

REPORT ON  
BANGLADESH CENSUS OF  
MANUFACTURING INDUSTRIES (CMI)  
2001-2002

APRIL - 2007

(MONOGRAM)

BANGLADESH BUREAU OF STATISTICS  
PLANNING DIVISION, MINISTRY OF PLANNING  
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DHAKA, BANGLADESH

# CHAPTER I

## CENSUS INSTRUMENTS, CONCEPTS AND DEFINITIONS

### 1.1 Census background

The Bangladesh Bureau of Statistics (BBS) has been conducting Census of Manufacturing Industries (CMI) under the Industrial Statistics Act 1942, on regular basis since 1972-73. The factories Act covers all units that employ 10 or more workers. These units may or may not use power in their industrial operations.

In 1986, the Census of Non-Farm Economic Activities was conducted and the report thereof was published in 1989. This census provided a list frame of all manufacturing establishments having 10 or more workers in the country. Based on that list frame (registered or unregistered with the Chief Inspector of Factories) steps were taken to conduct the census of manufacturing industries in 1988-89. Since then BBS is conducting CMI on regular basis by using that list frame/directory of establishments with a limited updating. This has made the CMI more representative of the entire manufacturing sector. This 2001-2002 CMI provides basic statistics on the industrial structure and production of the manufacturing sector of the country on a more comprehensive basis.

### 1.2 Scope and Objectives

All manufacturing establishments including handloom establishments with 10 or more persons engaged were within the scope of this census.

As with the earlier CMIs the main objectives of the 2001-2002 CMI were to determine the volume of industrial production, fixed capital formation, employment and gross value added in manufacturing industries. The data collected followed broadly the scope of the earlier CMIs, specifically in the following areas:

- Ownership status;
- Fixed assets by category;
- Employment by category;
- Value and quantity of raw material consumed;
- Employment cost;
- Operating expenses;
- Inventories of physical assets;
- Cost and quantity of fuel consumed;
- Value of gross output;
- Value added and indirect taxes, etc.

The information collected were ultimately processed and classified by manufacturing sector activities following the Bangladesh Standard Industrial Classification (BSIC) at 4-digit level.

### 1.3 Limitations

1. This Census was conducted based on a list frame obtained from the directory of manufacturing establishments of 1989-90. The directory itself requires updating. The next CMI will conduct on the basis of newly prepared business registrar (Directory).
2. The samples covered 47% of the total establishments and the actual coverage was only 18%. In spite of the best efforts the rate of response from the target group was relatively low. However, in the total, estimation accuracy remained unaffected.
3. The editing was done and adjustments were made for omissions, inconsistencies and information gaps in the filled-in returns.
4. Accounting periods of the responding units were not uniform. In some cases it was the calendar year and in some cases it was the financial year. Steps have been taken to unify the accounting period on the basis of financial year alone at the editing stage.
5. Values of products reported were also not uniform. The values were reported at production costs and at ex-factory prices.

### 1.4 Concepts and definitions

**Establishment:** An establishment is defined in operational terms as a unit combining activities and resources directed by a single owning or controlling entity towards the production of a homogeneous group of goods and services at a single physical location.

**Large-scale establishment:** Large-scale establishment means and includes those establishments, which have more than 49 workers.

**Medium scale establishment:** Medium scale establishment means and includes those establishments, which have more than 9 workers and less than 50 workers.

**Small-scale establishment:** Small-scale establishment means and includes those establishments, which have fewer than 10 workers.

**Household establishment:** Household establishment means and includes those establishments, which are located in a dwelling unit under one management.

**Manufacturing:** Manufacturing is defined as the mechanical or chemical transformation of organic or inorganic substances into new products, whether the work is performed by power driven machines or by hand, whether it is done in a factory or in a premise based location and whether the products are sold wholesale or retail.

**Unit:** A unit or a reporting unit is an establishment where production of goods and services take place.

**Legal Status:** It defines the status of ownership of the establishment for example, whether an establishment is recognized and registered as one person ownership, or partnership, or private limited company, or public limited company, or cooperative society, or nationalized corporation.

