

HIID/ESEPP Project  
Planning Commission

PN ARF-924

67974

MACRO ESTIMATES OF THE MANUFACTURING  
SECTOR IN BANGLADESH BASED ON  
ECONOMIC CENSUS AND HIID/IND SURVEY

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June 1990

Report written in fulfilment of short consultancy to the HIID/ESEPP  
Project

Draft

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\*Acronym for industry survey carried out by the HIID/ESEPP project of the Planning Commission.

# **Macro Estimates of the Manufacturing Sector in Bangladesh based on Economic Census and HIS**

## *I Introduction*

The state of the official data relating to macro indicators of the manufacturing sector (value added, employment investment etc.) is quite deplorable. The Bureau of Statistics (BBS) publishes value added data for the manufacturing sector against two sub-sectors -- large scale and small scale. Data source for the large scale sub-sector is the Census of Manufacturing Industries (CMI) conducted by the BBS on an yearly basis. The CMI suffers from significant undercoverage. It includes only 'registered' establishments with 10 or more workers'. Moreover, the number of units actually covered by the CMI is far smaller than the number of units registered. The CMI data are also published with considerable time lag. The latest available CMI covers the period 1985-86. For the years for which CMI data are not available, benchmark year figures are interpolated/extrapolated with Quantum Index of Manufacturing Production to get value added for the missing years. The Index itself is based on benchmark year CMI data and current year production data collected directly by the BBS from sector corporations, National Board of Revenue and selected large private establishments. Since the weights used in constructing the Index are based on CMI, these also suffer from the deficiency of under-coverage. Moreover, the weights used are also quite dated.

The small scale sub-sector is defined to include cottage industries as well. The estimation of the value added for this sub-sector is done on very weak statistical base. The BBS carried out a sample survey of the sector in 1976. Earlier in 1969 the BBS had carried out a survey of small and household industries in the rural areas of Bangladesh. At around the same time the Central Statistical Organisation of the then Pakistan carried out surveys of small and cottage industries in some selected urban centres. The employment growth rate between 1969/70 and 1976/77 as obtained from these surveys is applied to extrapolate employment for later years. Value added is then estimated by multiplying the employment figure by the benchmark estimate of value added per worker.

Until 1983, population census carried out by the BBS on a decennial basis were the main sources of official data on manufacturing employment. The census data suffered from a number of methodological deficiencies<sup>1</sup> which caused the estimate of manufacturing employment to be biased downward. These deficiencies have been largely corrected in the annual Labour Force Survey (LFS) instituted by the BBS since 1983. However, the coverage of the LFS is also less than complete. As in the case of census, the reference period in the LFS is one week previous to the day of the survey and also the LFS excludes all those who put in less than 15 hours of work in family

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<sup>1</sup>Bakht, Z. and Hossain, M. Value Added and Employment in Services, Small-scale and Cottage industries in Bangladesh, RR No. 109, BIDS, Dec. 1989.

enterprises in the reference week.<sup>1</sup> The LFS data also does not give break-up of manufacturing employment by large and small scale industries.

The state of official data is most unsatisfactory with respect to investment. The BBS does not provide any information on investment in manufacturing industries - large or small. Based on CMI results it publishes end of year capital stock figures for the establishments covered under the census. However, because of the restricted coverage of CMI it would be difficult to get reliable estimates of investments even for the 'large' industry category on the basis of CMI data. The Planning Commission provides an estimates of investment in the manufacturing sector. However, these are mostly guesstimates based on other secondary data; bank credit is taken as the base and an assumed percentage is added to the bank credit to get totals; to this an assumed percentage is added to account for investments which are not underwritten by bank credit.

With the purpose of improving the data base on economic activities outside agriculture, the BBS carried out in 1986 a nation-wide census of non-farm economic activities. Unfortunately, the census itself did not contain any information on output, capital stock, investment or value added for the listed units. However, the listing carried out in the census has provided BBS with a

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<sup>1</sup>To the extent that seasonal and irregular activities may be undertaken at gaps of more than one week and to the extent that many of the rural housewives may be involved in various cottage type production activities putting in less than 15 hours of work per week, the LFS data on labour force is likely to be underestimate.

sample frame on the basis of which BBS will be undertaking series of detail annual economic surveys. The census and the follow-up surveys together will, hopefully, generate reliable data on pertinent macroparameters on all non-farm activities including manufacturing.

The HIID/ESEPP Project of the Planning Commission has recently carried out a sample survey of the manufacturing sector in Bangladesh. Since it is going to be a while before BBS institutes its follow up economic surveys, one of the purposes of the HIID/ESEPP survey (acronym HIS) was to generate data on value added, investment, output etc. so that one could blow up these figures using the Economic Census frame to obtain national estimates of the pertinent variables. The present exercise is an attempt towards that end. In what follows, we first present a brief description of the Economic Census and the HIS data before getting on to the task of estimation itself.

## *II Economic Census*

The census of Non-farm Economic Activities, the first ever of its kind, was conducted by the BBS in the last week of December 1980. According to the census definition, economic activities are conducted in four broad types of economic units: 1) permanent establishments, 2) temporary establishments, 3) household premise based activities and, 4) floating activities. Of the four types of units, data on floating activities has not been published by the BBS

"due to difficulties in correctly identifying and classifying these units resulting in very low coverage rate". Data collected for each unit included description of the activity, major products sold or serviced, type of ownership, number of persons engaged by sex and type (family worker, full time/part time etc.), type of machinery used and year of establishment.

BBS published a preliminary national report based on 5% sample of census enumeration areas in December 1987. The final national report based on 100% processing of the census data was released in November 1989.

According to the final report, the census recorded 531 thousand manufacturing units of which 365 thousand (68.7%) were household premise based, 165.5 thousand (31.2%) had permanent establishment and the rest 0.5 thousand (0.1%) had temporary establishments. Total number of persons engaged in manufacturing activity was estimated to be 3.09 million.

The final report presented information on composition of employment by type and sex of worker for all the three types of units (i.e. permanent establishment temporary establishment and household based activities) disaggregated at 4 digit industry classification. The report also provided information on number of units and number of persons engaged in activities having permanent establishments by 4 digit industry classification and size of the establishment (i.e. number of workers engaged).

### *III HIS*

This nation-wide survey of industrial units was carried out under the auspices of the HIID/ESEPP project of the Planning Commission during 1989 (launched in April 1989) and covered 592 factory establishments and 1279 household based enterprises. Initially, two sets of samples were drawn in consultation with BBS. For large enterprises a random sample of 800 units was drawn from the updated CMI frame. For small and cottage industries, a list of all those enumeration areas (104 in all) in the Economic Census which had at least 10 units with fewer than 10 workers was obtained from BBS. The plan was to take a census of all the 104 enumeration areas including large enterprises. For various reasons, the project ended up with a more or less random sample survey of 51 enumeration areas. The large enterprise sample covered in the 51 enumeration areas was supplemented by a survey of more such enterprises drawn partly from the CMI sample and partly on purposive basis to ensure representation of various industry categories.

The HIS sample contained information on a wide range of variables including employment, investment, capital, costs, output.

#### *IV Comparison of Economic Census and HIS data*

In the Economic Census, 68.7% of the units had permanent establishments and 31.2% were household based. In the HIS sample, units with permanent establishments (hereafter referred as Establishment Sample) accounted for 68.2% of the cases while the household based units (hereafter referred as Cottage Sample) accounted for 31.8% of the cases.

