29	1.1	4	3	2
30	2.8	5	3	1
31	2.8	5	3	2
32	1.3	3	1	1
33	1.6	4	1	1
34	1.0	5	2	1
35	1.6	3	3	1
36	3.9	6	3	1
37	0.5	4	3	1
38	0.8	3	2	1
39	0.8	5	1	1
40	1.0	5	3	1
41	1.3	5	2	1
42	1.4	5	3	1
43	2.2	7	3	2
44	1.3	4	2	1
45	0.5	4	1	2
46	0.7	8	1	2
47	0.5	5	1	2
48	2.7	7	2	2
49	2.3	4	1	1
50	2.3	5	2	1
51	1.0	3	3	1
52	2.6	5	1	1

**Table D.1 Residential Variables (continue)**

NO.	WASTE kg/day Yr	NO.OF PEOPLE Xr1	INCOME LEVEL Xr2	DENSITY ZONE Xr3
53	1.4	4	2	1
54	2.9	3	3	1
55	1.0	4	2	1
56	0.5	3	3	1
57	0.8	5	2	1
58	2.2	6	3	1
59	0.6	3	2	1
60	1.3	6	3	1
61	3.7	7	2	1
62	0.3	1	2	1
63	0.8	3	2	1
64	1.9	3	2	1
65	1.7	7	2	1

Note:

Income Level 3 = High Income

Income Level 2 = Medium Income

Income Level 1 = Low Income

Density Zone 3 = High Density

Density Zone 2 = Medium Density

Density Zone 1 = Low Density

**Table D.2 Food Operations Factory Variables**

NO.	WASTE kg/day Yf	AREA sq.m. Xf1	NO. OF EMPLOYEES Xf2	PRODUCT kg/day Xf3	WORK HOUR hour/week Xf4	CAPITAL bath Xf5	POWER HP. Xf6
1	2.6	94	4	30	48	548,000.00	11.00
2	3.4	128	2	60	48	950,000.00	15.35
3	47.2	200	6	460	28	650,000.00	117.65
4	1.8	230	5	75	28	370,000.00	10.13
5	4.3	120	5	80	42	1,207,000.00	18.60
6	47.8	265	12	400	56	150,000.00	9.00

**Table D.3 Machinery Operations Factory Variables**

NO.	WASTE kg/day Ym	AREA sq.m. Xm1	NO. OF EMPLOYEES Xm2	PRODUCT part/year Xm3	WORK HOUR hour/week Xm4	CAPITAL bath Xm5	POWER HP. Xm6
1	27.5	1200	20	2700	48	5150000	414.99
2	24.0	800	16	11520	48	1030000	123.85
3	11.0	144	5	4200	48	2000000	66.50
4	68.0	890	23	18000	48	8700000	215.50
5	8.2	80	5	3000	48	333000	51.25

**Table D.4** Transportation Operations Factory Variables

NO.	WASTE kg/day Yt	AREA sq.m. Xt1	NO. OF EMPLOYEES Xt2	PRODUCT car/year Xt3	WORK HOUR hour/week Xt4	MONEY bath Xt5	POWER HP. Xt6
1	7.6	360	8	144	48	205000	22.75
2	4.0	240	3	120	48	350000	20.05
3	9.4	720	7	120	48	340000	47.25
4	19.6	256	12	180	48	430000	28.66
5	54.8	1673	30	3000	48	3900000	38.25
6	35.4	2400	10	192	48	1670000	110.56

**Table D.5** Textile Operations Factory Variables

NO.	WASTE kg/day Ye	AREA sq.m. Xe1	NO. OF EMPLOYEES Xe2	PRODUCT kg/year Xe3	WORK HOUR hour/week Xe4	MONEY bath Xe5	POWER HP Xe6
1	14.1	320	20	150	48	4,300,000	18.88
2	18.0	1500	120	300	48	4,900,000	35.28
3	13.0	288	105	400	48	2,500,000	20.38
4	18.0	1600	16	285	48	2,000,000	11.10
5	335.8	20800	965	156000	52	95,000,000	1618.85
6	894.4	65600	375	132000	52	66,700,000	3299.19

**Table D.6** Wood Operations Factory Variables

NO.	WASTE kg/day Yw	AREA sq.m. Xw1	NO. OF EMPLOYEES Xw2	PRODUCT cu.m/year Xw3	WORK HOUR hour/week Xw4	CAPITAL bath Xw5	POWER HP Xw6
1	302.4	4800	190	4370	48	44,515,000	1066.66
2	7.4	960	8	108	48	2,450,000	58.05
3	81.0	2000	7	554	51	460,000	42.00
4	144.6	3400	30	648	48	6,500,000	625.32
5	27.0	800	3	340	48	1,150,000	9.61
6	39.6	1200	3	100	48	2,250,000	110.50



Table D.7 Store Variables

NO.	WASTE kg/day Ys	AREA sq.m. Xs1	NO. OF EMPLOYEES Xs2	NO. OF CLIENTS Xs3	WORK HOUR hour/day Xs4
1	0.3	64.0	2.0	20.0	10.0
2	0.3	32.0	8.0	15.0	9.5
3	0.5	40.0	4.0	20.0	11.0
4	0.8	48.0	6.0	25.0	10.5
5	0.5	48.0	5.0	6.0	9.0
6	0.4	100.0	4.0	20.0	10.0
7	2.5	64.0	10.0	25.0	13.0
8	0.5	36.0	6.0	55.0	13.0
9	0.6	64.0	2.0	25.0	12.0
10	0.9	48.0	5.0	40.0	13.0
11	1.1	48.0	3.0	15.0	13.5
12	0.6	48.0	2.0	7.0	11.0
13	0.4	80.0	3.0	10.0	12.0
14	0.4	36.0	3.0	50.0	10.0
15	0.4	32.0	3.0	15.0	11.0
16	0.3	36.0	2.0	35.0	12.0
17	0.5	36.0	2.0	25.0	12.0
18	0.3	32.0	4.0	30.0	11.0
19	0.9	80.0	4.0	20.0	14.0
20	0.5	40.0	4.0	10.0	12.0
21	1.9	96.0	4.0	8.0	10.0
22	0.7	82.0	6.0	30.0	10.5
23	0.5	60.0	10.0	30.0	10.0
24	0.4	64.0	4.0	18.0	16.0
25	1.7	40.0	3.0	55.0	12.0
26	0.4	64.0	4.0	25.0	12.5
27	0.9	64.0	7.0	10.0	8.0
28	0.7	256.0	5.0	200.0	12.5
29	0.7	50.0	2.0	55.0	12.5
30	0.3	32.0	3.0	13.0	12.0

Table D.8 Private Office Variables

NO.	WASTE kg/day Yp	AREA sq.m. Xp1	NO. OF WORKERS Xp2	VISITORS /DAY Xp3	WORK HOUR hour/week Xp4
1	7.8	556	35	100	40
2	5.0	450	16	90	44
3	0.5	48	5	10	56
4	4.4	32	14	30	56
5	5.4	1260	32	300	50
6	5.0	360	35	700	50
7	1.8	360	22	150	48
8	2.2	280	20	20	48
9	10.8	1040	60	80	48
10	0.4	80	2	5	45
11	2.6	600	17	3	48
12	3.2	192	36	100	40
13	4.1	288	21	12	54
14	0.6	140	9	1	48
15	0.7	128	6	9	40

**Table D.9** Hotel Variables

NO.	WASTE kg/day Yh	NO. OF ROOMS Xh1	SOLD ROOM room/day Xh2	AREA sq.m. Xh3	NO. OF EMPLOYEES Xh4	ELECTRICITY unit/month Xh5	PRICE LEVEL Xh6	OTHER SERVICES Xh7
1	653.2	320	165	31200	410	388644	3	1
2	531.2	160	99	1875	253	256515	3	1
3	84.8	73	58	1568	82	71808	3	1
4	543.4	200	105	28800	400	274720	3	1
5	210.5	134	96	1830	75	105636	3	1
6	172.3	194	100	2274	104	86429	2	1
7	42.4	37	31	1800	55	30078	2	1
8	40.8	97	73	4480	48	44130	2	1
9	48.6	72	60	1980	60	41060	2	0
10	28.2	90	30	2304	13	18274	2	0
11	71.4	71	46	3820	31	55874	1	1
12	20.6	70	43	2142	16	8238	1	0
13	35.8	150	86	8640	25	48256	1	1
14	50.8	86	43	1488	12	13858	1	0
15	15.2	38	24	845	5	2386	1	0

Note :

- Price Level 3 = room price per day more than 1,000 baht (1st class)  
 Price Level 2 = room price per day between 500 to 1,000 baht (medium class)  
 Price Level 1 = room price per day less than 500 baht (motel)  
 Other Services 1 = having other services  
 Other Services 0 = not having other services

**Table D.10** Restaurant Variables

NO.	WASTE kg/day Yu	AREA sq.m. Xu1	NO. OF SEATS Xu2	NO. OF EMPLOYEES Xu3	NO. OF CLIENTS Xu4	WORK HOUR hour/day Xu5
1	15.7	64	48	3	55	9.5
2	18.8	76	76	7	90	12
3	4.6	48	24	2	25	15
4	11.9	64	48	3	48	15
5	17.1	32	36	4	96	7
6	29.3	120	296	10	230	9
7	29.3	48	52	5	105	8
8	14.1	124	88	7	65	12
9	17.6	100	80	4	45	10
10	50.3	240	96	17	120	10
11	153.7	760	440	70	200	12
12	10.7	80	64	3	35	11
13	63.6	240	108	5	180	11.5
14	271.1	2500	280	130	240	16

**Table D.11** Theater Variables

NO.	WASTE kg/day Ya	AREA sq.m. Xa1	NO. OF SEATS Xa2	NO. OF SHOWS Xa3	NO. OF EMPLOYEES Xa4
1	8.2	720	881	5	30
2	3.6	480	361	5	20
3	4.6	325	181	5	10
4	5.9	425	361	5	10
5	6.2	425	361	5	10
6	7.7	312	300	6	6
7	5.0	312	300	6	6

**Table D.12** Market Variables

NO.	NAME	WASTE kg/day Yk	AREA sq.m. Xk1	NO.OF SHOPS Xk2	DENSITY person/100sq.m Xk3	WORK HOUR hour/day Xk4
1	THETSABAAL1	2382.9	2,034	231	8	15
2	THETSABAAL2	3364.3	6,206	264	11	15
3	THETSABAAL3	3078.6	2,130	185	11	15
4	BANGLUMPHU	4637.1	5,410	287	12	20

**Table D.13** Large Store Variables

NO.	WASTE kg/day Yb	AREA sq.m. Xb1	NO.OF SHOPS Xb2	WORK HOUR hour/day Xb3	NO. OF CLIENTS Xb4	NO. OF EMPLOYEES Xb5	FRESH MART Xb6
1	340.0	576	5	12	667	85	1
2	73.0	1,440	120	12	962	450	1
3	24.7	2,000	50	12	754	135	0
4	115.7	360	65	12	1068	125	0

Note:

Fresh Mart 1 = Having Fresh Mart

Fresh Mart 0 = Not Having Fresh Mart

**Table D.14** Kindergarten Variables

NO.	WASTE kg/day Yi	AREA sq.m. Xi1	BD.AREA sq.m. Xi2	NO. OF STAFFS Xi3	NO. OF STUDENTS Xi4	WORK HOUR hour/day Xi5
1	44.2	2,644	2,091	38	345	7
2	14.0	1,776	1,872	22	165	6.5
3	5.3	898	264	12	130	7
4	25.8	40,000	2,104	27	520	6
5	9.9	800	200	18	120	7

Note: BD. AREA = Building Area

**Table D.15** Primary School Variables

NO.	WASTE kg/day Yy	AREA sq.m. Xy1	BD.AREA sq.m. Xy2	NO. OF STAFFS Xy3	NO. OF PUPILS Xy4	WORK HOUR hour/day Xy5	OWNER Xy6
1	96.2	8,800	5,434	94	2,537	7	1
2	92.2	14,400	4,104	81	2,342	7	1
3	90.4	2,400	4,512	58	1,253	7	0
4	60.4	36,800	3,745	42	749	7	1
5	49.6	5,880	2,136	28	585	7	1
6	47.2	38,300	2,592	37	881	7	1
7	80.8	35,088	3,422	31	511	7	0
8	118.6	11,200	4,470	135	2,200	7	1
9	29.6	18,400	1,760	24	519	7	1
10	36.0	23,960	1,800	26	542	7	1
11	135.6	22,800	5,051	110	2,644	7	1
12	26.0	9,200	2,400	32	664	7	0

Note:

OWNER 1 = Attach to Government

OWNER 0 = Attach to Private



**Table D.16** Secondary School & Collage Variables

NO.	WASTE kg/day Yc	AREA sq.m. Xc1	BD.AREA sq.m. Xc2	NO. OF STAFFS Xc3	NO. OF STUDENTS Xc4	WORK HOUR hour/day Xc5	OWNER Xc6
1	119.5	31,198	8,960	196	2,725	35	1
2	216.2	100,800	20,620	214	3,165	35	1
3	164.6	19,304	9,316	133	3,700	53	0
4	36.0	12,800	3,688	20	400	30	0
5	38.0	5,600	5,400	75	4,120	77	0
6	153.6	19,356	7,375	133	2,891	78	1
7	268.6	25,600	11,660	156	3,175	60	0
8	191.4	161,600	27,503	282	3,600	72	1

Note:

OWNER 1 = Attach to Governmen

OWNER 0 = Attach to Private

**Table D.17** Hospital Variables

NO.	NAME	WASTE kg/day Yo	AREA sq.m. Xo1	NO. OF BEDS Xo2	NO. OF OFFICIALS Xo3	NO. OF OUTPATIENTS Xo4	NO. OF OPERATIONS Xo5	BIRTH /DAY Xo6
1	SREENAKARIN	3108.8	55,531	752	1585	1359	25	15
2	KHONKAEN	1615.2	35,168	638	1232	1032	44	7
3	MATHER\$CHI	84.4	4,087	150	235	265	6	17
4	HAN-A-SA	4.8	200	30	24	10	0	0
5	MOKUL	22.0	540	30	16	20	0	0
6	RATCHPREUG	181.2	4000	100	199	50	7	5

