Table 1
Growth of the Indonesian manufacturing sector 1990-95 (%).

		Real Gross Output			Employment		
Sector	ISIC	Total	Domestic	Foreign	Total	Domestic	Foreign
Total		107.9	86.9	211.9	60.8	55.8	169.0
Food products	311	67.3	59.3	147.1	33.8	29.1	124.2
Other food	312	91.0	76.2	142.0	29.3	24.9	88.3
Beverages	313	50.7	64.2	34.7	96.1	105.2	58.1
Tobacco	314	63.5	60.1	185.9	67.8	68.7	-8.7
Textile	321	148.4	149.4	143.0	50.3	46.7	80.8
Clothes	322	114.2	60.4	752.7	53.5	28.3	399.9
Leather	323	101.0	70.8	3343.7	70.8	57.0	499.8
Footwear	324	474.3	344.6	740.0	389.8	281.0	618.3
Wood	331	9.7	8.8	16.5	20.7	19.9	31.1
Furniture	332	145.4	141.6	176.2	81.5	83.5	52.5
Paper	341	111.7	88.9	171.7	105.3	89.5	181.7
Printing	342	71.9	53.4	2128.4	38.0	32.2	1072.3
Industrial chemic.	351	36.5	31.9	43.8	40.1	34.9	67.0
Other chemicals	352	53.0	38.9	72.4	34.7	34.3	36.6
Petroleum ref.	354	13.9	-4.6	45.9	120.1	9.5	1861.4
Rubber	355	25.7	29.1	16.2	-23.1	-19.3	-39.8
Plastic	356	173.4	118.6	705.0	92.4	73.3	662.5
Pottery	361	102.1	137.1	30.2	93.1	93.5	91.1
Glass	362	97.5	63.4	--	50.7	34.2	--
Cement	363	61.5	43.0	130.9	39.5	34.5	84.8
Clay products	364	125.0	125.8	118.3	78.5	75.9	561.8
Non-metals	369	175.5	194.0	41.8	25.5	22.7	217.5
Iron and steel	371	59.2	55.1	71.7	27.8	37.7	-10.3
Non-ferrous metal	372	78.8	114.0	53.9	107.7	134.8	62.4
Metal products	381	106.9	79.4	162.3	83.1	65.6	179.6
Machinery	382	144.8	107.8	207.5	43.7	30.4	135.8
Electrical goods	383	324.9	175.2	571.3	174.9	80.9	471.2
Transport	384	154.3	207.2	100.9	48.7	37.0	106.9
Profession. Goods	385	699.5	600.0	832.9	338.5	154.1	1878.3
Other manufact.	390	216.1	82.2	744.4	155.6	82.6	534.7

Source: Own calculations.

Table 2
Descriptive statistics of the Indonesian manufacturing sector (%).