The Establishment Sample constituted 0.4% of the establishments and 7% of the employment recorded in the Economic Census under 'permanent establishment' (mfg) category. On the other hand, the Cottage Sample accounted for 0.4% of the units and 0.4% of the employment recorded in the Economic Census under 'household based manufacturing activity' category.

In the case of units with permanent establishments, a total of 205 different 4 digit manufacturing industries were found in the Economic Census. In contrast, the HIS Establishment Sample covered only 74 4-digit industry categories. However, these 74 industries are the dominant ones in so far as they account for 87% of the establishments and 80% of the employment recorded in the Economic Census under 'permanent establishment' category.

In Table 1 we have compared average size of establishment by size group as between Economic Census and HIS sample for units with permanent establishment. As can be seen from the table that, the HIS sample covers relatively larger

size units in the 1-3 workers and 4-9 workers size classes. However, the HIS sample compares very closely with Economic Census with respect to the next three size classes, namely, 10-19 workers, 20-49 workers and 50-99 workers. In the highest size class i.e. 100<sup>+</sup> worker group, the inclusion of a number of very large cotton and jute textile enterprises has caused the average size of the HIS sample to far exceed that in the Economic Census. However, once these two industries are taken out, the average size of establishment in the HIS sample in this size group comes out to be significantly lower than that in the Economic Census.

**Table 1**  
Average Size of Establishment in Economic Census and HIS Sample

Size Group	Average size of establishment (No. of workers)	
	Economic Census	HIS Sample
1-3 workers	2.05	2.68
4-9 "	5.63	6.77
10-19 "	13.20	13.48
20-49 "	29.30	29.15
50-99 "	68.41	68.27
100 <sup>+</sup> (Excluding jute & cotton textiles)	347.54	220.67
100 <sup>+</sup> (All)	449.56	1425.89

The HIS Cottage Sample also compared favourably with the corresponding group in the Economic Census with respect to size of the unit. Thus, Economic Census recorded average size of household based unit to be 3.72 workers as against 3.94 found in the HIS sample.

#### *IV Appropriate Blow-up Factor, Parameters for Estimation and Reference Year*

Since the enumeration areas in the HIS sample were selected on the basis of concentration of small and cottage units it would be inappropriate to derive estimates of macro parameters by blowing up the sample figures in proportion to the number of enumeration areas in the Economic Census. The two other options, in this respect are, to blow up sample estimates in proportion to (i) employment and (ii) number of establishments recorded in the census. We preferred to use both these as blow up factors and the detailed methodology of estimation is described in the following section. However, we took the mean of the two estimates obtained from the alternative procedures to arrive at the final figure since, as described below, the two estimates seemed to suffer from opposite types of biases.

The critical macro parameters that need to be estimated are value added, employment and investment. However, since the census final report provides detailed information on employment, it would not be very useful to re-estimate these figures by blowing up sample estimates in proportion to the census data.

In fact, if the blowing up is done on very detailed size class basis, the estimate will become a trivial one as one would end-up with exactly the same figures as the Economic Census. Accordingly, the present exercise limits itself to the estimation of the other two parameters, namely, value added and investment.

One problem encountered in the blow-up exercise was with regard to the reference period. As mentioned earlier, the Economic Census was carried out in the last week of December 1980 while the HIS was launched in April 1989. In the case of most of the units in the HIS Establishment Sample, the reference period for the flow data (output, cost, investment etc.) was 1987-88 while in the case of Cottage Sample, the reference year for the flow data was 1988-89.

We have attempted to estimate value added and investment in the manufacturing sector of Bangladesh for the year 1987-88 on the basis of the above data. For this purpose, we have blown up value added and investment recorded in the Establishment Sample in proportion to the employment and number of establishment observed in the Economic Census. In the case of Cottage Sample the value figures were deflated by the wholesale price index of manufactured goods to express them in 1987-88 current price and were then blown-up on the basis of employment and number of establishment recorded in the Economic Census to obtain estimates for 1987-88. Two types of approximations thus crept into our estimate - one due to the use of

employment and establishment data pertaining to the year (1986-89) previous to the year of estimation (1987-88) and the other due to the use of value data pertaining to the year (1988-89) following the year of estimation. However, the extent of approximation is unlikely to be very large since the years are proximate and also because of possible cancelling out of the two errors.

## *V Estimation Procedure*

### *A. Units with Permanent Establishments*

Value added and investment data obtained for the Establishment Sample have been blown up using, alternatively, national figures from Economic Census on (i) employment and (ii) number of establishments. The estimation has been carried out for 6 (employment) size classes disaggregated at 4-digit industry level. As mentioned earlier, the Establishment Sample covered 74 4-digit industries leaving out some 131 others. Accordingly the estimation was carried out in two stages -- first for the 74 industries included in the survey and then for the 131 left out industries.

### *Industries included in the Establishment Sample*

(a) *Size class covered in the Establishment Sample:* The ratio of (i) sample employment to census employment and (ii) sample establishment number to census number of establishments were used as blow-up factors to obtain national estimates of value added and investment.

(b) *Size class not covered in the Establishment Sample:* Value added (i) per worker and (ii) per establishment in the nearest size class covered by the Establishment Sample have been multiplied by Economic Census estimate of (i) employment and (ii) establishment number respectively. If an unrepresented size class is equi-distant from two other size classes covered by the Establishment Sample, weighted average of value added per worker/establishment has been used as the relevant sample estimate, with employment/establishment number recorded in the Economic Census as the weight.

The procedure, however, was not used in the case of investment because many size classes recorded zero investments which meant that estimation based on investment in the nearest size class would have resulted in zero investments for many other size classes. Instead, investment in unrepresented size class was estimated by multiplying the weighted average investment (i) per worker and (ii) per establishment in the size classes covered in the sample, by census estimate of (i) employment and (ii) establishment number in

the unrepresented size class. If in a particular industry, all size classes covered in the sample recorded zero investments, then investments in the unrepresented size classes were estimated on the basis of investment in the corresponding size class of comparable 4-digit or higher level industries.

### *Industries not included in the Establishment Sample*

In the case of industries not included in the Establishment Sample, value added and investment were estimated by multiplying (i) value added/investment per worker and (ii) value added/investment per establishment in the respective size group of comparable 4-digit industry by the census estimate of (i) employment and (ii) establishment number for corresponding size group in the excluded industry. When information were not available for comparable 4-digit industries, value-added/investment per worker and value added/investment per establishment at the 3-digit or higher industry level covered by the Establishment Sample was used as the relevant sample estimate.

An alternative set of estimate was prepared for the industries not included in the Establishment Survey using value added per worker/per establishment recorded in the latest available CMI (after adjusting for price changes) for the respective industry categories.

### *B. Household based units*

The final report of the Economic Census did not provide information on household based industries broken down by size classes. Also, there were some problems in matching the industry classification of the cottage sample with that of the Economic Census. Hence, the blowing up exercise for the household based industries has been done only at the aggregate level. The investment data for the Cottage Sample was not available at the time of the exercise and so the estimation has been done only with respect to value added. The estimation procedure involved multiplying sample estimate of value added<sup>1</sup> (i) per worker and (ii) per establishment by the size of employment and number of establishments respectively as recorded in the Economic Census under 'household based' and 'temporary establishment' category. Temporary establishments have been included in the estimation for completing the coverage of the manufacturing sector.

### *VI National Estimates of Value Added*

Appendix Tables A1 and A2 presents national estimates of value added in manufacturing industry (with permanent establishment) based on (i) employment size and (ii) establishment number respectively, disaggregated at 4-digit industry level and 6 size classes. A summary picture of these is presented in Table 2.

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<sup>1</sup>The value added figures at current (1999-89) price were first deflated to set value added at 1987-88 prices.