**Table D.18** Government Office Variables

NO.	WASTE kg/day Yg	AREA sq.m. Xg1	NO. OF STAFFS Xg2	VISITORS /DAY Xg3	WORK HOUR hour/week Xg4
1	3.5	769	62	6	40
2	13.3	1,800	150	40	40
3	4.7	1,872	100	75	40
4	8.9	2,280	133	30	40
5	3.8	870	30	50	40
6	1.1	300	30	0	40
7	1.6	288	22	50	80
8	0.3	200	3	3	40
9	3.3	576	54	5	40
10	5.0	2664	65	130	40
11	4.5	1404	91	50	40
12	0.7	250	12	10	40
13	1.7	384	25	15	40
14	3.0	180	14	10	40
15	4.7	264	42	50	40
16	2.8	408	16	30	40
17	2.2	157	31	100	40
18	0.6	48	18	2	40
19	4.4	840	33	150	40
20	1.0	24	4	10	40
21	4.2	200	17	25	40
22	0.6	192	11	2	40
23	1.9	1600	138	20	40
24	0.8	448	10	12	40
25	1.1	448	10	70	40

**Table D.19** Street Variables

NO.	WASTE kg/day Yn	NO. OF LANES Xn1	AREA sq.m Xn2	NO. OF VEHICLES /DAY Xn4
1	9.7	6	4,360	958
2	9.4	4	3,192	801
3	5.5	2	3,234	557
4	11.7	6	12,000	1,099
5	6.3	4	3,400	927
6	2.3	6	10,670	715
7	5.3	4	5,740	480

**Table D.20** Park Variables

NO.	NAME	WASTE kg/day	AREA sq.m	VISITOR /DAY
1	BEUNG K.NAKORN	202.3	213,500	582
2	SUANRATCHADA	22.0	37,000	270

**APPENDIX E**

**SOLID WASTE GENERATION RATE**

**IN EACH SOURCE**

**Table E.1 Residential Solid Waste Generation Rate**

NO.	GENERATION RATE (kg/capita/day)		
	HIGH INCOME	MEDIUM INCOME	LOW INCOME
1	0.65	0.38	0.45
2	0.30	0.58	0.06
3	0.30	0.28	0.18
4	0.20	0.47	0.09
5	0.33	0.33	0.58
6	0.28	0.25	0.42
7	0.33	0.10	0.28
8	0.28	0.20	0.60
9	0.56	0.20	0.55
10	0.56	0.27	0.24
11	0.53	0.26	0.33
12	0.65	0.33	0.15
13	0.13	0.39	0.33
14	0.20	0.46	0.43
15	0.28	0.35	0.40
16	0.31	0.25	0.16
17	0.33	0.16	0.13
18	0.97	0.20	0.09
19	0.17	0.53	0.10
20	0.36	0.30	0.58
21	0.22	0.27	0.52
22		0.63	
23		0.24	
AVERAGE	0.38	0.32	0.32

**Table E.2 Food operations Factory Solid Waste Generations rate**

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg / employee/ day	kg/ kg(production)/ day	kg/ hour/ day	kg/ capital(1,000bath)/ day	kg/hp/day
1	2.5	0.03	0.63	0.08	0.36	0.005	0.23
2	3.3	0.03	1.65	0.06	0.48	0.003	0.21
3	47.1	0.24	7.85	0.10	11.78	0.072	0.40
4	1.8	0.01	0.36	0.02	0.45	0.005	0.18
5	4.3	0.04	0.86	0.05	0.72	0.004	0.23
6	47.8	0.18	3.98	0.12	5.98	0.319	5.31
AVERAGE	17.8	0.09	2.55	0.07	3.29	0.068	1.09

**Table E.3 Machinery Operations Factory Solid Waste Generations rate**

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg / employee/ day	kg/ kg(production)/ day	kg/ hour/ day	kg/ capital(1,000bath)/ day	kg/hp/day
1	27.5	0.02	1.38	3.72	3.44	0.005	0.07
2	24.0	0.03	1.50	0.76	3.00	0.023	0.19
3	11.0	0.08	2.20	0.96	1.38	0.006	0.17
4	68.0	0.08	2.96	1.38	8.50	0.008	0.32
5	8.2	0.10	1.64	1.00	1.03	0.025	0.16
AVERAGE	27.7	0.06	1.93	1.56	3.47	0.013	0.18

**Table E.4** Transportatuon Operations Factory Solid Waste Generations rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg / employee/ day	kg/ car(production)/ day	kg/ hour/ day	kg/ capital(1,000bath)/ day	kg/hp/day
1	7.5	0.02	0.94	19.01	0.94	0.037	0.33
2	4.0	0.02	1.33	12.17	0.50	0.011	0.20
3	9.3	0.01	1.33	28.29	1.16	0.027	0.20
4	19.4	0.08	1.62	39.34	2.43	0.045	0.68
5	54.8	0.03	1.83	6.67	6.85	0.014	1.43
6	35.4	0.01	3.54	67.30	4.43	0.021	0.32
AVERAGE	21.7	0.03	1.76	28.79	2.72	0.026	0.53

**Table E.5** Textile Operations Factory Solid Waste Generations rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg / employee/ day	kg/ car(production)/ day	kg/ hour/ day	kg/ capital(1,000bath)/ day	kg/hp/day
1	14.1	0.04	0.71	34.31	1.76	0.003	0.75
2	18.0	0.01	0.15	21.90	2.25	0.004	0.51
3	13.0	0.05	0.12	11.86	1.63	0.005	0.64
4	18.0	0.01	1.13	23.05	2.25	0.009	1.62
5	335.8	0.02	0.35	0.79	41.98	0.004	0.21
6	894.4	0.01	2.39	2.47	111.80	0.013	0.27
AVERAGE	215.6	0.02	0.81	15.73	26.94	0.006	0.67

**Table E.6** Wood Furniture Operations Factory Solid Waste Generations rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg / employee/ day	kg/ car(production)/ day	kg/ hour / day	kg/ capital(1,000bath)/ day	kg/hp/day
1	302.4	0.06	1.59	25.26	6.30	0.007	0.28
2	7.4	0.01	0.93	25.01	0.15	0.003	0.13
3	81.0	0.04	11.57	53.37	1.59	0.176	1.93
4	144.6	0.04	4.82	81.45	3.01	0.022	0.23
5	27.0	0.03	9.00	28.99	0.56	0.023	2.81
6	39.6	0.03	13.20	144.54	0.83	0.018	0.36
AVERAGE	100.3	0.04	6.85	59.77	2.07	0.042	0.96

**Table E.7** Store Solid Waste Generations Rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg/ employee/ day	kg/ client/ day	kg/hour/day
1	0.3	0.004	0.13	0.01	0.03
2	0.3	0.008	0.03	0.02	0.03
3	0.5	0.013	0.13	0.03	0.05
4	0.8	0.017	0.14	0.03	0.08
5	0.5	0.010	0.10	0.08	0.06
6	0.4	0.004	0.09	0.02	0.04
7	2.5	0.039	0.25	0.10	0.19
8	0.5	0.015	0.09	0.01	0.04
9	0.6	0.009	0.30	0.02	0.05
10	0.9	0.019	0.19	0.02	0.07
11	1.1	0.022	0.35	0.07	0.08
12	0.6	0.012	0.29	0.08	0.05
13	0.4	0.005	0.13	0.04	0.03
14	0.4	0.011	0.13	0.01	0.04
15	0.4	0.012	0.13	0.03	0.03
16	0.3	0.009	0.16	0.01	0.03
17	0.5	0.013	0.23	0.02	0.04
18	0.3	0.009	0.08	0.01	0.03
19	0.9	0.011	0.23	0.05	0.07
20	0.5	0.012	0.12	0.05	0.04
21	1.9	0.020	0.48	0.24	0.19
22	0.7	0.009	0.12	0.02	0.07
23	0.5	0.008	0.05	0.02	0.05
24	0.4	0.006	0.10	0.02	0.02
25	1.7	0.044	0.58	0.03	0.15
26	0.4	0.007	0.10	0.02	0.03
27	0.9	0.015	0.13	0.09	0.12
28	0.7	0.003	0.14	0.00	0.06
29	0.7	0.014	0.35	0.01	0.06
30	0.3	0.010	0.11	0.02	0.03
AVERAGE	0.7	0.013	0.18	0.04	0.06

**Table E.8** Private Office Solid Waste Generations Rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg/ worker/ day	kg/ visitor/ day	kg/hour/day
1	7.8	0.014	0.22	0.08	0.20
2	5.0	0.011	0.31	0.06	0.11
3	0.5	0.010	0.10	0.05	0.01
4	4.4	0.136	0.31	0.15	0.08
5	5.4	0.004	0.17	0.02	0.11
6	5.0	0.014	0.14	0.01	0.10
7	1.8	0.005	0.08	0.01	0.04
8	2.2	0.008	0.11	0.11	0.05
9	10.8	0.010	0.18	0.14	0.23
10	0.4	0.005	0.20	0.08	0.01
11	2.6	0.004	0.15	0.85	0.05
12	3.2	0.017	0.09	0.03	0.08
13	4.1	0.014	0.19	0.34	0.08
14	0.6	0.004	0.06	0.56	0.01
15	0.7	0.005	0.11	0.08	0.02
AVERAGE	3.6	0.017	0.16	0.17	0.08



**Table E.9** Hotel Solid Waste Generations rate

NO.	WASTE kg/day Y	kg/room/day	kg/ sold room/day	kg/ sq.m.(building)/ day	kg/ employee/ day	kg/ unit(electricity)/ day
1	653.2	2.0	3.96	0.021	1.59	0.05
2	531.2	3.3	5.37	0.283	2.10	0.06
3	84.8	1.2	1.46	0.054	1.03	0.04
4	543.4	2.7	5.18	0.019	1.36	0.06
5	210.5	1.6	2.19	0.115	2.81	0.06
6	172.3	0.9	1.72	0.076	1.66	0.06
7	42.4	1.1	1.35	0.024	0.77	0.04
8	40.8	0.4	0.56	0.009	0.85	0.03
9	48.6	0.7	0.81	0.025	0.81	0.04
10	28.2	0.3	0.94	0.012	2.17	0.05
11	71.4	1.0	1.55	0.019	2.30	0.04
12	20.6	0.3	0.47	0.010	1.29	0.08
13	35.8	0.2	0.42	0.004	1.43	0.02
14	50.8	0.6	1.18	0.034	4.23	0.11
15	15.2	0.4	0.63	0.018	3.04	0.19
AVERAGE	169.9	1.1	1.85	0.048	1.83	0.06

**Table E.10** Restaurant Solid Waste Generations Rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg/seat/day	kg/ employee/ day	kg/ visitor/ day	kg/hour/day
1	15.7	0.25	0.33	5.24	0.29	1.65
2	18.8	0.25	0.25	2.69	0.21	1.57
3	4.6	0.10	0.19	2.29	0.18	0.30
4	11.9	0.19	0.25	3.95	0.25	0.79
5	17.1	0.54	0.48	4.29	0.18	2.45
6	29.3	0.24	0.10	2.93	0.13	3.25
7	29.3	0.61	0.56	5.86	0.28	3.66
8	14.1	0.11	0.16	2.02	0.22	1.18
9	17.6	0.18	0.22	4.39	0.39	1.76
10	50.3	0.21	0.52	2.96	0.42	5.03
11	153.7	0.20	0.35	2.20	0.77	12.81
12	10.7	0.13	0.17	3.57	0.31	0.97
13	63.6	0.26	0.59	12.71	0.35	5.53
14	271.1	0.11	0.97	2.09	1.13	16.95
AVERAGE	50.6	0.24	0.37	4.08	0.36	4.14

**Table E.11** Theater Solid Waste Generations Rate

NO.	WASTE kg/day Y	kg/ sq.m.(building)/ day	kg/seat/day	kg/show/day	kg/ employee/ day
1	8.2	0.011	0.01	1.64	0.27
2	3.6	0.008	0.01	0.73	0.18
3	4.6	0.014	0.03	0.92	0.46
4	5.9	0.014	0.02	1.19	0.59
5	6.2	0.015	0.02	1.25	0.62
6	7.7	0.025	0.03	1.28	1.28
7	5.0	0.016	0.02	0.83	0.83
AVERAGE	5.9	0.015	0.02	1.12	0.61

**Table E.12** Market Solid Waste Generations Rate

NO.	NAME	WASTE kg/day	kg/sq.m/day	kg/shop/day	kg/density (person/100sq.m) /day	kg/hour/day
1	THETSABAAL1	2382.9	1.17	10.32	297.86	158.86
2	THETSABAAL2	3364.3	0.54	12.74	305.84	224.29
3	THETSABAAL3	3078.6	1.45	16.64	279.87	205.24
4	BANGLUMPHU	4637.1	0.86	16.16	386.43	231.86
AVERAGE		3365.7	1.00	13.96	317.50	205.06

**Table E.13** Large Store Solid Waste Generations Rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg/shop/day	kg/hour/day	kg/ visitor/ day	kg/ employee/ day
1	340.0	0.59	68.10	28.38	0.51	4.01
2	73.0	0.05	0.61	6.08	0.08	0.16
3	24.7	0.01	0.49	2.06	0.03	0.18
4	115.7	0.32	1.78	9.64	0.11	0.93
AVERAGE		138.5	0.24	17.75	11.54	1.32

**Table E.14** Kindergarten Solid Waste Generations Rate

NO.	WASTE kg/day	kg/sq.m/day	kg/ sq.m.(building)/ day	kg/ staff/ day	kg/ pupil/ day	kg/hour/day
1	44.2	0.017	0.02	1.16	0.13	6.31
2	14.0	0.008	0.01	0.64	0.08	2.15
3	5.3	0.006	0.02	0.44	0.04	0.76
4	25.8	0.001	0.01	0.96	0.05	4.30
5	9.9	0.012	0.05	0.55	0.08	1.42
AVERAGE		19.9	0.009	0.02	0.75	2.99