Sector	ISIC	Sector's share of tot. manufacturing				Foreign share of sector			
		Gross output		Employment		Gross output		Employment	
		1990	1995	1990	1995	1990	1995	1990	1995
Total		100	100	100	100	22.2	28.6	10.1	17.2
Food products	311	11.7	10.5	10.3	8.8	9.0	13.3	5.0	8.3
Other food	312	3.0	2.9	4.6	3.8	22.5	28.4	6.9	10.1
Beverages	313	0.6	0.8	0.5	0.6	45.9	41.0	19.4	15.7
Tobacco	314	8.3	6.4	7.7	8.3	2.6	4.6	1.2	0.7
Textile	321	11.2	12.1	15.6	15.0	16.8	16.5	10.5	12.7
Clothes	322	3.4	3.3	9.1	8.9	7.8	31.0	6.8	22.1
Leather	323	0.3	0.3	0.5	0.5	0.9	15.8	3.1	10.9
Footwear	324	1.0	2.8	2.2	7.0	32.8	48.0	32.3	47.3
Wood	331	10.4	7.5	12.3	9.4	10.8	11.5	7.3	7.9
Furniture	332	0.8	1.1	3.0	3.5	11.0	12.4	6.4	5.4
Paper	341	3.5	3.7	1.6	2.1	27.6	35.4	17.1	23.5
Printing	342	1.3	1.3	1.6	1.4	0.9	11.6	0.6	4.7
Industrial chemic.	351	6.0	4.4	1.9	1.7	38.4	40.5	16.1	19.2
Other chemicals	352	4.4	4.2	3.2	2.7	42.2	47.5	20.4	20.7
Coal products	354	0.1	0.0	0.0	0.0	36.6	46.9	6.0	53.2
Rubber	355	4.5	3.4	6.2	3.1	25.9	24.0	18.6	14.6
Plastic	356	2.0	2.8	3.1	3.8	9.3	27.5	3.2	12.8
Pottery	361	0.5	0.6	0.9	1.1	32.7	21.1	17.0	16.9
Glass	362	0.6	0.6	0.5	0.5	0.0	17.3	0.0	11.0
Cement	363	2.2	1.8	1.3	1.2	21.0	30.1	10.0	13.2
Clay products	364	0.1	0.1	0.8	1.0	10.1	9.8	0.5	2.0
Non-metals	369	0.3	0.4	0.7	0.5	12.2	6.3	1.4	3.6
Iron and steel	371	6.3	5.2	1.0	0.8	24.7	26.7	20.6	14.5
Non-ferrous metal	372	1.7	1.3	0.3	0.4	58.6	50.4	37.5	29.3
Metal products	381	3.6	3.6	3.0	3.5	33.2	42.1	15.4	23.5
Machinery	382	1.3	1.6	1.1	1.1	37.1	46.6	12.6	20.6
Electrical goods	383	3.7	6.9	2.2	3.9	37.8	59.7	24.1	50.0
Transport	384	6.8	9.3	3.3	3.1	49.8	39.3	16.8	23.3
Profession. Goods	385	0.1	0.3	0.1	0.4	42.7	49.9	10.7	48.3
Other manufacture	390	0.5	0.7	1.1	1.9	20.2	54.0	16.2	40.1

Source: Own calculations.

Table 3

TFP growth rates in the Indonesian manufacturing sector 1990-95 (%).

Sector	ISIC	Fixed	Share	Covariance		Entry	Exit		Total
		1	2	3	1+2+3	4	5	4-5	
Total		-1.2	-3.3	10.4	5.8	3.1	-0.9	4.0	9.8
Food	31	9.0	0.0	10.4	19.4	9.9	-1.3	11.1	30.5
Textiles	32	-2.1	-3.1	13.8	8.6	6.6	1.5	5.1	13.7
Wood	33	-9.3	-5.4	8.9	-5.9	-3.2	-0.9	-2.2	-8.2
Paper	34	-3.7	-4.2	9.6	1.8	1.5	0.8	0.7	2.5
Chemicals	35	-3.4	-2.3	10.2	4.5	0.1	-1.1	1.2	5.7
Non-metal	36	-0.2	-5.1	8.8	3.6	-1.2	0.0	-1.2	2.4
Basic metal	37	1.6	-1.1	2.9	3.3	3.6	-6.0	9.6	12.9
Fabricated metal	38	-4.4	-7.2	12.5	1.0	0.0	-1.4	1.3	2.3
Other manufactures	39	7.8	-0.4	-0.7	6.8	24.6	3.9	20.7	27.5

Source: Own calculations.

Table 4
Labour productivity growth in the Indonesian manufacturing sector (%).

Sector	ISIC	Fixed	Share		Covariance	Entry	Exit		Total
		1	2	3	1+2+3	4	5	4-5	
Total		-1.3	-6.3	31.1	23.5	9.4	1.4	8.0	31.5
Food	31	-5.4	5.0	37.1	36.8	17.9	2.6	15.3	52.0
Textiles	32	-4.5	-6.1	37.9	27.3	26.0	0.2	25.8	53.1
Wood	33	-16.8	-6.9	16.4	-7.4	-2.0	-1.6	-0.4	-7.8
Paper	34	-6.1	-13.4	31.7	12.2	1.3	-3.3	4.6	16.9
Chemicals	35	-0.1	-5.1	31.0	25.9	7.5	-4.8	12.3	38.2
Non-metal	36	7.7	-14.7	19.8	12.9	5.7	-4.6	10.3	23.2
Basic metal	37	16.3	-8.0	27.5	35.8	0.6	1.7	-1.2	34.6
Fabricated metal	38	6.1	-14.8	33.0	24.3	-1.5	12.0	-13.5	10.7
Other manufactures	39	22.3	1.4	-3.9	19.9	63.0	12.6	50.4	70.3

Source: Own calculations.