Table 2

National Estimate of Value Added in Manufacturing Industries  
with Permanent Establishments (1987-88)

Size of eslb (No. of workers)	Estimate of Value Added (Million Tk)	
	Based on a number establishment	Based on size of employment
1 - 3	21752	6551
4 - 9	14813	8804
10 - 19	5414	4508
20 - 49	4811	4455
50 - 99	3738	3516
100 <sup>+</sup>	18,560	34,857
All	69,088	62,691

As can be seen from the Table, the two estimates match quite closely for 3 size classes, namely, 10-19 workers, 20-49 workers and 50-99 workers. In the case of bottom two size classes, estimates based on number of establishments far exceed that based on employment size. The reverse situation is observed in the case of top most size class.

One reason behind the divergence in the two estimates is sampling bias. As mentioned earlier, the average size of establishment in the HIS sample for 10-19, 20-49 and 50-99 size classes matched quite closely with that recorded

in the Economic Census. On the other hand, the sample establishments in the lower size classes (1-3 and 4-9 size classes) were over sized while those (excluding jute and cotton textile) in the top most size class were under-sized. As a result, value added estimated on the basis of number of establishment tended to be higher than that based on size of employment in the case of bottom size classes. The reverse situation occurred in the case of top most size class.

A second factor contributing to the divergence in the estimates is the built-in bias in the estimation procedure based on number of establishments. As mentioned earlier, value added for the unrepresented size-class has been estimated on the basis of value added per establishment in the nearest size class. This means that value added for (unrepresented) bottom size class has been estimated on the basis of value added per establishment in the higher size class while the reverse occurred in the case of top size class.

For our purpose we have taken the mean of the two estimates and the combined picture along with the estimates for household based and temporary units (mentioned here as the cottage industry) is given in Table 3. We have used 20 workers as the cut off mark for large industry keeping with the definition<sup>1</sup> of small industry used by the Bangladesh Small and Cottage Industries Corporation until recently. BBS definition of large industry is

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<sup>1</sup>Small industry was defined as an unit with upto 10 workers and using power with 10-20 workers but not using power.

somewhat different from this. As the table shows, our estimate of value added is nearly 23% higher than the official estimates for the large industry category and nearly 82% higher for the small and cottage category.

Table 3

National Estimate of Value Added in the Manufacturing Industries (1987-88)

Size of estb (No. of workers)	Estimated Value Added		Official estimate of share in GDP (%)
	Million Tk	As % of GDP	
100 <sup>+</sup>	26709	4.49	
50 - 99	3627	0.61	
20 - 49	4633	0.78	
Large	34969	5.88	4.80
10 - 19	4961	0.83	
4 - 9	11809	1.99	
1 - 3	14152	2.38	
Small <sup>a</sup>	30922	5.20	
Cottage <sup>b</sup>	9041	1.52	
Small and Cottage	39963	6.72	3.69
All Manufacturing	74932	12.61	8.49

a. Units with permanent establishment

b. Includes household based and temporary units. Value added was estimated for the cottage industry to be Tk 9298 million on the basis of number of establishment and Tk 8784 million on the basis of size of employment.

### *Industries not included in HIS: Alternative estimate from CMI*

According to the Economic Census final report, industries not included in the HIS involved some 22 thousand establishments and 359 thousand workers. Following the procedure described in Section V, value added was estimated for this set of industries to be Tk. 17,261 million on the basis of employment size.

As mentioned earlier, an alternative estimate was attempted on the basis of available CMI data. For this purpose the estimate of value added<sup>1</sup> per worker for these industries in the latest CMI (1985-86) was multiplied (after adjusting for price changes) by the Economic Census figure for employment to get an estimated value added of Tk 19,442 million. Because of the pre dominance of large enterprises in the CMI, no attempt was made to estimate value added for this set of industries on the basis of CMI estimate of value added per establishment.

### *Value Added in Handloom Industry*

Since handloom is by far the most dominant industry in the small and cottage sector in Bangladesh, we attempted to estimate value added for this industry separately and the results are shown in Table 4. The figures for

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<sup>1</sup>Value added at factor cost.

handloom units with permanent establishment have been taken from Table A1 and A2 while those for the household based units have been estimated on the basis of Cottage Sample and Economic census data following the same procedure as described earlier. The aggregate value added figure seems to be slightly on the high side compared to the figure of Tk 5459 million estimated for the industry by BIDS<sup>1</sup> for the year 1986-87.

Table 4  
Estimate of Value Added in Handloom Industry (1987-88)

Industry	Estimated Value Added (Mill. Tk)		
	based on number of estb	based on size of employment	Mean
a) Handloom units with permanent establishment	2238	1915	2077
b) Household based Handloom units	5711	5349	5530
All	7949	7264	7607

<sup>1</sup>Bakht and Hossain, op cit.

## VII Estimate of Investment

Appendix Table A3 and A4 presents estimates of investment in manufacturing industry (with permanent establishment) based on (i) employment size and (ii) establishment number respectively at 4-digit industry level broken down by 6 size classes. As in the case of value added, we have taken a mean of the two estimates and the results are shown in Table 5. Cottage industry has been left out from this estimation since investment data on cottage sample was not available at the time of estimation.

Total investment in the manufacturing sector (with permanent establishment) for 1987-88 has been estimated to be Tk 3694 million which constituted about 0.62% of the GDP. Planning Commission estimated private manufacturing investment in that year to be 0.21% of GDP.<sup>1</sup>

Table 5

Estimate of Investment in Manufacturing Industry  
(with permanent establishment) 1987-88.

Size of estb (No. of workers)	Estimated investment (million tk)
1 - 3	774
4 - 9	893
10 - 19	224
20 - 49	288
50 - 99	192
100 <sup>+</sup>	1323
A11	3694

<sup>1</sup>Estimate of total manufacturing investment as % of GDP was not readily available from other sources.

Table A1

Estimate of Value Added (1987-88) in Manufacturing Industry (with permanent establishment)  
based on Employment Size in HIS and Economic Census