**Table E.15** Primary School Solid Waste Generations Rate

NO.	WASTE kg/day	kg/sq.m/day	kg/ sq.m.(building)/ day	kg/ staff/ day	kg/ pupil/ day	kg/hour/ day
1	96.2	0.011	0.02	1.02	0.04	13.74
2	92.2	0.006	0.02	1.14	0.04	13.17
3	90.4	0.038	0.02	1.56	0.07	12.91
4	60.4	0.002	0.02	1.44	0.08	8.63
5	49.6	0.008	0.02	1.77	0.08	7.09
6	47.2	0.001	0.02	1.28	0.05	6.74
7	80.8	0.002	0.02	2.61	0.16	11.54
8	118.6	0.011	0.03	0.88	0.05	16.94
9	29.6	0.002	0.02	1.23	0.06	4.23
10	36.0	0.002	0.02	1.38	0.07	5.14
11	135.6	0.006	0.03	1.23	0.05	19.37
12	26.0	0.003	0.01	0.81	0.04	3.71
AVERAGE	71.9	0.008	0.02	1.36	0.07	10.27

**Table E.16** Secondary School Solid Waste Generations Rate

NO.	WASTE kg/day	kg/sq.m/day	kg/ sq.m.(building)/ day	kg/ staff/ day	kg/ student/ day	kg/hour/day
1	119.5	0.004	0.01	0.61	0.04	3.41
2	216.2	0.002	0.01	1.01	0.07	6.18
3	164.6	0.009	0.02	1.24	0.04	3.14
4	36.0	0.003	0.01	1.80	0.09	1.20
5	38.0	0.007	0.01	0.51	0.01	0.49
6	153.6	0.008	0.02	1.15	0.05	1.97
7	268.6	0.010	0.02	1.62	0.08	4.48
8	191.4	0.001	0.01	0.68	0.05	2.66
AVERAGE	148.5	0.005	0.01	1.08	0.06	2.94

**Table E.17** Hospital Solid Waste Generations rate

NO.	NAME	WASTE kg/day	kg/ sq.m.(building)/ day	kg/bed/day	kg/ official/ day	kg/ out patient/ day	kg/ operation/ day	kg/birth/day
1	SREENAKARIN	3108.8	0.06	4.13	1.96	2.29	124.35	207.25
2	KHONKAEN	1615.2	0.05	2.53	1.31	1.57	36.71	230.74
3	MATHER\$CHI	84.4	0.02	0.56	0.36	0.32	14.07	4.96
4	HAN-A-SA	4.8	0.02	0.16	0.20	0.48	0.00	0.00
5	MOKUL	22.0	0.04	0.73	1.38	1.10	0.00	0.00
6	RATCHPREUG	181.2	0.05	1.81	0.91	3.62	25.89	36.24
	AVERAGE	836.1	0.04	1.66	1.02	1.56	33.50	79.87

**Table E.18** Government Office Solid Waste Generations rate

NO.	WASTE kg/day	kg/ sq.m.(building)/ day	kg/ staff/ day	kg/ visitor/ day	kg/hour/day
1	3.5	0.004	0.06	0.58	0.43
2	13.3	0.007	0.09	0.33	1.67
3	4.7	0.002	0.05	0.06	0.58
4	8.9	0.004	0.07	0.30	1.12
5	3.8	0.004	0.13	0.08	0.48
6	1.1	0.004	0.04	0.07	0.14
7	1.6	0.006	0.07	0.03	0.10
8	0.3	0.002	0.11	0.11	0.04
9	3.3	0.006	0.06	0.66	0.41
10	5.0	0.002	0.08	0.04	0.63
11	4.5	0.003	0.05	0.09	0.56
12	0.7	0.003	0.06	0.07	0.09
13	1.7	0.004	0.07	0.11	0.21
14	3.0	0.017	0.21	0.30	0.38
15	4.7	0.018	0.11	0.09	0.58
16	2.8	0.007	0.18	0.09	0.35
17	2.2	0.014	0.07	0.02	0.27
18	0.6	0.013	0.04	0.32	0.08
19	4.4	0.005	0.13	0.03	0.55
20	1.0	0.041	0.25	0.10	0.12
21	4.2	0.021	0.24	0.17	0.52
22	0.6	0.003	0.05	0.29	0.07
23	1.9	0.001	0.01	0.10	0.24
24	0.8	0.002	0.08	0.07	0.10
25	1.1	0.002	0.11	0.02	0.14
AVERAGE	3.2	0.008	0.10	0.16	0.39

**Table E.19** Street Solid Waste Generations rate

NO.	WASTE kg/day	kg/lane/day	kg/ width/ day	kg/ length(m.)/ day	kg/ vehicle/ day
1	9.7	1.62	0.44	0.05	0.01
2	9.4	2.35	0.62	0.04	0.01
3	5.5	2.73	0.35	0.03	0.01
4	11.7	1.95	0.39	0.03	0.01
5	6.3	1.57	0.37	0.03	0.01
6	2.3	0.39	0.12	0.00	0.00
7	5.3	1.33	0.32	0.02	0.01
AVERAGE	7.2	1.71	0.37	0.03	0.01

**Table E.20** Park Solid Waste Generations rate

NO.	NAME	WASTE kg/day	kg/sq.m. (10,000sq.m.) /day	kg /visitors /day
1	BEUNG K.NAKORN	202.3	9.48	0.35
2	SUANRATCHADA	22.0	5.95	0.08
	AVERAGE	112.2	7.71	0.21

**APPENDIX F**

**QUESTIONNAIRE FOR DATA COLECTION**



## QUESTIONNAIRE RESIDENTIAL

Address.....  
 .....  
 .....

Type of household

- Single family  
 Compound family

No. of population in household.....

Income of household

- less than 10,000 Bahts/month  
 between 10,000 - 25,000 Bahts/month  
 more than 25,000 Bahts/month

Quantity of solid waste generated (average).....kg/day

.....

## QUESTIONNAIRE FACTORY

Type of factory.....

Area.....m<sup>3</sup>.

No. of employee.....persons.

Population density.....person/m<sup>3</sup>.

Work hour.....hours.

Quantity of solid waste generated (average).....kg/day

## QUESTIONNAIRE STORE

Type of factory.....  
 Area.....m<sup>3</sup>.  
 No. of employer and employee.....persons.  
 No. of customer (average).....person/day.  
 Population density.....person/m<sup>2</sup>/day.  
 Work hour.....hours  
 Quantity of solid waste generated (average).....kg/day

---

## QUESTIONNAIRE OFFICE

Type of office.....  
 Area.....m<sup>3</sup>.  
 No. of officer.....person  
 Population density.....person/m<sup>2</sup>/day.  
 Work hour.....hours  
 Quantity of solid waste generated (average).....kg/day

---

## QUESTIONNAIRE HOTEL

Area.....m<sup>3</sup>.  
 No. of room.....room.  
 No. of sold (average).....room/year.  
 .....room/day.  
 No. of employee.....persons.  
 Quantity of solid waste generated (average).....kg/day

## QUESTIONNAIRE RESTAURANT

Area.....m<sup>3</sup>.  
 No. of seat.....seats.  
 No. of customer (average).....person/day.  
 No. of employee.....persons.  
 Work hour.....hours  
 Quaty of solid waste generated (average).....kg/day

.....

## QUESTIONNAIRE THEATRE

Area.....m<sup>3</sup>.  
 No. of seat.....seats.  
 No. of employee.....persons.  
 No. of show/day.....  
 Quaty of solid waste generated (average).....kg/day

.....

## QUESTIONNAIRE MARKET

Area.....m<sup>3</sup>.  
 No. of seller.....  
 Population density.....person/m<sup>2</sup>/day.  
 Work hour.....hours  
 Quaty of solid waste generated (average).....kg/day

### QUESTIONNAIRE LARGE STORE

Area.....m<sup>3</sup>.  
 No. of shop.....  
 No. of employee.....persons.  
 Population density.....person/m<sup>2</sup>/day.  
 Work hour.....hours  
 Quaty of solid waste generated (average).....kg/day

---

### QUESTIONNAIRE SCHOOL

Area.....m<sup>3</sup>.  
 No. of student.....persons.  
 No. of teacher and officer.....persons.  
 Population density.....person/m<sup>2</sup>/day.  
 Work hour.....hours  
 Quaty of solid waste generated (average).....kg/day

---

### QUESTIONNAIRE GOVERMENT OFFICE

Area.....m<sup>3</sup>.  
 No. of officer.....persons.  
 Population density.....person/m<sup>2</sup>/day.  
 Work hour.....hours  
 Quaty of solid waste generated (average).....kg/day

---

### QUESTIONNAIRE HOSPITAL

Area.....m<sup>3</sup>.  
 No. of bed.....beds  
 No. of officer.....persons.  
 No. of out patient (average).....persons./day.  
 No. of live birth (average).....persons./day.  
 No. of surgical operation.....persons./day.  
 Population density.....person/m<sup>2</sup>/day.  
 Quaty of solid waste generated (average).....kg/day

**APPENDIX G**

**MULTIPLE LINEAR REGRESSION ANALYSIS**

**BY USING SPSS**

## 1. RESIDENTIAL

The obtained equation is in the following form:

$$Y = 0.115(Xr1) + 0.242(Xr2) + 0.503$$

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(RESIDENTIAL)

Listwise Deletion of Missing Data

Equation Number 1    Dependent Variable..    Y    GENERATION RATE

Block Number 1.    Method: Forward    Criterion    PIN    .1000  
Xr1            Xr2            Xr3

Variable(s) Entered on Step Number  
1..    Xr1            NO. OF PEOPLE IN HOUSE

Multiple R                    .25870  
R Square                      .06692  
Adjusted R Square            .05211  
Standard Error                .84406

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	3.21922	3.21922
Residual	63	44.88324	.71243

F =            4.51864            Signif F =    .0375

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xr1	.111220	.052321	.258697	2.126	.0375
(Constant)	1.005108	.276555		3.634	.0006

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xr2	.226035	.233829	.998536	1.894	.0629
Xr3	-.042367	-.043351	.976911	-.342	.7338

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(RESIDENTIAL)

Equation Number 1    Dependent Variable..    Y    GENERATION RATE

Variable(s) Entered on Step Number  
2..    Xr2            INCOME LEVEL

Multiple R                    .34343  
R Square                      .11794  
Adjusted R Square            .08949  
Standard Error                .82725

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	5.67326	2.83663
Residual	62	42.42920	.68434

F = 4.14505      Signif F = .0204

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xr1	.114938	.051317	.267345	2.240	.0287
Xr2	.241899	.127741	.226035	1.894	.0629
(Constant)	.503120	.379128		1.327	.1894

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xr3	-.010713	-.011164	.957919	-.087	.9308

End Block Number 1    PIN = .100 Limits reached.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(RESIDENTIAL)

Equation Number 1    Dependent Variable.. Y    GENERATION RATE

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	.9749	2.3782	1.5492	.2977	65
*RESID	-1.3093	1.9816	.0000	.8142	65
*ZPRED	-1.9290	2.7843	.0000	1.0000	65
*ZRESID	-1.5828	2.3954	.0000	.9843	65

Total Cases = 65

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

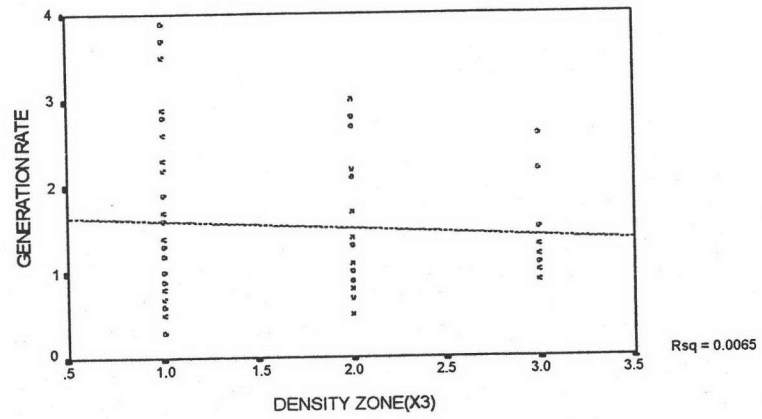
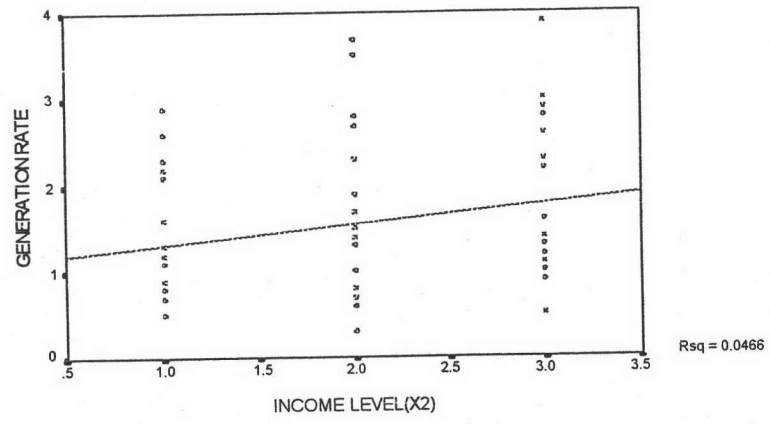
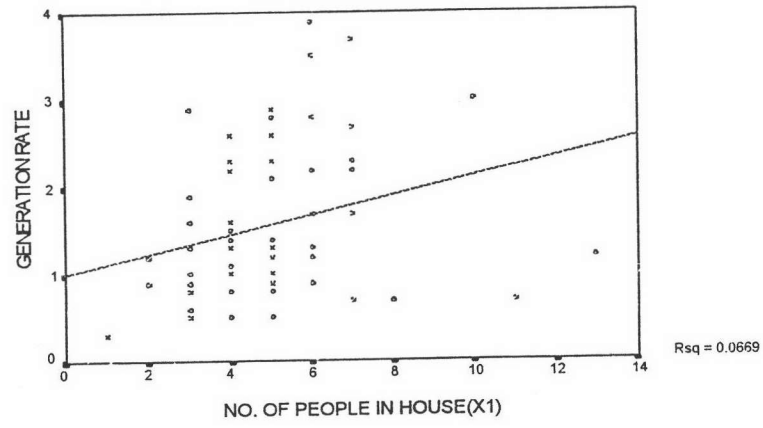
Name	Contents
YPRE	Predicted Value
ERROR	Residual