Table 5
Domestic and foreign TFP growth in the Indonesian manufacturing sector 1990-95 (%).

	ISIC		Fixed	Share		Covariance	Entry	Exit		Total
			1	2	3	1+2+3	4	5	4-5	
Total		domestic	-1.4	-2.2	7.3	3.7	2.1	-0.5	2.6	6.3
		foreign	0.4	-0.8	1.6	1.2	1.0	-0.5	1.4	2.6
Food	31	domestic	8.8	0.8	9.2	18.8	9.9	-1.3	11.2	30.0
		foreign	0.8	-0.2	-0.2	0.5	0.4	0.0	0.4	0.8
Textiles	32	domestic	-0.1	-2.5	10.1	7.4	4.8	2.1	2.8	10.2
		foreign	-2.4	-0.5	3.3	0.4	1.7	-0.6	2.2	2.7
Wood	33	domestic	-10.2	-5.3	7.5	-8.1	-3.0	-1.1	-1.8	-9.9
		foreign	1.0	-0.2	1.2	2.0	-0.2	0.2	-0.4	1.6
Paper	34	domestic	-2.5	0.0	4.4	1.9	0.0	-0.3	0.4	2.3
		foreign	-1.2	-4.2	5.0	-0.4	1.5	1.1	0.4	0.0
Chemicals	35	domestic	-3.2	-1.0	5.3	1.1	-1.1	-1.3	0.2	1.4
		foreign	1.1	-1.1	2.1	2.1	1.3	0.2	1.2	3.2
Non-metal	36	domestic	-2.3	-3.4	6.2	0.5	-1.7	-0.3	-1.4	-0.9
		foreign	2.8	-1.2	1.8	3.4	0.6	0.3	0.2	3.7
Basic metal	37	domestic	-7.4	-0.9	3.4	-4.9	3.8	-0.2	4.0	-0.9
		foreign	8.9	-0.3	-0.6	8.1	-0.1	-5.7	5.6	13.8
Fabricated metal	38	domestic	-2.3	-5.0	7.6	0.2	-1.8	-1.6	-0.2	0.0
		foreign	-2.7	-0.9	1.2	-2.4	1.5	0.1	1.5	-0.9
Other manufactures	39	domestic	5.4	1.2	-2.7	3.8	11.4	3.8	7.6	11.5
		foreign	3.0	-1.7	1.6	3.0	13.2	0.1	13.1	16.0

Source: Own calculations.
Note: The sum of domestic and foreign contributions to TFP growth is not necessarily equal to total TFP growth rates (Table 3) since establishments which changed ownership during the above period have been excluded.

Table 6
Domestic and foreign labor productivity growth in the Indonesian manufacturing sector 1990-95 (%).