(In million taka)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3112	Dairy products	43.65	89.06	16.72	26.94	7.14	111.36	297.07
3114	Processed fish and seafood	6.10	16.60	3.95	14.29	113.03	278.45	432.42
3115	hydrogenated vegetable oil	0.06	0.17	-	0.76	3.57	15.54	20.12
3116	Edible oil	44.14	101.57	42.78	22.03	6.97	4.17	221.66
3118	Grain milling (excl'd rice)	207.42	202.08	161.30	13.34	6.65	2.64	593.43
3119	Rice milling	2700.76	2553.07	211.04	218.43	27.91	19.67	5730.92
3121	Grain mill products, NEC	3.29	23.39	7.98	1.93	-	-	38.79
3122	Bakery products	23.53	150.97	264.72	97.15	54.91	91.54	694.84
3123	Chocolate sugar confectionery	3.23	8.61	6.36	4.34	6.48	0.96	30.20
3126	Edible salt refining	1.51	5.44	6.70	111.19	30.20	8.01	163.05
3141	Cigarettes and tobacco	0.18	0.60	0.75	0.83	7.93	99.45	109.74
3142	Cigars and cheroots	0.14	1.94	2.28	0.08	-	4.26	8.70
	Other 31 industries	42.05	131.86	115.11	139.21	237.21	4157.57	4923.01
31	Food, Beverages and Tobacco	3060.30	3295.58	839.69	652.74	502.00	4793.64	13,163.95
3211	Cotton spinning and weaving	7.50	36.36	44.35	63.65	328.42	3430.73	3933.23
3212	Wool spinning and weaving	3.56	10.06	10.75	20.86	17.07	24.49	87.19
3213	Jute spinning and weaving	0.65	2.29	1.28	6.94	4.63	3367.83	3383.65
3214	Silk, synthetic spinning, weaving	21.12	40.35	44.73	28.44	19.86	569.01	723.85
3215	Narrow fabric spinning and weaving	0.33	1.26	1.41	1.33	0.51	2.70	7.54
3216	Handloom spinning and weaving	51.51	355.26	445.09	606.52	258.58	197.62	1914.76
3217	Textile dyeing and finishing	15.24	46.69	32.07	43.02	19.46	85.75	242.23
3220	Knitwear	16.10	119.82	22.84	31.38	4.46	93.32	287.92
3225	Cordage, rope and twine	34.23	86.92	43.36	103.95	69.70	4557.76	4895.94
3226	Spooling, thread ball mfg	0.20	1.78	5.40	2.00	4.27	100.76	114.36
3229	Textiles NEC	0.34	0.87	0.27	0.51	-	2.49	4.46
3231	Readymade garments	2.94	28.46	24.52	24.59	347.50	4226.21	4654.22
3241	Tanning and leather finishing	12.39	35.60	1335.87	1025.63	410.83	228.93	3049.27
3243	Leather products, exc footwear	29.12	113.65	21.34	3.12	6.37	16.34	185.94
3251	Leather footwear	13.83	44.26	30.52	12.04	3.65	29.93	134.26
3263	Jute pressing and baling	0.13	0.84	0.70	2.95	15.96	73.53	94.11
	Other 32 industries	354.71	207.29	30.17	69.88	35.51	5638.69	6342.23
32	Textiles, Apparel, Leather	563.35	1134.09	2100.67	2067.01	1546.81	22646.31	30056.24

Table A1 (contd)

Ind. Code	Industry type	Size of Establishment (no. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3311	Saw and planing mills	22.94	328.63	257.63	44.40	58.71	142.35	854.66
3212	Plywood and plywood products	2.21	1.73	0.30	3.96	1.51	12.24	21.95
3321	Wooden furniture	529.38	1183.56	183.31	49.50	26.83	556.30	2528.88
	Other 33 industries	68.42	97.93	49.60	65.07	122.27	305.31	708.60
33	Wood, Wood Products, Furniture	622.95	1611.85	490.84	162.93	209.32	1016.20	4114.09
3422	Book printing and publishing	16.16	120.84	36.00	42.70	22.60	29.40	267.70
3425	Book binding and other activities	5.29	38.65	8.91	5.35	1.01	2.30	61.51
	Other 34 industries	29.08	252.07	55.51	73.90	36.00	353.60	800.42
34	Paper, Printing and Publishing	50.53	411.56	100.42	121.95	59.67	385.50	1129.63
3511	Allopathic medicine	0.39	11.04	19.41	207.49	92.97	453.19	784.49
3514	Homeopathic medicine	0.21	1.32	1.35	1.78	-	1.73	6.39
3525	Pesticides, insecticides etc	5.95	30.40	18.64	3.29	38.38	69.25	165.91
3526	Synthetic resins, plastic etc	0.53	2.06	1.27	1.67	0.96	2.66	9.15
3531	Faints, vernishes, lacquer etc	1.41	8.89	1.26	6.15	-	6.22	27.93
3533	Soap and detergent	3.66	34.06	38.12	128.68	23.16	209.13	436.65
3535	Matches	1.02	1.61	3.04	6.64	32.69	593.36	636.96
3537	Candles	0.16	1.34	0.66	-	-	-	2.16
3551	Tar, alkatra etc	1.35	8.10	1.35	7.20	-	-	18.00
3562	Rebuilding, retreading tyres	1.36	1.75	1.02	0.37	1.34	-	5.86
3565	Rubber products NEC	6.00	13.37	6.50	9.30	4.61	3.31	43.09
3579	Misc. plastic products NEC	36.65	196.36	30.14	3.91	19.52	30.42	317.04
	Other 35 industries	64.27	261.98	61.49	134.38	80.93	1094.49	1717.54
35	Chemicals, Rubber, Plastics	123.06	572.28	204.85	512.86	294.58	2465.76	4173.39
3612	China and ceramic	4.08	7.32	2.50	10.25	3.21	21.19	48.59
3622	Glass products	2.70	14.41	7.88	6.15	22.02	73.37	126.53
3631	Bricks and structural clay	22.35	120.08	93.11	264.80	21.23	329.03	852.66
	Other 36 industries	66.41	139.21	34.84	27.57	0.36	21.81	310.20
36	Non-metallic Mineral Products	115.54	281.02	140.33	306.67	46.84	445.40	1338.00
3712	Iron, steel foundry	0.15	2.38	3.10	5.31	6.74	6.90	24.61
3713	Iron and steel re-rolling	0.09	6.68	8.84	33.16	72.22	167.04	288.03
	Other 37 industries	0.04	2.72	0.47	1.45	1.06	68.00	73.69
37	Basic Metal Industries	0.28	11.78	12.35	39.92	80.02	241.94	366.33

Table A.i (contd)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100	
3811	Cutlery	0.62	3.22	3.53	1.09	3.94	10.17	22.57
3812	Hand and edge tools	102.29	53.39	0.41	2.18	1.45	-	159.72
3814	Metal furniture and fixture	7.61	88.80	17.88	30.81	81.25	18.79	245.14
3815	Structural metal products	594.81	444.93	179.36	32.42	79.72	889.68	2220.92
3817	Heating, cooking, lighting equipment	8.32	22.14	6.08	8.71	32.13	23.88	101.26
3818	Wire products	0.09	0.89	0.15	0.36	0.12	0.52	2.13
3819	Utensils of aluminium	3.58	37.05	33.19	140.57	121.37	124.60	460.40
3825	Metal trunks	4.39	11.05	2.25	0.52	-	-	18.21
3827	Plumbing equipment, sanitary wares	5.37	10.29	6.46	6.63	8.46	47.78	84.99
3829	Metal products NEC excld machinery	2.66	16.50	10.51	30.45	1.36	9.10	70.90
3832	Agricultural machinery	21.39	27.33	4.40	1.74	3.10	16.24	74.20
3834	Textile machinery	2.92	12.82	4.55	8.16	14.32	51.63	94.63
3835	Other industrial machinery	1.40	4.82	8.20	9.83	21.94	15.10	61.29
3839	Machinery NEC excld electrical	7.62	22.28	17.06	24.34	20.47	66.63	158.40
3842	Radio, TV, communication equipment	5.27	10.43	7.96	16.49	9.39	128.00	177.54
3843	Electrical appliances, housewares	0.56	1.84	1.40	2.58	0.75	14.09	21.22
3844	Insulated wires and cables	1.06	6.64	3.45	6.53	6.75	48.07	72.50
3845	Electric bulb and tubes	13.72	62.23	21.07	26.83	9.02	20.87	153.74
3846	Batteries	11.66	22.31	22.03	21.49	14.42	138.09	230.00
3849	Electrical appliances NEC	0.82	5.14	4.03	8.02	5.21	4.97	28.19
3856	Bicycles and rickshaws	19.34	26.50	10.40	10.70	-	14.14	81.08
3872	Optical goods	1.07	4.23	3.32	1.40	-	-	10.02
	Other 38 industries	100.79	272.94	190.80	166.71	258.68	1040.57	2030.49
38	Metal Products, Machinery, Equipment	917.36	1168.11	558.52	558.56	693.87	2683.12	6579.54
3937	Pens and office supplies	6.08	7.92	6.44	1.20	4.65	-	26.29
3931	Jewellery of precious metals	971.37	252.84	23.42	4.55	-	-	1252.16
3949	Mfg industries NEC	0.72	1.80	1.47	0.63	5.64	23.53	33.79
	Other 39 industries	59.22	55.33	28.62	23.29	72.88	155.77	435.11
39	Other Manufacturing Industries	1077.39	317.89	59.95	29.67	83.17	179.30	1747.37
3	Manufacturing (with permanent establishment)	6550.76	8804.16	4507.66	4454.51	3516.26	34857.17	62,690.54