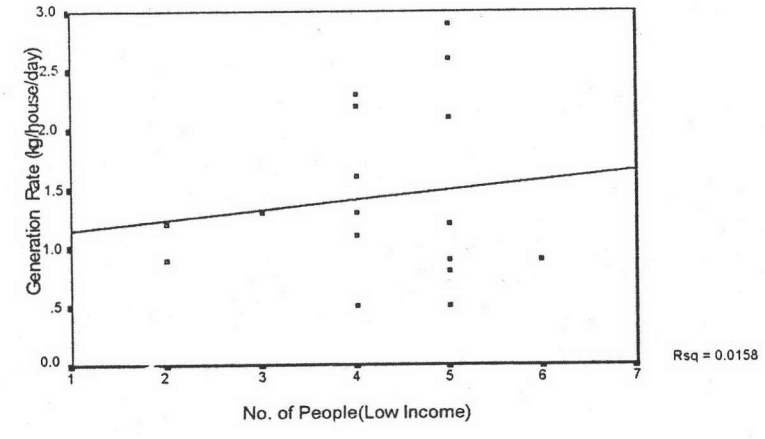
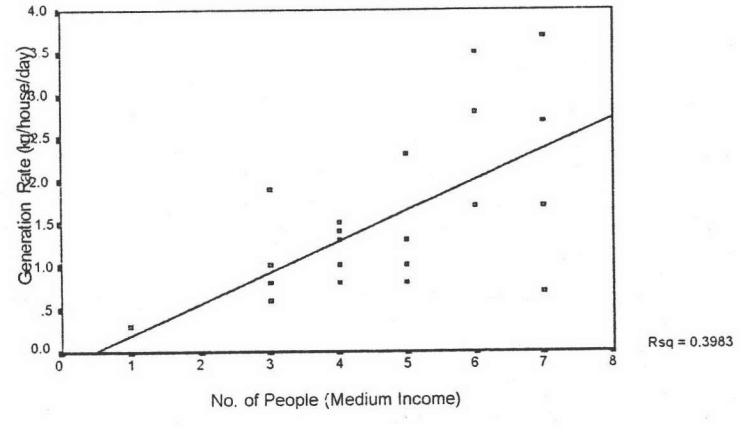
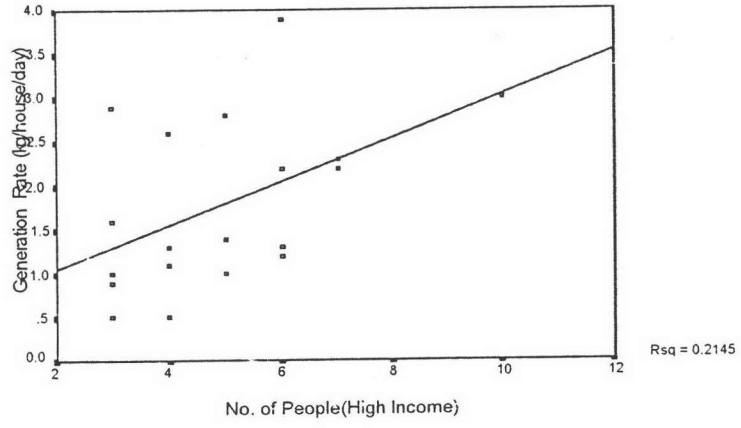
Y	YPRE	ERROR
2.6	1.68857	.91143
1.5	1.44667	.05333
.9	.97490	-.07490
3.0	2.37820	.62180
.9	1.57363	-.67363
1.2	1.91845	-.71845
2.3	2.03338	.26662
.7	2.00934	-1.30934
3.5	1.67655	1.82345
.9	1.31971	-.41971
1.2	2.23922	-1.03922
2.9	1.31971	1.58029
.7	1.67655	.02345

2.8	1.67655	1.12345
2.1	1.31971	.78029
1.4	1.80351	-.40351
1.1	1.20477	-.10477
1.2	.97490	.22510
2.2	1.20477	.99523
1.2	1.31971	-.11971
1.0	1.33173	-.33173
1.0	1.44667	-.44667
1.3	1.20477	.09523
.7	1.79149	-1.09149
.8	1.44667	-.64667
.9	1.43465	-.53465
1.3	1.20477	.09523
1.3	1.68857	-.38857
1.1	1.68857	-.58857
2.8	1.80351	.99649
2.8	1.80351	.99649
1.3	1.08983	.21017
1.6	1.20477	.39523
1.0	1.56161	-.56161
1.6	1.57363	.02637
3.9	1.91845	1.98155
.5	1.68857	-1.18857
.8	1.33173	-.53173
.8	1.31971	-.51971
1.0	1.80351	-.80351
1.3	1.56161	-.26161
1.4	1.80351	-.40351
2.2	2.03338	.16662
1.3	1.44667	-.14667
.5	1.20477	-.70477
.7	1.66452	-.96452
.5	1.31971	-.81971
2.7	1.79149	.90851
2.3	1.20477	1.09523
2.3	1.56161	.73839
1.0	1.57363	-.57363
2.6	1.31971	1.28029
1.4	1.44667	-.04667
2.9	1.57363	1.32637
1.0	1.44667	-.44667
.5	1.57363	-1.07363
.8	1.56161	-.76161
2.2	1.91845	.28155
.6	1.33173	-.73173
1.3	1.91845	-.61845
3.7	1.79149	1.90851
.3	1.10186	-.80186
.8	1.33173	-.53173
1.9	1.33173	.56827
1.7	1.79149	-.09149

Number of cases read: 65      Number of cases listed: 65









2. STORE

The obtained equation is in the following form:

$$Y_s = 0.077(X_{s2}) + 0.361$$

$$Y_s = 4.057E-3(X_{s1}) + 0.464$$

\* \* \* \* M U L T I P L E R E G R E S S I O N  
(STORE)

Listwise Deletion of Missing Data

Equation Number 1    Dependent Variable..    Y    GENERATION RATE (KG./DAY)

Block Number 1.    Method: Forward    Criterion    PIN    .1000  
                   Xs1                    Xs2                    Xs3                    Xs4

Variable(s) Entered on Step Number  
                   1..                    Xs2                    NO. EMPLOYEES

Multiple R                    .33129  
 R Square                     .10975  
 Adjusted R Square          .07796  
 Standard Error              .49059

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	.83080	.83080
Residual	28	6.73887	.24067

F =            3.45198            Signif F = .0737

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xs2	.077404	.041661	.331291	1.858	.0737
(Constant)	.361250	.201528		1.793	.0839

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xs1	.173871	.182850	.984567	.966	.3424
Xs3	.017672	.018714	.998365	.097	.9232
Xs4	.204476	.211782	.954999	1.126	.2701

End Block Number 1    PIN =    .100 Limits reached.

\* \* \* \* M U L T I P L E R E G R E S S I O N    \* \* \* \*  
(STORE)

Equation Number 1    Dependent Variable..    Y    GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	.5161	1.1353	.6967	.1693	30
*RESID	-.6805	1.3647	.0000	.4821	30
*ZPRED	-1.0671	2.5914	.0000	1.0000	30
*ZRESID	-1.3871	2.7818	.0000	.9826	30

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents	
----	-----	
YPRE	Predicted Value	
ERROR	Residual	
	Y	ERROR
	.3	-.21606
	.3	-.68048
	.5	-.17087
	.8	-.02567
	.5	-.24827
	.4	-.27087
	2.5	1.36471
	.5	-.32567
	.6	.08394
	.9	.15173
	1.1	.50654
	.6	.08394
	.4	-.19346
	.4	-.19346
	.4	-.19346
	.3	-.21606
	.5	-.01606
	.3	-.37087
	.9	.22913
	.5	-.17087
	1.9	1.22913
	.7	-.12567
	.5	-.63529
	.4	-.27087
	1.7	1.10654
	.4	-.27087
	.9	-.00308
	.7	-.04827
	.7	.18394
	.3	-.29346

Number of cases read: 30      Number of cases listed: 30

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(STORE)

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. Ys GENERATION RATE (KG./DAY)

Block Number 1. Method: Enter Xs1

Variable(s) Entered on Step Number  
1.. Xs1 AREA (SQ.M)

Multiple R .21234  
R Square .04509  
Adjusted R Square .01099  
Standard Error .50809

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	.34131	.34131
Residual	28	7.22835	.25816

F = 1.32213 Signif F = .2599

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xs1	.004057	.003528	.212344	1.150	.2599
(Constant)	.464075	.222538		2.085	.0463

End Block Number 1 All requested variables entered.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(STORE)

Equation Number 1 Dependent Variable.. Y GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	.5935	1.0969	.6967	.1085	30
*RESID	-.4698	1.7763	.0000	.4993	30
*ZPRED	-.9473	3.6896	.0000	1.0000	30
*ZRESID	-.9246	3.4960	.0000	.9826	30

Total Cases = 30

\*\*\*\*\*

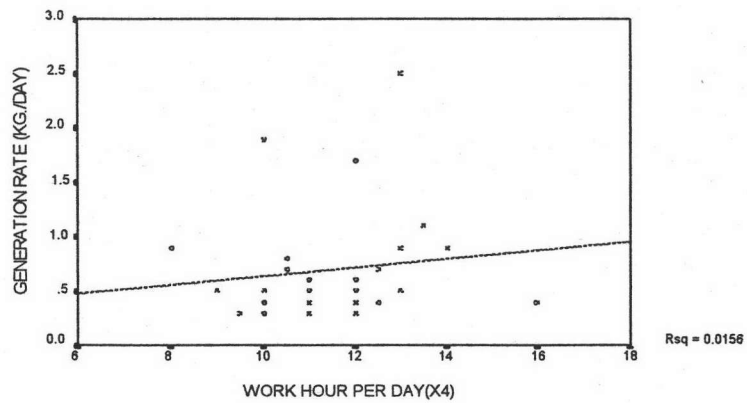
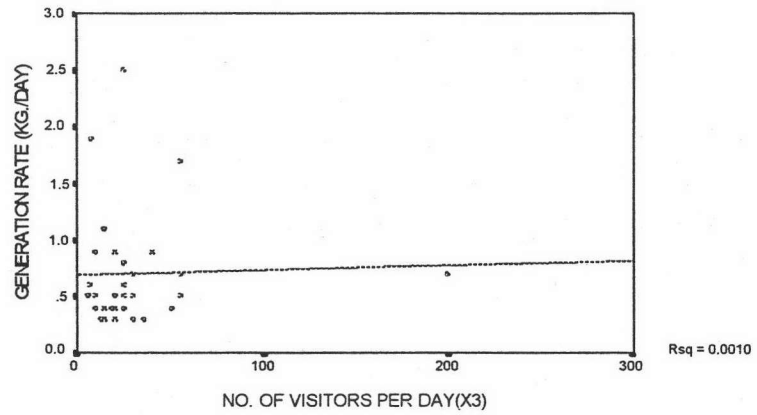
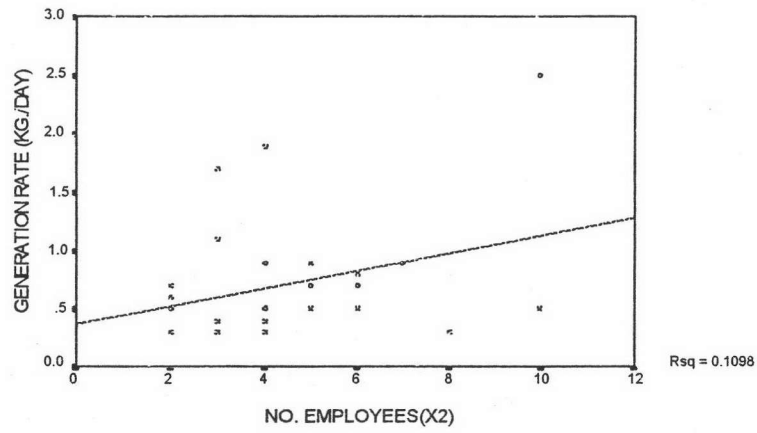
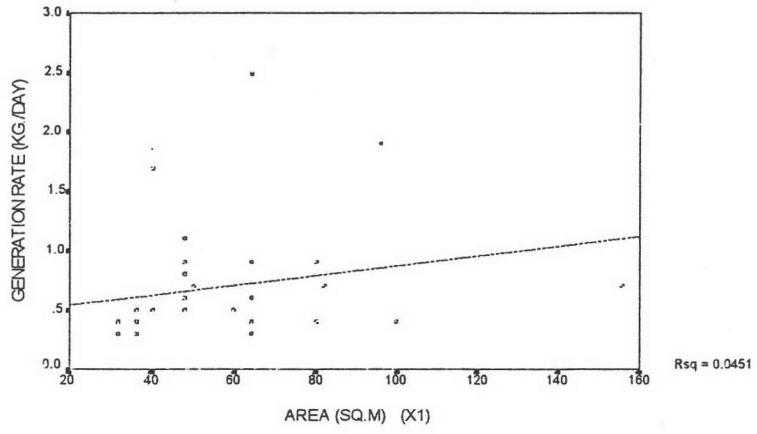
From Equation 1: 2 new variables have been created.

Name	Contents
YPRE	Predicted Value
ERROR	Residual

Ys YPRE ERROR

.3	.72371	-.42371
.3	.59389	-.29389
.5	.62635	-.12635
.8	.65880	.14120
.5	.65880	-.15880
.4	.86976	-.46976
2.5	.72371	1.77629
.5	.61012	-.11012
.6	.72371	-.12371
.9	.65880	.24120
1.1	.65880	.44120
.6	.65880	-.05880
.4	.78862	-.38862
.4	.61012	-.21012
.4	.59389	-.19389
.3	.61012	-.31012
.5	.61012	-.11012
.3	.59389	-.29389
.9	.78862	.11138
.5	.62635	-.12635
1.9	.85353	1.04647
.7	.79674	-.09674
.5	.70748	-.20748
.4	.72371	-.32371
1.7	.62635	1.07365
.4	.72371	-.32371
.9	.72371	.17629
.7	1.09694	-.39694
.7	.66692	.03308
.3	.59389	-.29389

Number of cases read: 30      Number of cases listed: 30



3. PRIVATE OFFICE

The obtained equation is in the following from:

$$Y_p = 5.746E-3(X_{p1}) + 1.406$$

$$Y_p = 0.166(X_{p2}) - 0.032$$

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(PRIVATE OFFICE)

Listwise Deletion of Missing Data

Equation Number 1    Dependent Variable..    Y    GENERATION RATE (KG./DAY)

Block Number 1.    Method: Forward    Criterion    PIN    .1000  
                   Xp1                    Xp2                    Xp3                    Xp4

Variable(s) Entered on Step Number  
                   1..                    Xp2                    NO. EMPLOYEES

Multiple R                    .87238  
 R Square                     .76105  
 Adjusted R Square           .74267  
 Standard Error               1.49214

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	92.18891	92.18891
Residual	13	28.94442	2.22649

F =            41.40541            Signif F =    .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xp2	.166586	.025889	.872384	6.435	.0000
(Constant)	-.031567	.687621		-.046	.9641

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xp1	.178082	.261814	.516472	.940	.3659
Xp3	-.090363	-.167670	.822668	-.589	.5667
Xp4	.072080	.145908	.979097	.511	.6187

End Block Number    1    PIN =            .100 Limits reached.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(PRIVATE OFFICE)

Equation Number 1    Dependent Variable..    Y    GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	.3016	9.9636	3.6333	2.5661	15
*RESID	-2.7655	2.3662	.0000	1.4379	15
*ZPRED	-1.2984	2.4669	.0000	1.0000	15



\*ZRESID -1.8534 1.5858 .0000 .9636 15

Total Cases = 15

\* \* \* \* \*

From Equation 1: 2 new variables have been created.