	ISIC		Fixed	Share	Covariance		Entry	Exit		Total
			1	2	3	1+2+3	4	5	4-5	
Total		domestic	-1.8	-2.6	21.1	16.7	5.5	-0.8	6.4	23.0
		foreign	-0.4	-2.3	5.5	2.9	4.0	2.2	1.7	4.6
Food	31	domestic	-8.6	8.7	33.3	33.4	17.8	2.7	15.1	48.5
		foreign	2.2	-1.6	0.0	0.6	0.6	0.3	0.3	0.9
Textiles	32	domestic	6.3	-5.2	22.1	23.2	17.9	0.6	17.3	40.4
		foreign	-11.8	-0.8	14.9	2.3	8.0	-0.4	8.5	10.8
Wood	33	domestic	-16.2	-6.7	14.9	-8.0	-3.0	-1.7	-1.3	-9.3
		foreign	-0.5	-0.1	1.3	0.8	1.1	0.2	0.9	1.7
Paper	34	domestic	-2.7	-6.9	17.6	7.9	-2.0	-3.6	1.6	9.5
		foreign	-2.3	-6.9	13.7	4.5	3.6	0.3	3.3	7.8
Chemicals	35	domestic	-1.1	-2.8	17.6	13.7	-0.5	-5.2	4.8	18.5
		foreign	1.3	0.0	2.9	4.1	8.1	0.1	8.0	12.1
Non-metal	36	domestic	4.0	-8.9	11.0	6.2	-2.1	-5.2	3.0	9.2
		foreign	3.7	-2.5	5.0	6.1	7.6	0.5	7.0	13.1
Basic metal	37	domestic	9.1	-4.3	26.9	31.7	2.1	-1.2	3.2	34.9
		foreign	7.1	-3.5	0.5	4.1	-1.4	2.9	-4.3	-0.3
Fabricated metal	38	domestic	-1.1	-5.3	16.5	10.2	-4.2	0.3	-4.5	5.7
		foreign	3.4	-6.2	6.9	4.1	2.4	11.7	-9.3	-5.2
Other manufactures	39	domestic	16.9	6.0	-9.5	13.4	38.8	11.7	27.1	40.5
		foreign	6.7	-5.4	4.7	6.0	24.2	0.9	23.3	29.2

Source: Own calculations.
Note: See Table 5.

Table A1
The number of entries, exits and stayers in the Indonesian manufacturing industry 1990-95.

		Total			Domestic			Foreign		
	ISIC	Stayers	Entry	Exit	Stayers	Entry	Exit	Stayers	Entry	Exit
Food products	311	761	991	524	737	962	522	10	29	2
Other food	312	719	647	464	701	632	462	10	15	2
Beverages	313	78	128	41	66	122	41	3	6	0
Tobacco	314	393	244	391	391	239	390	1	5	1
Textile	321	766	895	540	734	848	534	22	47	6
Clothes	322	521	881	676	507	825	667	11	56	9
Leather	323	56	108	34	56	106	33	0	2	1
Footwear	324	67	220	74	62	186	71	4	34	3
Wood	331	506	968	596	480	947	585	16	21	11
Furniture	332	220	723	252	214	706	248	6	17	4
Paper	341	79	141	43	73	130	40	2	11	3
Printing	342	225	196	125	222	190	125	1	6	0
Industrial chemicals	351	136	148	76	112	124	69	15	24	7
Other chemicals	352	282	161	130	239	150	117	35	11	13
Rubber	355	210	122	168	189	114	150	19	8	18
Plastic	356	261	422	191	256	384	185	2	38	6
Pottery	361	107	175	74	101	171	73	3	4	1
Glass	362	23	24	8	22	21	8	0	3	0
Cement	363	287	415	209	201	283	156	4	9	1
Clay products	364	315	438	109	315	437	108	0	1	1
Iron and Steel	371	37	36	9	28	30	8	7	6	1
Non-ferrous metals	372	17	39	10	14	33	8	3	6	2
Metal products	381	264	427	174	243	388	168	14	39	6
Machinery	382	81	165	66	68	145	59	10	20	7
Electrical goods	383	117	227	83	92	147	74	17	80	9
Transport	384	181	223	95	166	199	91	13	24	4
Professional goods	385	26	26	8	24	19	7	2	7	1
Other manufactures	390	87	238	79	79	204	77	5	34	2

Note: The sum of domestic and foreign establishments is not necessarily equal to the total number of establishments since establishments which changed ownership during the above period have been excluded.

Table A2
TFP growth in the Indonesian manufacturing sector 1990-95 (%).