Table A2

Estimate of Value Added (1987-88) in Manufacturing Industry (with permanent establishment)  
based on Number of Establishment HIS and Economic Census

(In million taka)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3112	Dairy products	238.11	204.94	15.95	22.80	3.04	7.60	492.44
3114	Processed fish and seafood	97.20	113.40	10.80	14.40	98.80	278.97	613.57
3116	Edible oil	296.93	239.33	46.08	10.37	1.44	0.29	594.44
3118	Grain milling (excl'd rice)	287.64	305.53	177.46	16.00	3.20	0.32	790.15
3119	Rice milling	5252.81	3378.68	216.80	186.19	31.92	9.12	13,077.52
3121	Grain mill products, NEC	16.72	23.94	3.80	0.38	-	-	44.84
3122	Bakery products	84.70	197.06	280.96	109.02	59.54	22.90	754.18
3125	Chocolate sugar confectionery	4.48	9.48	3.00	1.08	0.60	0.06	18.70
3128	Edible salt refining	23.76	24.48	13.68	103.06	37.38	2.67	207.03
3141	Cigarettes and tobacco	1.35	1.65	0.90	0.45	19.32	67.62	91.29
3142	Cigars and cheroots	0.85	3.32	1.66	0.08	-	0.32	6.21
	Other 31 industries	159.02	166.00	122.29	116.30	232.34	637.34	1633.29
31	Food, Beverages and Tobacco	10,463.55	4,667.81	893.38	584.13	467.58	1,227.21	18,323.66
3211	Cotton spinning and weaving	54.75	90.50	47.50	67.73	390.44	5,379.38	6,030.30
3212	Wool spinning and weaving	539.00	413.80	215.60	154.00	61.60	30.80	1416.80
3213	Jute spinning and weaving	922.54	868.28	271.34	651.21	162.80	4453.71	7329.88
3214	Silk, synthetic spinning, weaving	28.48	62.10	40.52	25.74	20.16	520.24	697.24
3215	narrow fabric spinning and weaving	13.28	20.40	9.69	4.08	0.51	0.51	48.45
3216	handloom spinning and weaving	239.55	550.77	465.71	648.05	265.07	66.46	2,237.61
3217	Textile dyeing and finishing	122.76	134.20	41.36	24.20	5.28	6.60	334.40
3223	Knitwear	40.48	124.37	23.03	32.66	1.56	5.18	227.30
3225	Cordage, rope and twine	282.18	216.81	47.52	53.46	14.85	26.73	641.52
3226	Spooling, thread ball mfg	0.80	2.68	5.17	2.86	2.40	5.76	19.67
3229	Textiles NEC	3.36	3.15	0.42	0.42	-	0.42	7.77
3231	Ready-made garments	3.93	26.85	27.00	19.98	331.58	3621.03	4,030.22
3241	Tanning and leather finishing	44.84	33.04	1365.03	799.40	420.48	702.30	3,365.66
3243	Leather products, exc footwear	191.09	283.65	24.33	1.97	32.68	16.34	532.36
3251	Leather footwear	41.23	47.18	34.23	6.06	0.87	0.87	130.44
3263	Jute pressing and baling	2.43	3.69	1.44	2.88	15.52	13.43	44.39
	Other 32 industries	2337.54	444.00	42.43	43.82	11.12	33.51	3,139.74
32	Textiles, Apparel, Leather	3,008.51	3,329.30	2,663.23	2,340.32	1,736.92	14,893.27	30,233.75

Table A2 (contd)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3311	Saw and planing mills	100.28	455.35	246.48	19.34	64.33	33.74	939.54
3312	Plywood and plywood products	55.87	16.61	1.51	7.55	1.51	4.53	87.56
3321	Wooden furniture	578.00	1471.03	217.79	41.78	26.38	18.67	2,353.85
	Other 33 industries	411.12	167.58	44.93	37.12	157.41	60.31	898.47
33	Wood, Wood Products, Furniture	1,145.27	2,110.57	510.71	105.79	269.65	137.45	4,279.44
3421	Book printing and publishing	13.72	123.24	39.44	48.06	21.32	9.84	255.62
3423	Book binding and other activities	5.45	61.71	7.61	2.39	0.22	0.22	77.50
	Other 34 industries	23.21	293.93	53.33	74.48	34.48	39.06	520.43
34	Paper, Printing and Publishing	42.38	478.90	102.60	124.63	56.00	49.06	853.57
3511	Allopathic medicine	2.70	29.70	25.92	298.08	122.62	236.36	715.58
3514	Homeopathic medicine	1.44	3.56	1.44	0.72	-	0.24	7.20
3525	Pesticides, insecticides etc	23.97	43.71	12.69	1.41	4.23	2.82	86.83
3526	Synthetic resins, plastic etc	1.70	2.55	0.85	0.51	0.17	0.17	5.95
3531	Paints, varnishes, lacquer etc	28.44	42.66	2.37	7.11	-	7.11	87.69
3533	Soap and detergent	21.56	76.44	39.69	112.81	7.78	27.23	265.51
3535	Matches	229.78	114.88	143.60	143.60	229.76	344.64	1,206.24
3537	Candies	1.30	2.34	0.52	-	-	-	4.16
3551	Tar, alketa etc	5.76	9.36	0.72	2.16	-	-	18.00
3562	Rebuilding, retreading tyres	8.16	4.08	1.02	0.37	0.37	-	14.00
3569	Rubber products NEC	33.08	26.46	5.67	8.97	1.38	0.69	76.25
3579	Misc. plastic products NEC	115.62	237.71	29.50	2.90	14.35	11.48	413.56
	Other 35 industries	466.58	468.06	110.64	191.85	55.04	96.61	1,388.82
35	Chemicals, Rubber, Plastics	940.07	1063.31	374.63	770.53	435.90	727.35	4,311.75
3612	China and ceramic	36.08	26.40	3.52	10.77	3.21	5.64	85.62
3622	Glass products	159.72	300.68	67.76	24.20	38.72	53.24	643.72
3691	Bricks and structural cla,	118.68	218.52	77.76	51.80	15.30	226.80	748.26
	Other 36 industries	791.32	453.96	40.92	15.64	0.30	11.84	1,313.98
36	Non-metallic Mineral Products	1105.20	998.96	189.96	142.41	57.53	297.52	2,791.56
3712	Iron, steel foundry	0.52	2.69	1.82	1.13	0.69	0.26	7.11
3713	Iron and steel re-rolling	2.40	53.80	42.00	66.00	69.60	55.20	294.00
	Other 37 industries	0.37	23.07	1.57	2.96	1.07	2.26	31.30
37	Basic Metal Industries	3.29	84.56	45.39	70.09	71.36	57.72	332.41