Name	Contents
----	-----
YPRE	Predicted Value
ERROR	Residual

Y	YPRE	ERROR
7.8	5.79896	2.00104
5.0	2.63381	2.36619
.5	.80136	-.30136
4.4	2.30064	2.09936
5.4	5.29920	.10080
5.0	5.79896	-.79896
1.8	3.63333	-1.83333
2.2	3.30016	-1.10016
10.8	9.96362	.83638
.4	.30161	.09839
2.6	2.80040	-.20040
3.2	5.96554	-2.76554
4.1	3.46675	.63325
.6	1.46771	-.86771
.7	.96795	-.26795

Number of cases read: 15      Number of cases listed: 15

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(PRIVATE OFFICE)

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. Yp GENERATION RATE (KG./DAY)

Block Number 1. Method: Enter Xp1

Variable(s) Entered on Step Number  
1.. Xp1 AREA (SQ.M)

Multiple R .69860  
R Square .48804  
Adjusted R Square .44866  
Standard Error 2.18413

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	59.11759	59.11759
Residual	13	62.01575	4.77044

F = 12.39248 Signif F = .0038

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xp1	.005746	.001632	.698597	3.520	.0038
(Constant)	1.406124	.847531		1.659	.1210

End Block Number 1 All requested variables entered.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(PRIVATE OFFICE)

Equation Number 1 Dependent Variable.. Y GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	1.5900	8.6463	3.6333	2.0549	15
*RESID	-3.2463	3.4179	.0000	2.1047	15
*ZPRED	-.9944	2.4395	.0000	1.0000	15
*ZRESID	-1.4863	1.5649	.0000	.9636	15

Total Cases = 15

\*\*\*\*\*

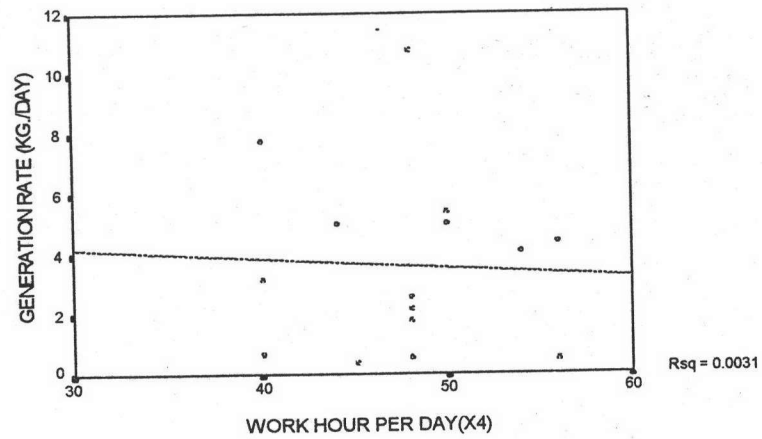
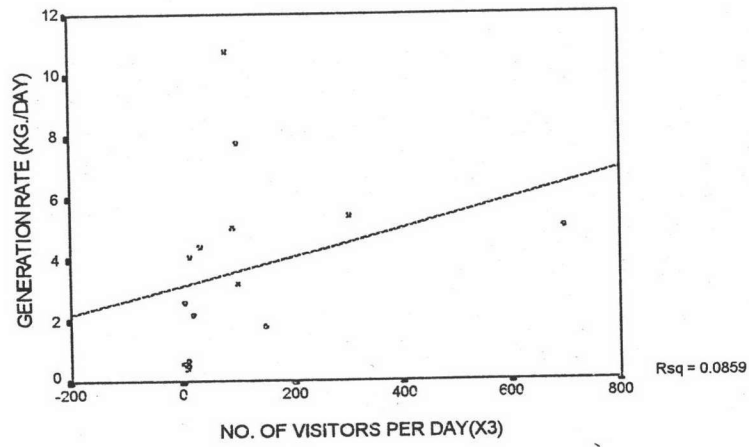
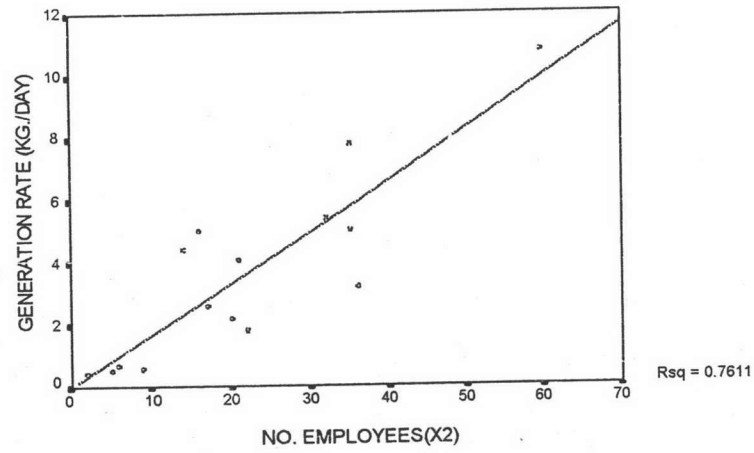
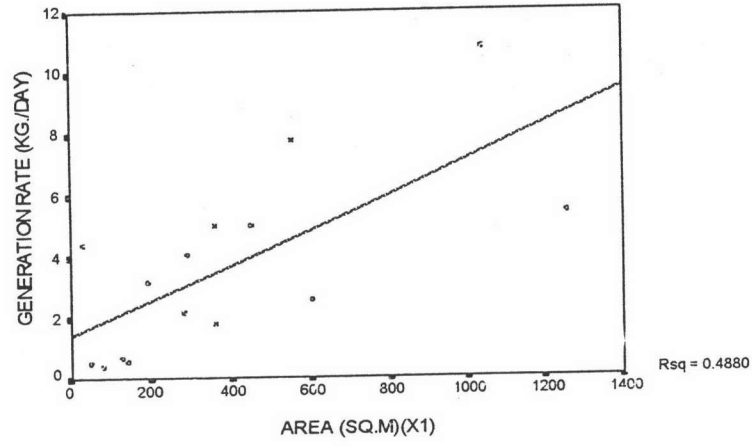
From Equation 1: 2 new variables have been created.

Name	Contents
YPRE	Predicted Value
ERROR	Residual

Yp YPRE ERROR

7.8	4.60099	3.19901
5.0	3.99189	1.00811
.5	1.68194	-1.18194
4.4	1.59000	2.81000
5.4	8.64628	-3.24628
5.0	3.47474	1.52526
1.8	3.47474	-1.67474
2.2	3.01505	-.81505
10.8	7.38212	3.41788
.4	1.86582	-1.46582
2.6	4.85382	-2.25382
3.2	2.50939	.69061
4.1	3.06102	1.03898
.6	2.21059	-1.61059
.7	2.14163	-1.44163

Number of cases read: 15      Number of cases listed: 15



## 4. HOTEL

The obtained equation are in the the following :

$$\begin{aligned} Y_h &= 1.866(X_{h1}) + 94.871(X_{h6}) - 242.679 \quad \dots (1) \\ Y_h &= 4.777(X_{h2}) - 167.344 \quad \dots (2) \\ Y_h &= 1.557(X_{h4}) + 4.973 \quad \dots (3) \\ Y_h &= 1.864E-3(X_{h5}) - 9.710504 \quad \dots (4) \end{aligned}$$

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
(HOTEL)

Listwise Deletion of Missing Data

Equation Number 1    Dependent Variable..    Y    GENERATION RATE

Block Number 1.    Method: Forward    Criterion    PIN    .1000  
Xh1            Xh3            Xh6            Xh7

Variable(s) Entered on Step Number  
1..    Xh1            ROOM

Multiple R                    .83965  
R Square                      .70500  
Adjusted R Square            .68231  
Standard Error               123.14845

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	471170.99620	471170.99620
Residual	13	197152.02114	15165.54009

F =            31.06853            Signif F =    .0001

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xh1	2.424136	.434907	.839646	5.574	.0001
(Constant)	-119.656774	60.914344		-1.964	.0712

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xh3	.267612	.301096	.373434	1.094	.2955
Xh6	.366979	.574178	.722144	2.429	.0318
Xh7	.086788	.141312	.782083	.494	.6299

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
(HOTEL)

Equation Number 1    Dependent Variable..    Y    GENERATION RATE

Variable(s) Entered on Step Number  
2..    Xh6            PRICE LEVEL

Multiple R                    .89569  
R Square                      .80226  
Adjusted R Square            .76930

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	536168.08605	268084.04303
Residual	12	132154.93128	11012.91094

F = 24.34271 Signif F = .0001

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xh1	1.865650	.436121	.646203	4.278	.0011
Xh6	94.871327	39.051623	.366979	2.429	.0318
(Constant)	-242.678956	72.518061		-3.346	.0058

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xh3	.267963	.368243	.326401	1.314	.2157
Xh7	-.047918	-.088759	.626466	-.296	.7731

End Block Number 1 PIN = .100 Limits reached.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(HOTEL)

Equation Number 1 Dependent Variable.. Y GENERATION RATE

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	-76.9129	638.9430	169.9467	195.6980	15
*RESID	-136.6998	190.7610	.0000	97.1578	15
*ZPRED	-1.2614	2.3965	.0000	1.0000	15
*ZRESID	-1.3026	1.8178	.0000	.9258	15

Total Cases = 15

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents
YPRE	Predicted Value
ERROR	Residual

Y	YPRE	ERROR
653.2	638.94298	14.25702
531.2	340.43900	190.76100
84.8	178.12746	-93.32746
543.4	415.06499	128.33501
210.5	291.93211	-81.43211
172.3	308.99977	-136.69977
42.4	16.09274	26.30726

40.8	128.03173	-87.23173
48.6	81.39049	-32.79049
28.2	114.97218	-86.77218
71.4	-15.34649	86.74649
20.6	-17.21214	37.81214
35.8	132.03985	-96.23985
50.8	12.63826	38.16174
15.2	-76.91293	92.11293

Number of cases read: 15      Number of cases listed: 15

\* \* \* \*    M U L T I P L E    R E G R E S S I O N    \* \* \* \*  
(HOTEL)

Listwise Deletion of Missing Data

Equation Number 1      Dependent Variable..    Y      GENERATION RATE

Block Number 1.    Method: Forward      Criterion    PIN    .1000  
                   Xh2            Xh3            Xh6            Xh7

Variable(s) Entered on Step Number  
           1..      Xh2            SOLD ROOM

Multiple R                    .83553  
 R Square                      .69812  
 Adjusted R Square          .67490  
 Standard Error            124.57750

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	466568.81544	466568.81544
Residual	13	201754.20189	15519.55399

F =            30.06329            Signif F =    .0001

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xh2	4.777497	.871329	.835535	5.483	.0001
(Constant)	-167.344612	69.417822		-2.411	.0314

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xh3	.333829	.417667	.472550	1.592	.1373
Xh6	.306835	.437495	.613724	1.685	.1177
Xh7	-.045544	-.067160	.656451	-.233	.8196

End Block Number 1    PIN =    .100 Limits reached.

\* \* \* \*    M U L T I P L E    R E G R E S S I O N    \* \* \* \*  
(HOTEL)

Equation Number 1      Dependent Variable..    Y      GENERATION RATE

Residuals Statistics:

Min	Max	Mean	Std Dev	N
-----	-----	------	---------	---

```

*PRED      -52.6847  620.9424  169.9467  182.5550  15
*RESID     -207.7201  225.5724   .0000  120.0459  15
*ZPRED     -1.2195   2.4705   .0000   1.0000  15
*ZRESID    -1.6674   1.8107   .0000   .9636   15

```

Total Cases = 15

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents	
----	-----	
YPRE	Predicted Value	
ERROR	Residual	
Y	YPRE	ERROR
653.2	620.94237	32.25763
531.2	305.62758	225.57242
84.8	109.75021	-24.95021
543.4	334.29256	209.10744
210.5	291.29509	-80.79509
172.3	310.40507	-138.10507
42.4	-19.24221	61.64221
40.8	181.41266	-140.61266
48.6	119.30520	-70.70520
28.2	-24.01971	52.21971
71.4	52.42024	18.97976
20.6	38.08775	-17.48775
35.8	243.52012	-207.72012
50.8	38.08775	12.71225
15.2	-52.68469	67.88469

Number of cases read: 15 Number of cases listed: 15

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(HOTEL)

Listwise Deletion of Missing Data

```

Equation Number 1   Dependent Variable..  Y  GENERATION RATE
Block Number 1.  Method: Forward      Criterion  PIN  .1000
  Xh1           Xh4           Xh6           Xh7

```

```

Variable(s) Entered on Step Number
1..  Xh4  EMPLOYEE

```

```

Multiple R          .96771
R Square            .93646
Adjusted R Square   .93157
Standard Error      57.15475

```

```

Analysis of Variance
                DF      Sum of Squares      Mean Square
Regression      1      625856.36051      625856.36051
Residual       13      42466.65682       3266.66591

```

F = 191.58873 Signif F = .0000



----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xh4	1.557332	.112511	.967708	13.842	.0000
(Constant)	4.973280	18.969269		.262	.7973

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xh1	.131512	.295563	.320945	1.072	.3049
Xh6	.052125	.146847	.504307	.514	.6164
Xh7	.022473	.079308	.791331	.276	.7875

End Block Number 1 PIN = .100 Limits reached.