	ISIC	Fixed	Share Covariance			Entry	Exit		Total
		1	2	3	1+2+3	4	5	4-5	
Food products	311	10.2	-2.7	10.7	18.1	15.0	-0.6	15.6	33.7
Other food	312	-4.4	-2.7	10.8	3.6	-1.2	-1.2	0.1	3.7
Beverages	313	-27.5	0.0	13.1	-14.4	-9.1	-0.5	-8.6	-23.0
Tobacco	314	25.4	8.8	8.8	43.1	10.6	-3.1	13.7	56.8
Textile	321	-0.5	-3.4	14.5	10.6	7.9	1.4	6.5	17.1
Clothes	322	-3.3	-4.3	12.9	5.3	14.1	-0.8	14.8	20.1
Leather	323	1.5	-2.4	6.3	5.3	-3.0	3.5	-6.4	-1.1
Footwear	324	-11.3	0.6	12.2	1.6	-13.7	5.7	-19.4	-17.8
Wood	331	-10.8	-5.9	9.0	-7.8	-4.7	-0.9	-3.9	-11.6
Furniture	332	4.4	-1.3	7.9	11.0	10.5	-1.8	12.3	23.3
Paper	341	-3.5	-4.0	11.1	3.6	1.0	1.5	-0.4	3.2
Printing	342	-4.1	-4.7	4.9	-4.0	2.9	-1.4	4.3	0.3
Industrial chemicals	351	-0.9	-4.1	10.2	5.2	0.3	-0.2	0.5	5.7
Other chemicals	352	-16.7	-3.6	17.6	-2.7	-3.6	2.4	-6.0	-8.7
Rubber	355	2.9	2.1	5.1	10.1	0.0	-5.8	5.8	15.9
Plastic	356	4.3	-3.9	5.6	6.0	7.0	-0.8	7.8	13.9
Pottery	361	-1.2	-5.0	10.1	3.9	-6.2	-1.1	-5.1	-1.2
Glass	362	9.0	-2.6	-1.2	5.2	5.9	-0.3	6.2	11.4
Cement	363	-3.0	-5.4	11.2	2.8	-0.6	0.2	-0.8	2.0
Clay products	364	18.2	-8.4	-1.7	8.1	-1.9	6.1	-7.9	0.2
Iron and steel	371	-8.3	-1.0	4.5	-4.8	-0.9	-7.7	6.8	2.0
Non-ferrous metals	372	42.4	-1.4	-3.9	37.1	22.2	1.2	21.0	58.1
Metal products	381	-14.9	-5.5	18.6	-1.7	-2.3	6.5	-8.8	-10.6
Machinery	382	-3.4	-16.7	15.0	-5.1	-9.7	-4.6	-5.0	-10.1
Electrical goods	383	3.9	-1.4	9.8	12.3	9.3	1.8	7.5	19.9
Transport	384	-7.6	-11.8	11.7	-7.7	-5.1	-8.5	3.4	-4.2
Professional goods	385	20.0	-2.7	-14.6	2.7	-20.3	-2.2	-18.1	-15.4
Other manufactures	390	7.8	-0.4	-0.7	6.8	24.6	3.9	20.7	27.5

Source: Own calculations.

Table A3
Domestic and foreign TFP growth in the Indonesian manufacturing sector 1990-95 (%).