Table A.2 (contd)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3811	Cutlery	5.81	9.13	4.15	0.83	0.83	0.83	21.58
3812	Hand and edge tools	128.37	29.08	3.60	2.18	0.73	-	163.96
3814	Metal furniture and fixture	9.56	94.30	17.93	33.76	65.70	7.30	228.55
3815	Structural metal products	173.29	477.29	185.22	27.83	99.65	530.20	1,493.48
3017	Heating, cooking, lighting equipment	28.08	128.08	7.08	10.37	17.28	3.46	94.35
3818	Wire products	0.21	0.74	0.06	0.05	0.01	0.02	1.09
3819	Utensils of aluminium	23.12	74.80	31.96	116.50	132.00	52.80	431.18
3825	Metal trunks	81.12	84.24	6.76	0.52	-	-	172.64
3827	Plumbing equipment, sanitary wares	52.20	38.40	9.60	3.60	11.65	3.60	119.05
3829	Metal products NEC exclud machinery	3.86	16.24	10.82	34.96	1.12	5.73	72.73
3832	Agricultural machinery	86.32	32.76	2.96	2.20	2.82	8.46	135.52
3834	Textile machinery	15.30	23.80	4.25	11.03	8.82	6.62	69.82
3835	Other industrial machinery	5.51	7.22	7.99	8.32	16.92	5.64	51.60
3937	Machinery NEC exclud electrical	9.81	28.11	20.72	12.83	4.93	1.48	77.88
3842	Radio, TV, communication equipment	65.96	56.07	19.79	16.49	9.39	19.79	187.49
3843	Electrical appliances, housewares	3.78	4.59	1.26	0.99	0.18	0.90	11.70
3844	Insulated wires and cables	3.03	6.68	1.65	1.65	0.55	0.83	14.59
3845	Electric bulb and tubes	70.07	118.58	21.56	28.43	11.67	11.67	262.03
3846	Batteries	55.55	44.44	18.18	8.06	3.03	3.03	132.31
3849	Electrical appliances NEC	1.19	6.36	4.32	9.72	2.38	3.36	27.33
3856	Bicycles and rickshaws	114.66	67.62	9.80	4.90	-	10.32	207.30
3872	Optical goods	3.38	5.72	2.08	0.26	-	-	11.44
	Other 38 industries	270.38	416.84	192.36	121.26	182.68	434.61	1,616.15
38	Metal Products, Machinery, Equipment	1210.56	1671.29	584.10	456.83	572.34	1110.65	5,605.77
3937	Pens and office supplies	33.32	14.28	4.76	0.75	1.50	-	54.61
3931	Jewellery of precious metals	1561.90	325.61	21.60	1.98	-	-	1,911.09
3949	Mfg industries NEC	0.50	1.32	1.02	1.12	4.76	9.56	18.30
	Other 39 industries	157.25	66.85	22.69	12.10	43.95	47.80	350.64
39	Other Manufacturing Industries	1752.97	408.06	50.07	15.95	50.23	57.36	2,334.64
3	Manufacturing (with permanent establishment)	21,751.80	14,812.76	5,414.07	4,810.88	3,737.51	18,559.59	69,086.61

Table A3

**Estimate of Investment (1987-88) in Manufacturing Industry (with permanent establishment)  
based on Employment Size in HIS and Economic Census**

(In million taka)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3112	Dairy products	1.29	2.61	0.76	0.00	0.07	1.04	5.77
3114	Processed fish and seafood	0.07	0.20	0.05	0.00	0.00	5.09	5.41
3115	Hydrogenated vegetable oil	0.002	0.004	-	0.018	0.085	0.370	0.479
3116	Edible oil	1.04	2.40	1.01	0.52	0.16	0.10	5.23
3118	Grain milling (excl'd rice)	1.15	9.19	47.70	0.00	2.79	1.11	61.94
3119	Rice milling	102.57	94.06	21.10	32.27	0.37	2.00	252.37
3121	Grain mill products, NEC	0.05	0.00	0.18	0.04	-	-	0.27
3122	Bakery products	0.53	2.98	1.90	1.76	0.30	0.92	8.39
3125	Chocolate sugar confectionery	0.00	3.59	2.11	1.50	2.14	0.32	9.66
3128	Edible salt refining	0.03	0.09	0.14	1.01	0.00	0.11	1.38
3141	Cigarettes and tobacco	0.00	0.00	0.01	0.00	0.02	0.00	0.03
3142	Cigars and cheroots	0.00	0.00	0.00	0.00	-	0.12	0.12
	Other 31 industries	1.169	4.557	5.489	7.613	5.551	64.122	88.501
31	Food, Beverages and Tobacco	107.901	119.681	80.449	44.731	11.486	75.302	439.55
3211	Cotton spinning and weaving	1.27	6.48	4.61	57.10	1.27	211.98	282.71
3212	Wool spinning and weaving	0.05	0.13	0.14	0.28	0.23	0.32	1.15
3213	Jute spinning and weaving	0.03	0.09	0.05	0.27	0.18	133.29	133.91
3214	Silk, synthetic spinning, weaving	0.00	4.16	2.21	3.65	13.94	21.67	45.63
3215	Narrow fabric spinning and weaving	0.02	0.07	0.08	0.08	0.03	0.16	0.44
3216	Handloom spinning and weaving	10.75	92.56	77.63	103.37	7.15	27.03	318.49
3217	Textile dyeing and finishing	0.90	3.63	0.00	2.90	0.65	7.11	15.19
3223	Knitwear	0.34	1.42	1.65	1.11	0.12	2.56	7.20
3225	Cordage, rope and twine	0.09	0.11	0.00	0.27	0.81	21.16	22.44
3226	Spooling, thread ball mfg	0.06	0.00	0.17	0.00	1.34	10.53	12.10
3229	Textiles NEC	0.02	0.06	0.02	0.03	-	0.17	0.30
3231	Readymade garments	0.00	0.19	0.02	0.55	73.02	385.38	459.16
3241	Tanning and leather finishing	1.66	3.02	3.71	5.00	23.53	81.83	118.75
3243	Leather products, exc footwear	22.40	90.51	0.05	2.49	8.55	38.85	162.85
3251	Leather footwear	0.16	0.63	0.90	0.05	0.02	0.13	0.99
3263	Jute pressing and baling	0.14	0.84	0.33	0.00	0.00	15.27	16.56
	Other 32 industries	4.11	3.24	1.09	0.74	0.98	40.86	51.02
32	Textiles, Apparel, Leather	42.00	207.14	91.76	177.89	131.82	996.30	1,648.91

Table A3 (contd)