**Individually owned:** It means the manufacturing establishments owned and run by one person or family who bear the profits or losses of the establishment.

**Partnership:** A partnership-manufacturing establishment is an establishment created by an agreement. Its members will be more than one.

**Private limited company:** A company, which has no right to transfer the shares of its members to others according to the "Articles of Association". The number of members must be at least two but not more than fifty, and the employees are not regarded as members. The public may not be asked to buy the company's shares or debentures.

**Public limited company:** A company incorporated under the company's act 1913 or recognized thereby as an existing company, which is not a private company. A public company can have any number of members, excluding of course its employees and can invite public subscription for its shares and debentures. A public company may be a company limited by shares or a company limited by guarantee or an unlimited company.

**Co-operative society:** A corporate body operating not for the purpose of earning profit but rather for the purpose of providing services to its members. In a co-operative society the capital needed is supplied by members and by borrowing and its saving are distributed to the members.

**Fixed assets:** It means all assets, whether obtained from other enterprises or produced by the establishment out of its resources for its own use, which are expected to have a productive life of more than one year. It consists of land, buildings, other construction, machinery, tools and equipment, transport etc.

**Land:** It means covered and open area at establishment location. Agricultural land including land acquired for gaining sand, clay, etc. if connected with the establishment are excluded. Cost of land purchased plus premium paid for leased land and additions, alterations and improvements made there on are shown separately.

**Improvement to land:** It Includes value of improvements made (i.e. by raising, filling-up, digging, leveling, etc. of land) in the inquiry period.

**Residential buildings:** Residential buildings Include the buildings constructed for residential use by the staff/workers.

**Non-residential buildings:** Non-residential buildings Include all other buildings such as factories, warehouses, office buildings, stores, restaurants, dispensaries, buildings for labour welfare, schools, etc.

**Other construction:** It Includes access roads, parking facilities, fences, bridges, platforms, pipelines, communication lines, sewerage and water system, etc.

**Plant and machinery:** It Includes all machines, tools and equipment used in the establishment.

**Transport equipment:** It includes cars, buses, trolleys, vans, etc. used inside and outside the plant.

**Other fixed assets:** Other fixed assets include furniture, fixtures, air-conditioners, refrigerators etc.

**Working Proprietors / Partners:** Proprietors/partners who are actively engaged in managing or operating the activities of the unit.

**Administrative, clerical and sales employees:** These include all classes of permanent and salaried employees of the establishment such as managers, clerks, typists and other administrative workers.

**Production workers:** It means those who are engaged directly in the production process and include those engaged in manufacturing, assembling, packing, repairing, etc. Working supervisors and persons engaged for repair and maintenance are also included. Temporary daily basis hired workers and unpaid family workers are, however, excluded.

**Unpaid family workers:** It means those members of the family of the owners/proprietors who work in the production process for more than 15 hours a week, but are not paid any wages and salaries.

**All employees:** All employees comprise both salaried employees and production workers. Salaried employees include professional and technical workers, administrative and managerial workers, clerical workers, sales and services workers.

**Average number of persons engaged:** Persons engaged either paid or unpaid in the establishment during the year under reference. This is defined as average number of persons that worked per month.

**Wages and salaries:** Wages and salaries include all cash payments (monthly salary, house rent, medical allowance and other allowances) made during the year in cash as compensation for work done but does not include other cash and non-cash benefits.

**Other cash benefits:** It includes other monetary benefits such as education cost, hospital cost, bonus, etc. paid to the employees in addition to wages and salaries.

**Other non-cash benefits:** It includes the material goods and other benefits provided to the employees, in addition to their salaries and wages and cash benefits such as food and food articles, clothing, housing accommodation, transport, etc. which is free of cost or at a price lower than the market value. This excludes employer's contribution to provident fund, persons' gratuity or other social security measures.

**Stock:** Stock refers to inventories of inputs such as raw materials, fuel, spare parts, packing materials, lubricants, etc. and finished and semi-finished goods.