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
(HOTEL)

Equation Number 1 Dependent Variable.. Y GENERATION RATE

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	12.7599	643.4795	169.9467	211.4333	15
*RESID	-84.5061	132.2217	.0000	55.0757	15
*ZPRED	-.7434	2.2396	.0000	1.0000	15
*ZRESID	-1.4785	2.3134	.0000	.9636	15

Total Cases = 15

\* \* \* \* \*

From Equation 1: 2 new variables have been created.

Name	Contents
YPRE	Predicted Value
ERROR	Residual

Y	YPRE	ERROR
653.2	643.47947	9.72053
531.2	398.97832	132.22168
84.8	132.67452	-47.87452
543.4	627.90614	-84.50614
210.5	121.77319	88.72681
172.3	166.93582	5.36418
42.4	90.62655	-48.22655
40.8	79.72522	-38.92522
48.6	98.41321	-49.81321
28.2	25.21860	2.98140
71.4	53.25058	18.14942
20.6	29.89059	-9.29059
35.8	43.90658	-8.10658
50.8	23.66127	27.13873
15.2	12.75994	2.44006



\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents	
----	-----	
YPRE	Predicted Value	
ERROR	Residual	
Y	YPRE	ERROR
653.2	643.47947	9.72053
531.2	398.97832	132.22168
84.8	132.67452	-47.87452
543.4	627.90614	-84.50614
210.5	121.77319	88.72681
172.3	166.93582	5.36418
42.4	90.62655	-48.22655
40.8	79.72522	-38.92522
48.6	98.41321	-49.81321
28.2	25.21860	2.98140
71.4	53.25058	18.14942
20.6	29.89059	-9.29059
35.8	43.90658	-8.10658
50.8	23.66127	27.13873
15.2	12.75994	2.44006

Number of cases read: 15      Number of cases listed: 15

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(HOTEL)

Listwise Deletion of Missing Data

Equation Number 1      Dependent Variable.. Y      GENERATION RATE

Block Number 1.      Method: Forward      Criterion PIN .1000  
Xh3      Xh5      Xh6      Xh7

Variable(s) Entered on Step Number  
1..      Xh5      ELECTRICITY CONSUMTION

Multiple R      .98670  
R Square      .97358  
Adjusted R Square      .97155  
Standard Error      36.85438

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	650665.82695	650665.82695
Residual	13	17657.19038	1358.24541

F = 479.04879      Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
----------	---	------	------	---	-------

Xh5 .001864 8.5154E-05 .986702 21.887 .0000  
 (Constant) -9.710504 12.566875 -.773 .4535

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xh3	-.111747	-.400087	.338666	-1.512	.1564
Xh6	.018473	.080284	.499018	.279	.7850
Xh7	-.050051	-.265979	.746105	-.956	.3580

End Block Number 1 PIN = .100 Limits reached.

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
 (HOTEL)

Equation Number 1 Dependent Variable.. Y GENERATION RATE

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	-5.2635	714.6382	169.9467	215.5832	15
*RESID	-61.4383	62.8218	.0000	35.5138	15
*ZPRED	-.8127	2.5266	.0000	1.0000	15
*ZRESID	-1.6671	1.7046	.0000	.9636	15

Total Cases = 15

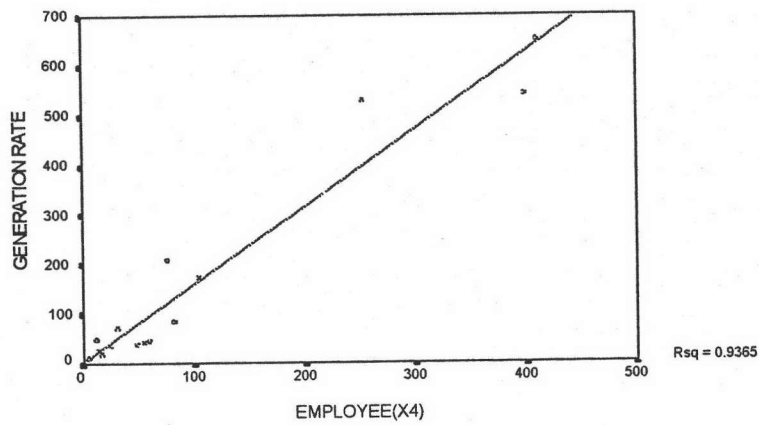
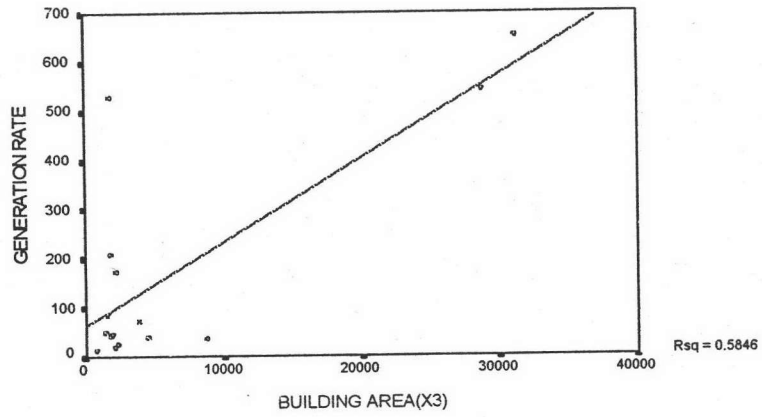
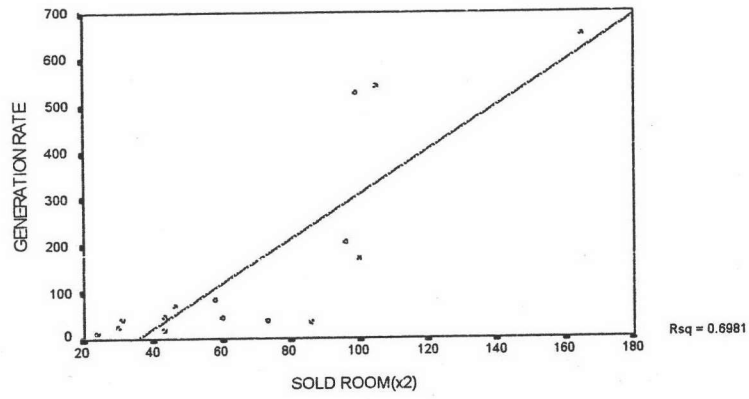
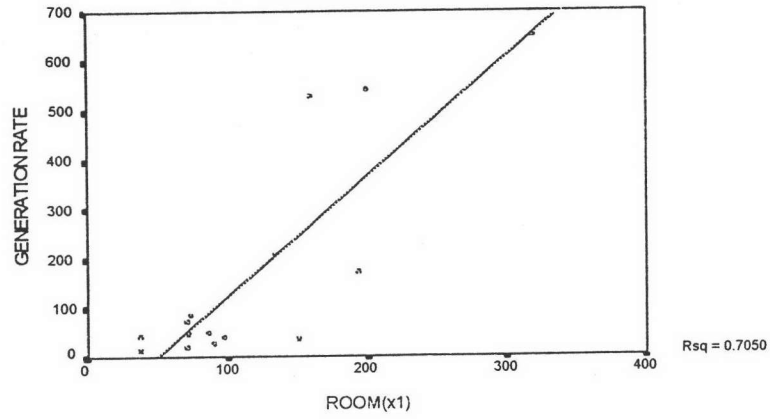
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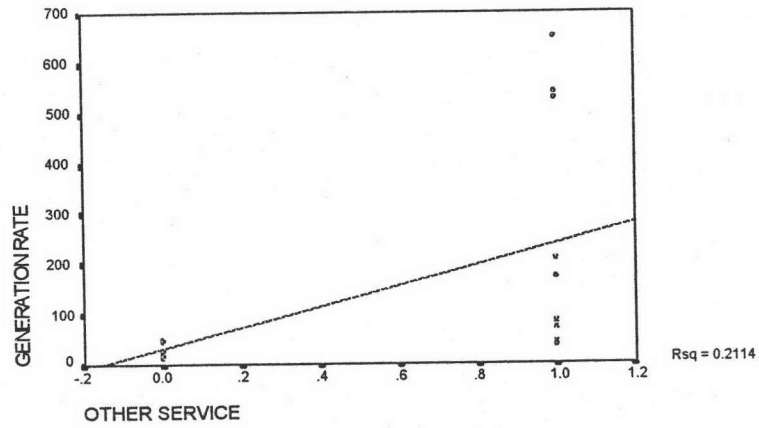
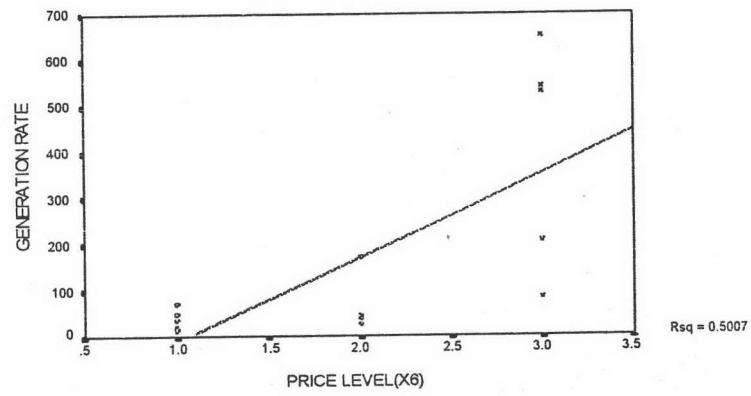
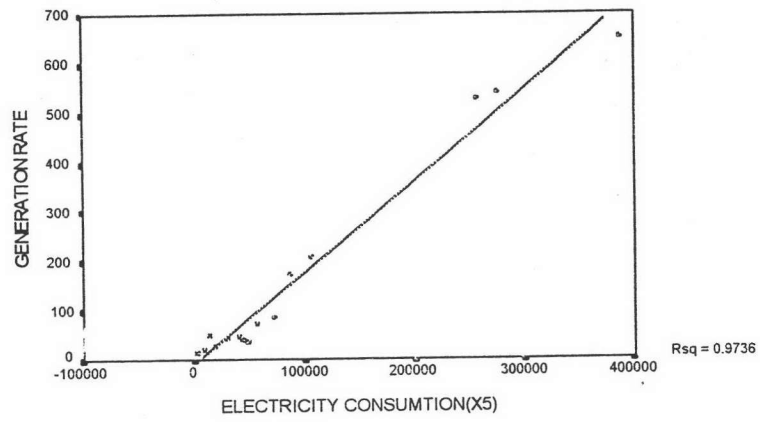
From Equation 1: 2 new variables have been created.

Name	Contents
YPRE	Predicted Value
ERROR	Residual

Y	YPRE	ERROR
653.2	714.63826	-61.43826
531.2	468.37824	62.82176
84.8	124.12415	-39.32415
543.4	502.30844	41.09156
210.5	187.17226	23.32774
172.3	151.37455	20.92545
42.4	46.34841	-3.94841
40.8	72.53832	-31.73832
48.6	66.81650	-18.21650
28.2	24.34830	3.85170
71.4	94.42661	-23.02661
20.6	5.64336	14.95664
35.8	80.22829	-44.42829
50.8	16.11783	34.68217
15.2	-5.26351	20.46351

Number of cases read: 15 Number of cases listed: 15





## 5. RESTAURANT

The obtained equations are in the following form:

$$Y_u = 0.094(X_{u1}) + 0.140(X_{u2}) + 2.953 \quad \dots (1)$$

$$Y_u = 1.813(X_{u3}) + 0.140(X_{u4}) + 0.285 \quad \dots (2)$$

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
RESTAURANT

Listwise Deletion of Missing Data

Equation Number 1      Dependent Variable..      Y      GENERATION RATE (KG./DAY)

Block Number 1. Method: Forward      Criterion      PIN      .1000  
                  Xu1                   Xu2                   Xu3                   Xu4                   Xu5

Variable(s) Entered on Step Number  
 1..      Xu3                   NO. EMPLOYEES

Multiple R                   .98412  
 R Square                   .96850  
 Adjusted R Square         .96587  
 Standard Error            13.68210

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	69058.35580	69058.35580
Residual	12	2246.39849	187.19987

F =      368.90172                      Signif F =      .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xu3	2.004168	.104347	.984122	19.207	.0000
(Constant)	11.905334	4.173868		2.852	.0146

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xu1	.143439	.187623	.053902	.634	.5393
Xu2	.030194	.120430	.501196	.402	.6951
Xu4	.139331	.580973	.547755	2.367	.0373
Xu5	-.038863	-.192273	.771119	-.650	.5291

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
RESTAURANT

Equation Number 1      Dependent Variable..      Y      GENERATION RATE (KG./DAY)

Variable(s) Entered on Step Number  
 2..      Xu4                   NO. OF VISITORS PER DAY

Multiple R                   .98951  
 R Square                   .97913  
 Adjusted R Square         .97533

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	69816.58295	34908.29148
Residual	11	1488.17134	135.28830

F = 258.02890      Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xu3	1.813350	.119857	.890423	15.129	.0000
Xu4	.139642	.058986	.139331	2.367	.0373
(Constant)	.284632	6.056824		.047	.9634

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xu1	.204677	.326137	.048306	1.091	.3009
Xu2	-.112417	-.417939	.288465	-1.455	.1764
Xu5	.015819	.086365	.341193	.274	.7896

End Block Number 1      PIN = .100 Limits reached.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
 RESTAURANT

Equation Number 1      Dependent Variable.. Y      GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	7.4024	269.5342	50.5571	73.2837	14
*RESID	-21.2358	29.1131	.0000	10.6993	14
*ZPRED	-.5889	2.9881	.0000	1.0000	14
*ZRESID	-1.8257	2.5030	.0000	.9199	14

Total Cases = 14

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents
YPRE	Predicted Value
ERROR	Residual