Ind. Code	Industry type	Size of Establishment (No. of worker)					Total	
		1-3	4-9	10-19	20-49	50-99		100+
3311	Saw and planing mills	1.47	21.60	5.13	1.09	2.09	0.93	32.31
3212	Plywood and plywood products	0.37	0.29	0.05	0.66	0.25	2.03	3.65
3321	Wooden furniture	10.90	3.35	0.40	0.43	0.08	2.20	17.36
	Other 33 industries	4.63	5.8	0.90	2.16	4.73	5.57	23.79
33	Wood, Wood Products, Furniture	17.37	31.04	6.48	4.34	7.15	10.73	77.11
3422	Book printing and publishing	0.00	0.93	1.85	10.13	8.27	2.79	23.97
3425	Book binding and other activities	0.00	10.23	0.00	1.37	0.26	0.59	12.45
	Other 34 industries	0.00	17.35	2.25	17.59	13.06	37.95	86.20
34	Paper, Printing and Publishing	0.00	28.51	4.10	29.09	21.59	41.33	124.62
3511	Allopathic medicine	0.16	4.63	0.00	0.00	4.36	138.43	147.57
3514	Homeopathic medicine	0.01	0.08	0.08	0.11	-	0.11	0.39
3525	Pesticides, insecticides etc	0.08	0.00	0.26	0.05	0.54	0.98	1.91
3526	Synthetic resins, plastic etc	0.06	0.24	0.15	0.20	0.11	0.31	1.07
3531	Paints, vernishes, lacquer etc	0.02	0.14	0.02	0.12	-	0.12	0.42
3533	Soap and detergent	0.12	1.09	0.00	0.00	0.17	1.51	2.89
3535	Matches	0.02	0.03	0.08	0.14	0.78	0.00	1.05
3537	Candles	0.02	0.12	0.00	-	-	-	0.14
3551	Tar, alkatra etc	0.02	0.00	0.01	0.02	-	-	0.05
3562	Rebuilding, retreading tyres	0.03	0.04	0.00	0.00	0.13	-	0.20
3569	Rubber products NEC	0.34	0.76	0.62	0.27	0.26	0.19	2.44
3579	Misc. plastic products NEC	0.07	0.09	0.39	0.27	0.08	0.10	1.00
	Other 35 industries	2.81	1.14	0.95	1.54	1.53	31.43	39.40
35	Chemicals, Rubber, Plastics	3.76	8.36	2.56	2.72	7.95	173.18	198.53
3612	China and ceramic	0.30	0.53	0.18	0.34	0.01	0.92	2.28
3622	Glass products	0.29	1.49	0.81	0.64	2.28	7.58	13.09
3691	Bricks and structural clay	0.16	0.87	0.69	0.74	0.00	20.56	23.02
	Other 36 industries	5.69	8.87	1.57	0.26	0.00	1.95	18.34
36	Non-metallic Mineral Products	6.43	11.76	3.25	1.98	2.29	31.01	56.72
3712	Iron, steel foundry	0.00	0.00	0.18	0.79	1.20	0.32	2.49
3713	Iron and steel re-rolling	0.00	0.13	0.32	3.15	0.00	4.94	8.54
	Other 37 industries	0.00	0.04	0.02	0.15	0.02	2.08	2.31
37	Basic Metal Industries	0.00	0.17	0.52	4.09	1.22	7.34	13.34

Table A.3 (contd)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3811	Cutlery	0.00	0.02	0.00	0.04	0.15	0.11	0.33
3812	Hand and edge tools	0.00	0.02	0.00	0.04	0.00	-	0.06
3814	Metal furniture and fixture	0.00	0.32	1.09	2.50	0.00	0.06	3.97
3815	Structural metal products	0.00	4.73	0.82	0.00	0.09	0.00	5.64
3017	Heating, cooking, lighting equipment	1.08	4.26	0.55	0.00	2.55	1.90	10.34
3818	Wire products	0.00	0.00	0.05	0.32	0.13	0.14	0.64
3819	Utensils of aluminium	0.61	0.52	0.00	4.20	0.00	-	4.73
3825	Metal trunks	3.28	0.33	0.18	0.00	-	-	3.79
3827	Plumbing equipment, sanitary wares	0.03	0.05	0.03	0.06	0.01	0.22	0.40
3829	Metal products NEC excld machinery	3.58	0.38	0.72	0.00	0.01	0.10	4.79
3832	Agricultural machinery	0.36	0.00	0.00	0.81	0.30	0.52	1.99
3834	Textile machinery	0.28	1.23	0.01	0.91	0.84	3.05	6.32
3835	Other industrial machinery	0.30	0.00	0.55	0.00	4.67	1.40	6.92
3939	Machinery NEC excld electrical	0.00	0.26	0.02	0.10	0.08	0.26	0.72
3842	Radio, TV, communication equipment	0.13	0.26	0.20	0.05	1.01	8.83	10.48
3843	Electrical appliances, housewares	0.16	0.51	0.39	0.72	0.21	3.91	5.90
3844	Insulated wires and cables	0.03	0.16	0.08	0.15	0.16	1.14	1.72
3845	Electric bulb and tubes	0.04	0.16	0.39	0.27	0.00	0.57	1.43
3846	Batteries	0.21	0.30	0.00	0.34	0.28	3.07	4.20
3849	Electrical appliances NEC	0.00	0.10	1.00	0.51	0.23	0.07	1.91
3856	Bicycles and rickshaws	0.27	0.37	0.32	0.15	-	0.00	1.11
3872	Optical goods	0.01	0.00	0.08	0.06	-	-	0.15
	Other 38 industries	1.37	4.14	3.36	4.02	3.68	6.09	22.68
38	Metal Products, Machinery, Equipment	11.14	18.12	9.86	15.25	14.41	31.44	100.22
3937	Pens and office supplies	0.13	0.17	0.00	0.16	0.08	-	0.54
3931	Jewellery of precious metals	0.00	2.71	0.00	0.02	-	-	2.73
3949	Mfg industries NEC	0.00	0.09	0.03	0.00	0.00	0.09	0.21
	Other 39 industries	0.02	0.62	0.03	0.63	0.57	0.59	2.46
39	Other Manufacturing Industries	0.15	3.59	0.06	0.81	0.65	0.68	5.94
3	Manufacturing (with permanent establishment)	182.691	428.351	199.039	280.911	198.326	1367.262	2,664.94

Table A4

Estimate of Investment (1987-88) in Manufacturing Industry (with permanent establishment)  
based on Number of Establishment in HIS and Economic Census

(In million taka)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3112	Dairy products	8.742	7.524	0.727	0.000	0.019	0.047	17.059
3114	Processed fish and seafood	5.503	6.420	0.611	0.000	0.000	5.095	17.629
3115	Hydrogenated vegetable oil	0.014	0.007	-	0.007	0.014	0.021	0.063
3116	Edible oil	7.010	5.650	1.088	0.245	0.034	0.007	14.034
3118	Grain milling (excl rice)	1.598	13.868	52.478	0.000	0.230	0.023	68.217
3119	Rice milling	412.753	124.477	21.680	27.800	0.420	0.162	587.232
3121	Grain mill products, NEC	0.310	0.000	0.138	0.029	-	-	0.477
3122	Bakery products	2.584	3.645	2.015	1.975	0.325	0.035	10.583
3125	Chocolate sugar confectionery	0.000	3.950	0.731	0.263	0.146	0.015	5.105
3128	Edible salt refining	0.504	0.520	0.285	0.954	0.000	0.015	2.278
3141	Cigarettes and tobacco	0.003	0.003	0.006	0.001	0.001	0.000	0.014
3142	Cigars and cheroots	0.001	0.004	0.000	0.003	-	0.004	0.012
	Other 31 industries	5.691	5.749	5.113	5.664	0.901	9.335	32.451
31	Food, Beverages and Tobacco	444.713	171.841	84.872	36.941	2.090	14.697	755.154
3211	Cotton spinning and weaving	144.107	238.205	4.940	46.117	1.505	332.364	767.256
3212	Wool spinning and weaving	7.140	5.508	2.856	2.040	0.816	0.408	18.768
3213	Jute spinning and weaving	36.511	34.364	10.739	25.773	6.443	176.264	290.094
3214	Silk, synthetic spinning, weaving	0.000	22.504	1.998	3.300	14.144	19.816	61.762
3215	Narrow fabric spinning and weaving	0.780	1.200	0.570	0.240	0.030	0.030	2.850
3216	handloom spinning and weaving	85.461	143.491	97.988	110.448	7.326	2.332	447.046
3217	Textile dyeing and finishing	7.870	7.029	0.000	2.982	0.724	3.227	21.852
3223	Knitwear	1.158	1.475	1.667	1.155	0.011	0.038	5.504
3225	Cordage, rope and twine	0.438	0.121	0.000	0.280	0.478	0.066	1.381
3226	Spooling, thread ball mfg	0.184	0.000	0.160	0.000	0.750	0.110	1.204
3229	Textiles NEC	0.224	0.210	0.028	0.028	-	0.028	0.518
3231	Readymade garments	0.000	0.174	0.027	0.444	65.674	330.196	400.515
3241	Tanning and leather finishing	80.788	2.800	3.793	3.900	29.763	251.000	372.042
3248	Leather products, exc footwear	290.351	434.000	0.000	2.993	2.993	38.850	769.186
3251	Leather footwear	0.527	0.674	0.000	0.013	0.002	0.002	1.218
3263	Jute pressing and baling	2.570	2.498	0.411	0.000	0.000	18.350	23.827
	Other 32 industries	24.62	8.82	1.130	0.760	0.670	1.830	37.830
32	Textiles, Apparel, Leather	682.747	903.101	126.370	200.473	135.327	1174.931	3,222.949