**Manufacturing goods/ finished products:** Manufacturing goods are those that were produced during the reference period at the final stage of production and are ready for sale.

**Work-in-progress:** It means Value of all materials, which have been partially processed and are not usually sold without further processing.

**Industrial waste:** It means the Products, which are not included in the final products.

**Fuels:** These include all purchased fuels except those that are used as raw materials or chemicals.

**Depreciation:** Depreciation means an accounting item to set aside an allowance to cover the cost of wear and tear of the fixed assets used in manufacturing process during the year.

**Cost of repairs and maintenance work done by others:** It means the cost to the establishment of current repairs and maintenance services rendered by others to fixed assets of the establishment.

**Employment cost:** It Includes all payments, whether in cash or in kind, made by the employer. It includes all cash payments, bonuses, cost of living allowances, vacation and sick leave benefits, social insurance contribution, pension, etc.

**Industrial cost:** Industrial cost includes the cost of materials and supplies that have been physically incorporated in the products and by-products, cost of fuel and electricity used for manufacturing purposes, as well as payment for work done by others.

**Non-industrial cost:** It Includes payment for water charges, printing and stationery, advertising, business insurance, postage, telegraph and telephone, banking, legal and accounting services rendered to the establishments and also amount paid for technical know-how and consultative services. It excludes interest paid to bank.

**Cost of production:** Cost of production includes industrial cost, non-industrial cost, employment cost and indirect taxes.

**Valuation of products and by-products:** Products and by-products are valued at the ex-factory prices. It also includes excise duty, sales tax and other indirect taxes.

**Value of gross output:** It includes value of products and by-products, plus receipts for work done and for services to others, plus net change in work-in-progress.

**Indirect tax:** Indirect taxes include excise duties and sales tax only.

**Census value added:** It is the value of gross output less industrial cost i.e. cost of raw materials and fuel, etc.

**Value added at factor cost:** It is the census value added less non-industrial cost and indirect taxes.

## 1.5 Census instruments and enumeration

### 1.5.1 Census questionnaire:

A questionnaire with an instruction manual in Bengali was used. The questionnaire was canvassed both for large and medium scale establishments as well as for handloom establishments. The CMI questionnaire is attached as appendix.

**Data collection/enumeration:** The data collection/enumeration of large and medium scale establishments (excluding handloom) was done primarily by mailing method. Questionnaires along with instruction manuals were mailed to the owners/occupiers of establishments. They were requested to fill up the questionnaires and return them within 30 days. In case of non-response, reminders were issued and there were also follow-ups by telephone calls. Staff from the BBS personally contacted the respondents who were found defaulting even after second reminder. After personal visits returns could be collected from most of defaulting establishments.

For handloom establishments, personal interview method was adopted for the purpose of data collection. The BBS staff contacted the individual respondents (owners of establishments) with a written request to provide necessary information. However, for a few establishments no response could be elicited.

### 1.5.2 Data Processing and preparation of tables

**Verification of BSIC and geo-code:** After completion of the enumeration, all returns were carefully checked with respect to unique establishment identification, BSIC group and also for geographic area codes. A unique establishment code was assigned to each establishment. The geo-code for each establishment was transcribed on the census returns. For proper area classification, it was necessary to enter the appropriate geo-code developed by the BBS. The geo-codes entered by the staff were thoroughly checked by the officers against the original geo-code list.

The filled-in returns were first edited manually. The desk officers corrected omissions, inconsistencies and errors detected in the returns. In some cases respondents had to be contacted for elucidating further information. In a few cases where information gaps could not be rectified, imputations were made. Coding of specific items was done manually. After editing and coding, the data entry work was done by the Computer Wing in the Microcomputer environment. Final tables obtained from the computer in the form of computer printouts were directly used for publication. This helped avoiding corrections and editing at the printing stage and expedited considerably the printing process. For tabulation purposes classification of the manufacturing establishments followed the Bangladesh Standard Industrial Classification (BSIC '2001), which is developed in conformity with the International Standard Industrial Classification. (ISIC) Rev.-3

**Preparation of statistical tables:** Format and titles of statistical tables of 2001-2002 CMI report were kept similar to those in the previous report. For ensuring comparability table contents also remained similar to earlier CMIs. However, the tabulated data show significant variations from the earlier result due to improved coverage. Some summary tables have been added in this report showing key findings of the censuses of 1997-98, 1999-2000 and 2001-2002.