		Ownership	Fixed	Share	Covariance		Entry	Exit		Total
Sector	ISIC3		1	2	3	1+2+3	4	5	4-5	
Food products	311	Domestic	7.9	-1.5	8.9	15.3	14.5	-0.6	15.1	30.4
		Foreign	1.4	-0.4	-0.6	0.5	0.5	0.1	0.5	1.0
Other food	312	Domestic	-5.6	-3.0	11.0	2.4	-1.4	-1.1	-0.3	2.1
		Foreign	0.5	0.1	-0.2	0.5	0.3	-0.1	0.4	0.9
Beverages	313	Domestic	-13.8	1.0	8.0	-4.7	-10.6	-0.5	-10.1	-14.9
		Foreign	-5.2	0.0	3.6	-1.5	1.5	0.0	1.5	0.0
Textile	321	Domestic	3.1	-2.0	8.9	10.0	7.0	1.4	5.6	15.6
		Foreign	-4.0	-1.2	5.0	-0.3	0.9	0.0	0.9	0.7
Clothes	322	Domestic	-3.1	-3.9	12.3	5.3	2.5	-0.6	3.1	8.4
		Foreign	-0.3	-0.4	0.4	-0.3	11.5	-0.1	11.7	11.4
Leather	324	Domestic	-14.9	-3.7	13.9	-4.7	-3.0	10.6	-13.6	-18.3
		Foreign	3.6	4.3	-1.7	6.2	-10.7	-4.9	-5.8	0.4
Wood	331	Domestic	-11.6	-5.5	7.6	-9.5	-4.2	-1.0	-3.2	-12.7
		Foreign	0.9	-0.5	1.1	1.5	-0.5	0.2	-0.7	0.8
Furniture	332	Domestic	2.0	-3.7	6.2	4.4	8.2	-2.1	10.3	14.8
		Foreign	2.4	2.4	1.8	6.5	2.3	0.3	2.0	8.5
Paper	341	Domestic	-1.7	1.6	4.2	4.1	0.6	0.0	0.5	4.6
		Foreign	-1.8	-5.6	6.8	-0.6	0.5	1.4	-1.0	-1.5
Industrial chemicals	351	Domestic	-5.0	-2.0	6.6	-0.4	-1.3	0.4	-1.7	-2.1
		Foreign	5.1	-1.3	2.5	6.3	1.6	-0.6	2.2	8.5
Other chemicals	352	Domestic	-9.2	-1.2	5.1	-5.4	-4.2	0.2	-4.4	-9.8
		Foreign	-4.1	-3.0	3.5	-3.5	0.6	2.2	-1.6	-5.1
Rubber	355	Domestic	1.6	1.8	3.6	7.0	-0.3	-3.8	3.6	10.5
		Foreign	1.5	0.4	1.4	3.3	0.2	-1.9	2.2	5.5
Plastic	356	Domestic	2.4	-3.5	6.0	4.9	3.1	-3.3	6.4	11.3
		Foreign	0.3	-0.5	-0.1	-0.3	3.9	2.4	1.4	1.1

Table A3
Continued.

Glass	362	Domestic	9.0	-1.8	-1.2	6.1	1.8	-0.3	2.1	8.2
		Foreign	0.0	0.0	0.0	0.0	4.1	0.0	4.1	4.1
Non-ferrous metals	372	Domestic	-2.5	-2.2	2.0	-2.6	22.1	1.0	21.0	18.4
		Foreign	44.9	0.9	-6.0	39.8	0.1	0.2	-0.1	39.7
Metal products	381	Domestic	-12.6	-4.5	15.8	-1.3	0.1	-3.0	3.1	1.9
		Foreign	-0.4	-1.0	2.1	0.7	-2.4	9.6	-12.0	-11.3
Machinery	382	Domestic	-4.2	-9.4	6.3	-7.3	-5.0	-5.8	0.8	-6.5
		Foreign	0.5	0.1	3.5	4.1	-4.7	1.2	-5.8	-1.7
Electrical goods	383	Domestic	1.8	-1.6	2.0	2.2	-0.2	1.1	-1.3	0.9
		Foreign	-0.5	2.7	-1.4	0.8	9.6	0.8	8.8	9.6
Transport	384	Domestic	0.0	-7.6	8.7	1.1	-3.4	-2.2	-1.2	-0.2
		Foreign	-7.6	-4.2	3.0	-8.8	-1.7	-6.4	4.6	-4.2
Other manufactures	390	Domestic	5.4	1.2	-2.7	3.8	11.4	3.8	7.6	11.5
		Foreign	3.0	-1.7	1.6	3.0	13.2	0.1	13.1	16.0

Source: Own calculations.
Note: The sum of domestic and foreign contributions to TFP growth is not necessarily equal to total TFP growth rates (Table 3) since establishments which changed ownership during the above period have been excluded. Some sectors have been excluded when the number of observations have been to few for the calculations.