Table A4 (contd)

Ind. Code	Industry type	Size of Establishment (No. of worker)					Total	
		1-3	4-9	10-19	20-49	50-99		100+
3311	Saw and planing mills	6.998	29.923	4.910	0.354	3.000	0.024	45.209
3212	Plywood and plywood products	9.250	2.750	0.250	1.250	0.250	0.750	14.500
3321	Wooden furniture	11.900	4.158	0.480	0.364	0.077	0.005	16.984
	Other 33 industries	42.07	10.49	0.82	1.89	5.96	1.54	62.77
33	Wood, Wood Products, Furniture	70.218	47.321	6.46	3.858	9.287	2.319	139.463
3422	Book printing and publishing	0.000	0.948	2.022	11.398	7.800	0.106	22.274
3425	Book binding and other activities	0.000	16.335	0.000	0.317	0.033	0.033	16.718
	Other 34 industries	0.000	27.510	2.370	17.400	12.550	0.540	60.350
34	Paper, Printing and Publishing	0.000	44.793	4.392	29.115	20.363	0.679	99.342
3511	Allopathic medicine	2.515	27.660	0.000	0.000	5.750	72.200	108.125
3514	Homeopathic medicine	0.090	0.210	0.090	0.045	-	0.015	0.450
3525	Pesticides, insecticides etc	0.340	0.000	0.180	0.020	0.060	0.040	0.640
3526	Synthetic resins, plastic etc	0.200	0.300	0.100	0.060	0.020	0.020	0.700
3531	Paints, vernishes, lacquer etc	0.432	0.648	0.036	0.108	-	0.036	1.260
3533	Soap and detergent	1.584	5.616	0.000	0.000	0.072	0.252	7.524
3535	Matches	0.288	0.144	0.180	0.180	0.288	0.000	1.080
3537	Candles	0.360	0.648	0.000	-	-	-	1.008
3551	Tar, alkatra etc	0.185	0.000	0.005	0.020	-	-	0.210
3562	Rebuilding, retreading tyres	0.206	0.103	0.000	0.000	0.026	-	0.335
3569	Rubber products NEC	2.710	2.168	0.540	0.260	0.052	0.026	5.756
3579	Misc. plastic products NEC	0.285	0.113	0.381	0.203	0.060	0.007	1.049
	Other 35 industries	48.780	48.270	0.900	0.680	0.950	10.620	110.20
35	Chemicals, Rubber, Plastics	57.975	85.880	2.412	1.576	7.278	83.216	238.337
3612	China and ceramic	1.746	1.278	0.256	0.340	0.010	0.245	3.875
3622	Glass products	16.500	31.000	7.000	2.500	4.000	5.500	66.500
3691	Bricks and structural clay	5.403	9.999	3.558	0.255	0.000	14.175	33.390
	Other 36 industries	38.840	22.240	2.650	0.260	0.000	1.140	65.150
36	Non-metallic Mineral Products	62.489	64.517	13.464	3.375	4.010	21.060	168.915
3712	Iron, steel foundry	0.003	0.000	0.186	0.684	0.184	0.040	1.097
3713	Iron and steel re-rolling	0.001	0.110	0.310	2.892	0.000	0.611	3.924
	Other 37 industries	0.000	0.040	0.020	0.160	0.000	0.030	0.250
37	Basic Metal Industries	0.004	0.150	0.516	3.736	0.184	0.681	5.271

Table A.4 (contd)

Ind. Code	Industry type	Size of Establishment (No. of worker)						Total
		1-3	4-9	10-19	20-49	50-99	100+	
3811	Cutlery	0.003	0.025	0.000	0.053	0.023	0.013	0.117
3812	Hand and edge tools	0.000	0.017	0.036	0.040	0.000	-	0.093
3814	Metal furniture and fixture	0.000	0.336	1.098	2.744	0.000	0.003	4.181
3815	Structural metal products	0.000	5.075	0.845	0.000	0.008	0.000	5.928
3017	Heating, cooking, lighting equipment	4.870	5.400	0.640	0.003	0.451	0.090	11.454
3818	Wire products	0.010	0.000	0.053	0.263	0.023	0.027	0.376
3819	Utensils of aluminium	0.032	0.495	0.000	4.259	0.000	0.106	4.892
3825	Metal trunks	4.952	0.572	0.199	0.000	-	-	5.723
3827	Plumbing equipment, sanitary wares	0.355	0.291	0.073	0.030	0.020	0.027	0.856
3829	Metal products NEC excld machinery	5.192	0.369	0.740	0.000	0.010	0.063	6.374
3832	Agricultural machinery	2.621	0.000	0.000	1.025	0.270	0.047	3.963
3834	Textile machinery	2.964	4.611	0.010	1.225	0.325	0.247	9.386
3835	Other industrial machinery	1.750	0.000	0.536	0.000	3.600	0.123	6.049
3939	Machinery NEC excld electrical	0.000	0.331	0.028	0.023	0.009	0.003	0.394
3842	Radio, TV, communication equipment	2.351	1.998	0.705	0.050	1.008	0.705	6.817
3843	Electrical appliances, housewares	1.050	1.275	0.350	0.275	0.050	0.250	3.250
3844	Insulated wires and cables	0.072	0.163	0.039	0.039	0.013	0.020	0.346
3845	Electric bulb and tubes	0.743	1.257	0.400	0.343	0.000	0.171	2.914
3846	Batteries	2.251	1.295	0.000	0.279	0.257	0.156	4.242
3849	Electrical appliances NEC	0.000	0.120	1.073	0.616	0.042	0.050	1.901
3856	Bicycles and rickshaws	3.191	1.862	0.300	0.136	-	0.000	5.509
3872	Optical goods	0.036	0.000	0.096	0.038	-	-	0.170
	Other 38 industries	8.620	9.920	3.530	3.970	1.430	0.370	27.840
38	Metal Products, Machinery, Equipment	41.143	35.436	10.751	15.411	7.543	2.471	112.755
3937	Pens and office supplies	0.661	0.283	0.000	0.100	0.011	-	1.055
3931	Jewellery of precious metals	0.000	3.485	0.000	0.002	-	-	3.491
3949	Mfg industries NEC	0.000	0.066	0.015	0.000	0.000	0.000	0.081
	Other 39 industries	0.060	0.750	0.020	0.310	0.070	0.000	1.210
39	Other Manufacturing Industries	0.721	4.588	0.035	0.412	0.081	0.000	5.837
3	Manufacturing (with permanent establishment)	1360.010	1357.627	249.272	294.897	186.163	1300.054	4,746.023