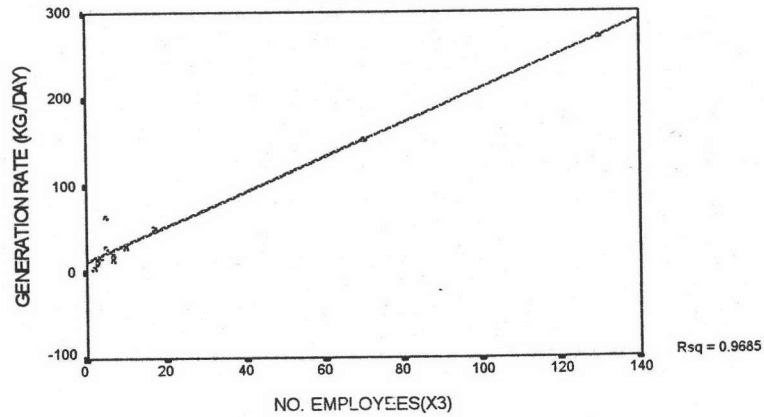
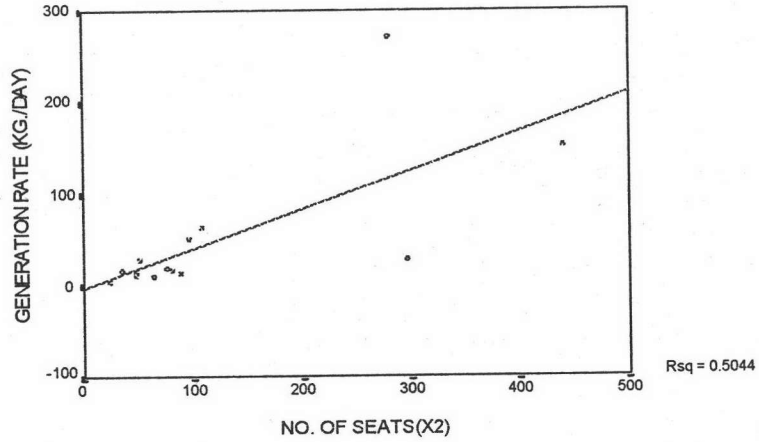
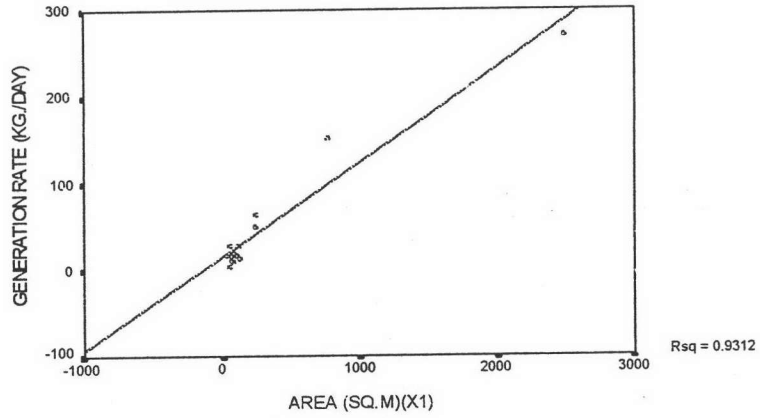
Y	YPRE	ERROR
15.7	13.40499	2.29501
18.8	25.54585	-6.74585
4.6	7.40238	-2.80238
11.9	12.42749	-.52749
17.1	20.94366	-3.84366
29.3	50.53577	-21.23577
29.3	24.01378	5.28622
14.1	22.05481	-7.95481

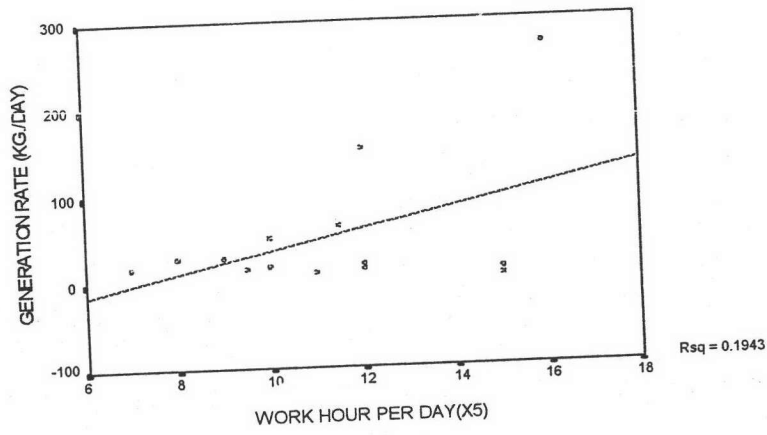
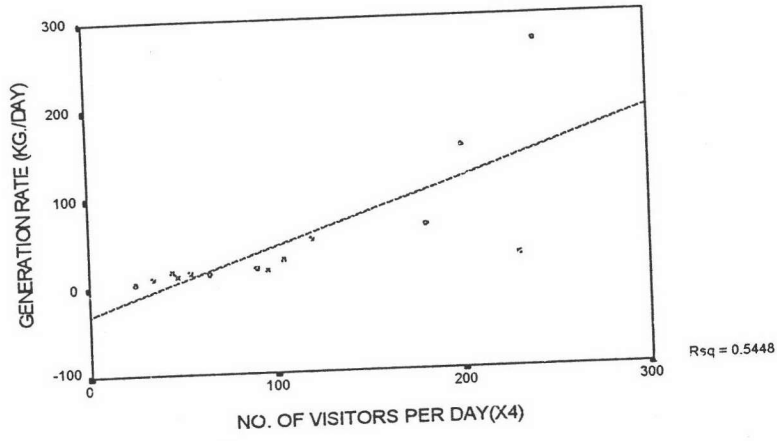
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50.3	47.86861	2.43139
153.7	155.14750	-1.44750
10.7	10.61215	.08785
63.6	34.48693	29.11307
271.1	269.53417	1.56583

Number of cases read: 14    Number of cases listed: 14





## 6. PRIMARY SCHOOL

The obtained equations are in the following forms:

$$Y_y = 0.015(Xy2) + 0.434(Xy3) - 3.435 \quad \dots(1)$$

$$Y_y = 0.035(Xy4) + 27.217 \quad \dots(2)$$

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
PRIMARY SCHOOL

Listwise Deletion of Missing Data

Equation Number 1    Dependent Variable..    Y    GENERATION RATE

The following variables are constants or have missing correlations:

Xy5

They will be deleted from the analysis.

Block Number 1.    Method: Forward    Criterion    PIN    .1000  
Xy1            Xy2            Xy3            Xy5            Xy6

Variable(s) Entered on Step Number  
1..    Xy2            BUILDING AREA

Multiple R            .89847  
R Square              .80725  
Adjusted R Square    .78798  
Standard Error        16.47807

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	11371.88724	11371.88724
Residual	10	2715.26943	271.52694

F =            41.88125            Signif F =    .0001

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xy2	.024910	.003849	.898472	6.472	.0001
(Constant)	-14.109446	14.113545		-1.000	.3410

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xy1	.027755	.062037	.962958	.186	.8562
Xy3	.457586	.595777	.326747	2.225	.0531
Xy6	.100485	.228878	.999988	.705	.4984

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
PRIMARY SCHOOL

Equation Number 1    Dependent Variable..    Y    GENERATION RATE

Variable(s) Entered on Step Number  
2..    Xy3            NO. OF OFFICIALS

Multiple R .93577  
 R Square .87567  
 Adjusted R Square .84804  
 Standard Error 13.95025

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	12335.67141	6167.83570
Residual	9	1751.48526	194.60947

F = 31.69340 Signif F = .0001

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xy2	.014500	.005701	.523014	2.544	.0315
Xy3	.434281	.195147	.457586	2.225	.0531
(Constant)	-3.434978	12.875301		-.267	.7956

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xy1	.094401	.255604	.309294	.748	.4760
Xy6	-.037966	-.093621	.247039	-.266	.7970

End Block Number 1 PIN = .100 Limits reached.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
 PRIMARY SCHOOL

Equation Number 1 Dependent Variable.. Y GENERATION RATE

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	32.5084	120.0095	71.8833	33.4877	12
*RESID	-19.9823	21.1521	.0000	12.6185	12
*ZPRED	-1.1758	1.4371	.0000	1.0000	12
*ZRESID	-1.4324	1.5162	.0000	.9045	12

Total Cases = 12

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name Contents  
 -----

YPRE Predicted Value  
 ERROR Residual

Y	YPRE	ERROR
96.2	116.18235	-19.98235
92.2	91.25123	.94877
90.4	87.17892	3.22108
60.4	69.10865	-8.70865
49.6	39.69765	9.90235
47.2	50.21833	-3.01833
80.8	59.64795	21.15205

118.6	120.00951	-1.40951
29.6	32.50839	-2.90839
36.0	33.95696	2.04304
135.6	117.57720	18.02280
26.0	45.26286	-19.26286

Number of cases read: 12      Number of cases listed: 12

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
PRIMARY SCHOOL

Listwise Deletion of Missing Data

Equation Number 1      Dependent Variable..      Y      GENERATION RATE

The following variables are constants or have missing correlations:

Xy5

They will be deleted from the analysis.

Block Number 1.      Method: Forward      Criterion      PIN      .1000  
Xy1      Xy4      Xy5      Xy6

Variable(s) Entered on Step Number  
1..      Xy4      NO. OF STUDENTS

Multiple R      .85013  
R Square      .72273  
Adjusted R Square      .69500  
Standard Error      19.76351

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	10181.19286	10181.19286
Residual	10	3905.96381	390.59638

F =      26.06576      Signif F =      .0005

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xy4	.034744	.006805	.850135	5.105	.0005
(Constant)	27.216516	10.444695		2.606	.0262

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xy1	.125661	.227200	.906397	.700	.5017
Xy6	-.196315	-.352199	.892428	-1.129	.2881

End Block Number 1      PIN =      .100 Limits reached.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
PRIMARY SCHOOL

Equation Number 1      Dependent Variable..      Y      GENERATION RATE

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	44.9709	119.0807	71.8833	30.4231	12
*RESID	-24.2868	35.8291	.0000	18.8438	12
*ZPRED	-.8846	1.5514	.0000	1.0000	12
*ZRESID	-1.2289	1.8129	.0000	.9535	12

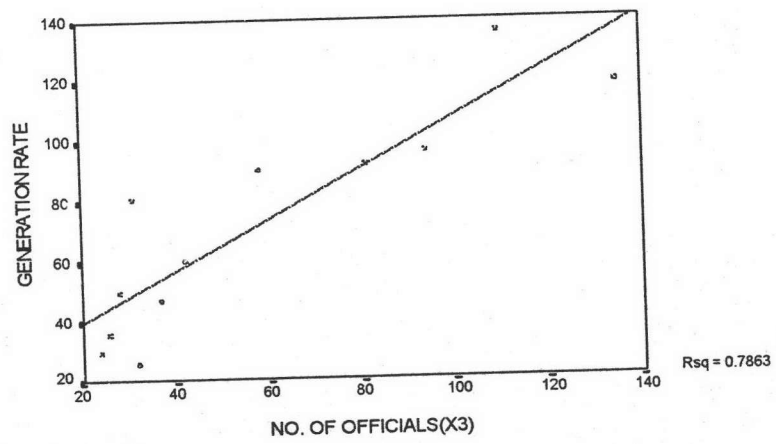
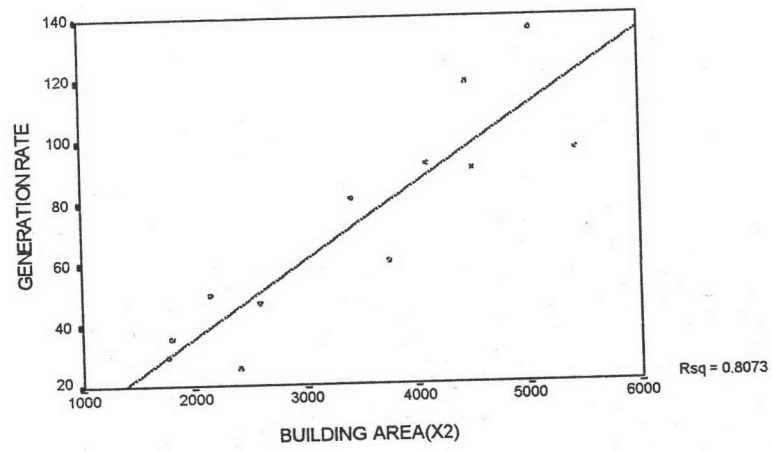
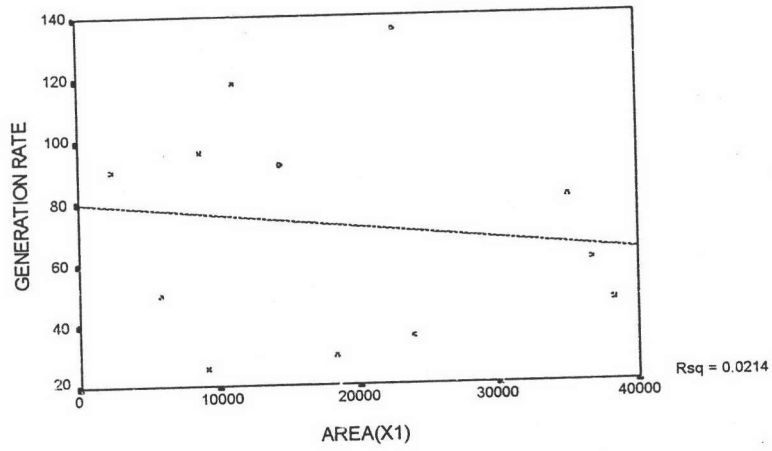
Total Cases = 12

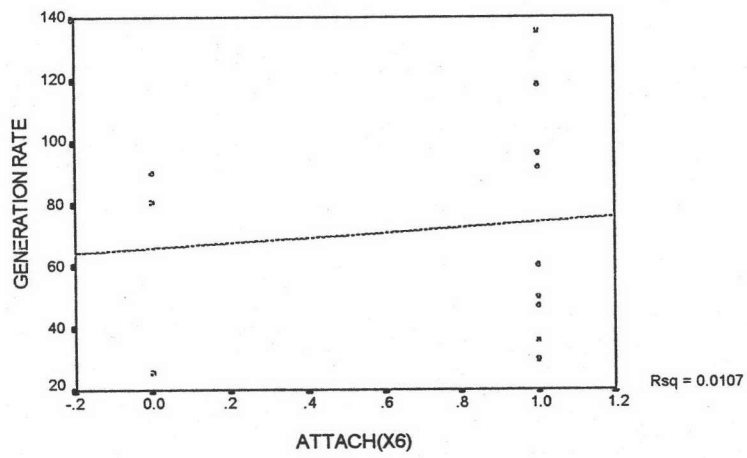
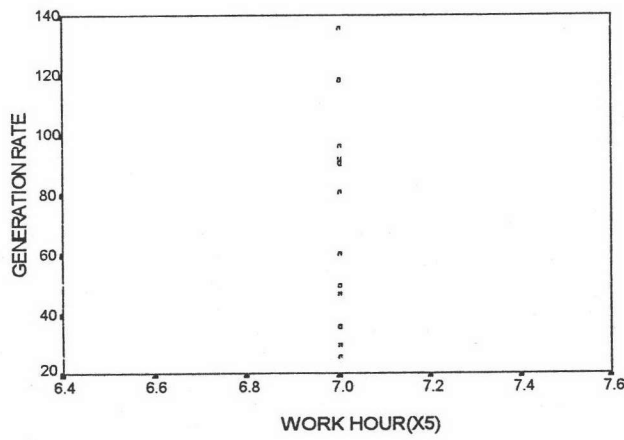
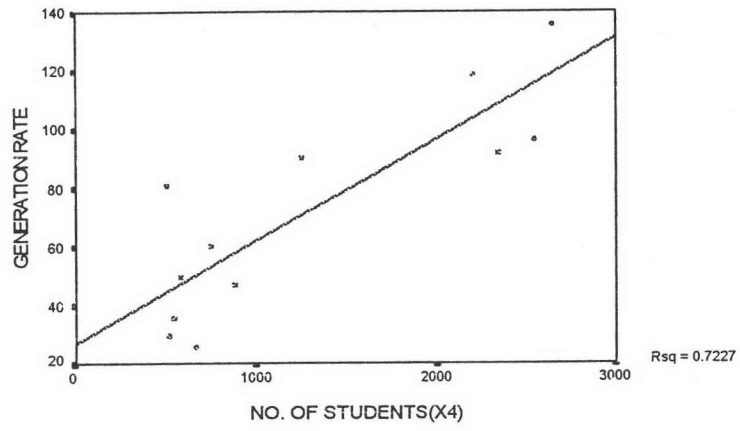
\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents	
----	-----	
YPRE	Predicted Value	
ERROR	Residual	
Y	YPRE	ERROR
96.2	115.36305	-19.16305
92.2	108.58789	-16.38789
90.4	70.75125	19.64875
60.4	53.24007	7.15993
49.6	47.54199	2.05801
47.2	57.82633	-10.62633
80.8	44.97090	35.82910
118.6	103.65419	14.94581
29.6	45.24886	-15.64886
36.0	46.04798	-10.04798
135.6	119.08070	16.51930
26.0	50.28680	-24.28680

Number of cases read: 12      Number of cases listed: 12









7. GOVERNMENT OFFICE

The obtained equation are in the following form:

$$Y_g = 2.608E-3(X_{g1}) + 1.262 \quad \dots (1)$$

$$Y_g = 0.050(X_{g2}) + 0.961 \quad \dots (2)$$

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
(GOVERNMENT OFFICE)

Listwise Deletion of Missing Data

Equation Number 1    Dependent Variable..    Yg    GENERATION RATE (KG./DAY)

Block Number 1.    Method: Forward    Criterion    PIN    .1000

Xg1            Xg3            Xg4

Variable(s) Entered on Step Number

1..    Xg1            AREA (SQ.M)

Multiple R                    .67426

R Square                     .45462

Adjusted R Square          .43091

Standard Error              2.18926

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	91.89104	91.89104
Residual	23	110.23536	4.79284

F =            19.17256            Signif F =    .0002

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xg1	.002608	5.9553E-04	.674256	4.379	.0002
(Constant)	1.261911	.620653		2.033	.0537

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xg3	-3.309E-04	-.000404	.811210	-.002	.9985
Xg4	-.030113	-.040456	.984347	-.190	.8511

End Block Number 1    PIN =    .100 Limits reached.

\* \* \* \* MULTIPLE REGRESSION \* \* \* \*  
(GOVERNMENT OFFICE)

Equation Number 1    Dependent Variable..    Y    GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	1.3245	8.2086	3.1880	1.9567	25
*RESID	-3.5341	7.3444	.0000	2.1432	25
*ZPRED	-.9524	2.5658	.0000	1.0000	25
*ZRESID	-1.6143	3.3547	.0000	.9789	25

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents
----	-----
YPRE	Predicted Value
ERROR	Residual

Yg	YPRE	ERROR
3.5	3.26717	.23283
13.3	5.95562	7.34438
4.7	6.14337	-1.44337
8.9	7.20727	1.69273
3.8	3.53054	.26946
1.1	2.04420	-.94420
1.6	2.01290	-.41290
.3	1.78343	-1.48343
3.3	2.76390	.53610
5.0	8.20860	-3.20860
4.5	4.92300	-.42300
.7	1.91381	-1.21381
1.7	2.26324	-.56324
3.0	1.73128	1.26872
4.7	1.95032	2.74968
2.8	2.32582	.47418
2.2	1.67131	.52869
.6	1.38708	-.78708
4.4	3.45231	.94769
1.0	1.32449	-.32449
4.2	1.78343	2.41657
.6	1.76257	-1.16257
1.9	5.43410	-3.53410
.8	2.43012	-1.63012
1.1	2.43012	-1.33012

Number of cases read: 25      Number of cases listed: 25

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(GOVERNMENT OFFICE)

Listwise Deletion of Missing Data

Equation Number 1      Dependent Variable..      Yg      GENERATION RATE (KG./DAY)

Block Number 1.      Method: Forward      Criterion      PIN      .1000  
Xg2      Xg3      Xg4

Variable(s) Entered on Step Number  
1..      Xg2      NO. OFFICIALS

Multiple R      .75347  
R Square      .56772  
Adjusted R Square      .54893  
Standard Error      1.94908

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	114.75184	114.75184

Residual 23 87.37456 3.79889

F = 30.20665 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xg2	.049671	.009038	.753474	5.496	.0000
(Constant)	.960766	.562296		1.709	.1010

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Xg3	.178534	.268160	.975231	1.306	.2052
Xg4	-.032942	-.049811	.988317	-.234	.8172

End Block Number 1 PIN = .100 Limits reached.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(GOVERNMENT OFFICE)

Equation Number 1 Dependent Variable.. Yg GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	1.1098	8.4114	3.1880	2.1866	25
*RESID	-5.9153	4.8886	.0000	1.9080	25
*ZPRED	-.9504	2.3888	.0000	1.0000	25
*ZRESID	-3.0349	2.5082	.0000	.9789	25

Total Cases = 25

\*\*\*\*\*

From Equation 1: 2 new variables have been created.

Name	Contents
YPRE	Predicted Value
ERROR	Residual

Yg	YPRE	ERROR
3.5	4.04035	-.54035
13.3	8.41137	4.88863
4.7	5.92784	-1.22784
8.9	7.56697	1.33303
3.8	2.45089	1.34911
1.1	2.45089	-1.35089
1.6	2.05352	-.45352
.3	1.10978	-.80978
3.3	3.64298	-.34298
5.0	4.18936	.81064
4.5	5.48080	-.98080
.7	1.55681	-.85681
1.7	2.20253	-.50253
3.0	1.65616	1.34384

4.7	3.04694	1.65306
2.8	1.75550	1.04450
2.2	2.50056	-.30056
.6	1.85484	-1.25484
4.4	2.59990	1.80010
1.0	1.15945	-.15945
4.2	1.80517	2.39483
.6	1.50714	-.90714
1.9	7.81532	-5.91532
.8	1.45747	-.65747
1.1	1.45747	-.35747

Number of cases read: 25      Number of cases listed: 25

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*  
(GOVERNMENT OFFICE)

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. Yg GENERATION RATE (KG./DAY)

Block Number 1. Method: Enter Xg1

Variable(s) Entered on Step Number  
1.. Xg1 AREA (SQ.M)

Multiple R .67426  
R Square .45462  
Adjusted R Square .43091  
Standard Error 2.18926

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	91.89104	91.89104
Residual	23	110.23536	4.79284

F = 19.17256 Signif F = .0002

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
Xg1	.002608	5.9553E-04	.674256	4.379	.0002
(Constant)	1.261911	.620653		2.033	.0537

End Block Number 1 All requested variables entered.

\*\*\*\*\* MULTIPLE REGRESSION \*\*\*\*\*

Equation Number 1 Dependent Variable.. Y GENERATION RATE (KG./DAY)

Residuals Statistics:

	Min	Max	Mean	Std Dev	N
*PRED	1.3245	8.2086	3.1880	1.9567	25
*RESID	-3.5341	7.3444	.0000	2.1432	25
*ZPRED	-.9524	2.5658	.0000	1.0000	25
*ZRESID	-1.6143	3.3547	.0000	.9789	25

Total Cases = 25

\*\*\*\*\*

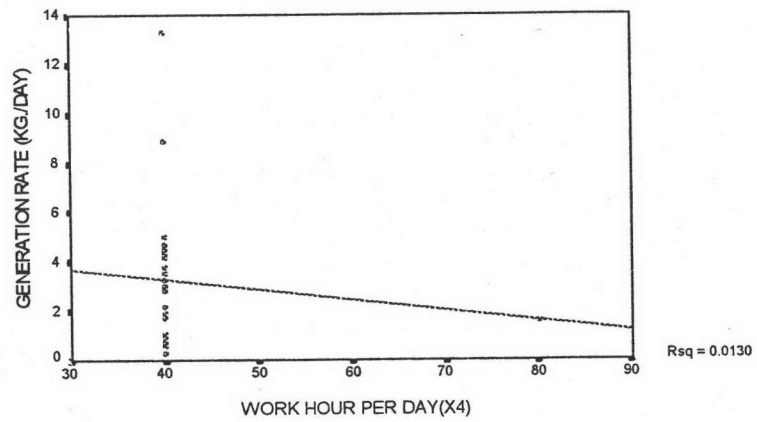
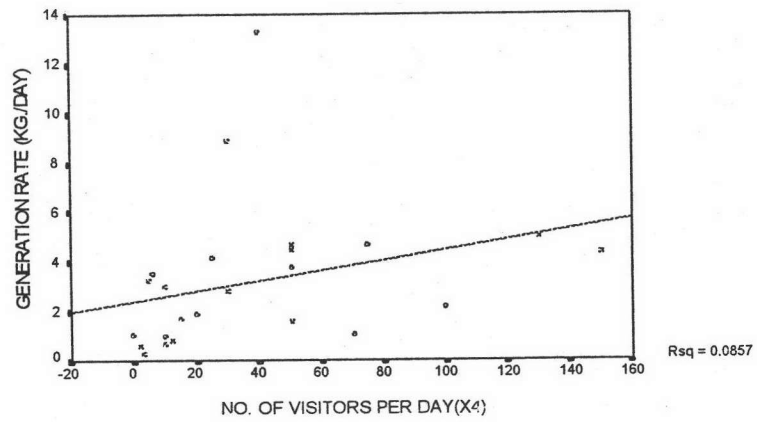
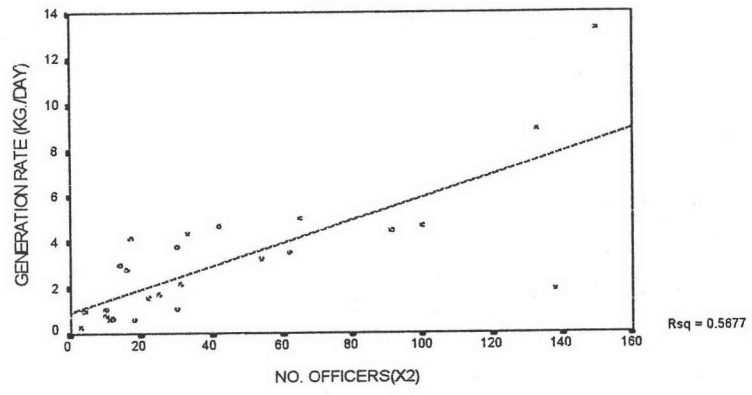
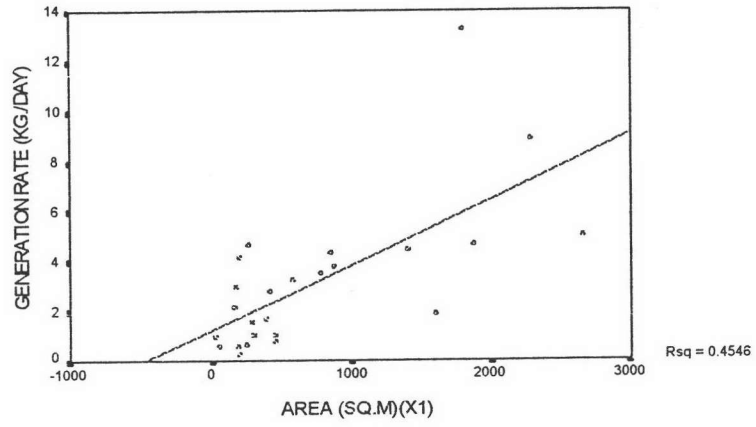
From Equation 1: 2 new variables have been created.

Name Contents  
-----

YPRE Predicted Value  
ERROR Residual

Yg	YPRE	ERROR
3.5	3.26717	.23283
13.3	5.95562	7.34438
4.7	6.14337	-1.44337
8.9	7.20727	1.69273
3.8	3.53054	.26946
1.1	2.04420	-.94420
1.6	2.01290	-.41290
.3	1.78343	-1.48343
3.3	2.76390	.53610
5.0	8.20860	-3.20860
4.5	4.92300	-.42300
.7	1.91381	-1.21381
1.7	2.26324	-.56324
3.0	1.73128	1.26872
4.7	1.95032	2.74968
2.8	2.32582	.47418
2.2	1.67131	.52869
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4.4	3.45231	.94769
1.0	1.32449	-.32449
4.2	1.78343	2.41657
.6	1.76257	-1.16257
1.9	5.43410	-3.53410
.8	2.43012	-1.63012
1.1	2.43012	-1.33012

Number of cases read: 25      Number of cases listed: 25





## VITA

The author, Chatchaval Piyaprasit received a Bachelor's Degree of Engineering in Mechanical Engineering from Khon Kaen University in 1990.