## 1.6 Conceptual framework and census methodology

### 1.6.1 Census design

Two independent list frames one for the handloom establishments and the other for the manufacturing establishments (excluding handloom establishments) were used for the collection of data. The sample of handloom establishments was taken from an updated list of area frame of handloom establishments. The sample of manufacturing establishments (excluding handloom establishments) was taken from a directory of manufacturing establishments, compiled from the economic census of 1986. For the purpose of choosing the sample manufacturing establishments (other than handloom establishments) were classified as large and medium establishments on the basis of the number of persons engaged. A total number of 13179 manufacturing establishments were taken as the sample for this census of which 2150 were handloom establishments. The number of establishments selected from the two independent frames as sample is as follows: -

**Table 1.1 Number of establishments covered under census frame, 2001-2002**

Classification	Stratum	No. of establishments in the sampling frame	No. of establishments in the sample
1. Large scale manufacturing establishments (other than handloom establishments)	I (Establishment with 50+ persons)	7944	7944
2. Medium scale manufacturing establishments (other than handloom establishments)	II (Establishments with 10-49 persons)	12337	3085
3. Handloom establishments	III (Establishment with 10+ persons)	7784	2150
Total	All stratum	28065	13179

#### **Actual Coverage:**

Filled-in-returns from 5012 establishments were collected from the sample of 13179 establishments.

### 1.6.2 Selection of sample

It was decided to cover all large scale manufacturing industries identified in the directory (excluding handloom) of the 2001-2002 CMI. It was also decided that about 3085 establishments be selected from the medium scale establishments.

The total sample size was determined on the basis of precision requirements and also for obtaining reliable results for as many 4 - digit level BSIC groups as possible.

A stratified single-stage systematic sample design was used to select the sample of manufacturing industries. To increase the efficiency of the sample design the frame was stratified into as many homogeneous strata or groups as possible. After determining the approximate effect of alternative sampling strategies on the precision of the estimates at the 4 - digit BSIC level, it was decided to divide the manufacturing sector, represented by the directory and list frame of handloom establishments, into the following 7 substrata :

1. BSIC with 10-19 establishments.
2. BSIC with 20-49 establishments.
3. BSIC with 50-99 establishments and with less than 50% of overall TPE in the 50+TPE stratum.
4. BSIC with 50-99 establishments and with more than 50% of overall TPE in the 50+ TPE stratum.
5. BSIC with 100-299 establishments and with less than 50% of overall TPE in the 50+TPE stratum.
6. BSIC with 100-299 establishments and with more than 50% of overall TPE in the 50+TPE stratum.
7. BSIC with 300+establishments.

Since many of the characteristics of the manufacturing units covered by the CMI such as value of production, intermediate consumption, etc. are correlated with TPE (total persons engaged) the sampling frame was also stratified by TPE size groups.

The following table shows the sampling rates for each manufacturing substratum by TPE size groups.

**Table 1.2 Sampling rates (excluding handloom) by TPE size groups**

Manufacturing Stratum	Sampling rates by TPE size groups			
	10-19	20-29	30-49	50+
1.	Certainty	Certainty	Certainty	Certainty
2.	50%	Certainty	Certainty	Certainty
3.	25%	50%	Certainty	Certainty
4.	10%	20%	50%	Certainty
5.	10%	20%	50%	Certainty
6.	5%	10%	20%	Certainty
7.	5%	10%	20%	Certainty

The new sampling approach for the manufacturing sector resulted in a sample of approximately 11029 manufacturing establishments (excluding handloom), which was within the upper limit determined by the resources of the CMI.

The handloom establishments were selected through an area sample. A two stage sample design was used for the purpose. The first stage was for selection of the enumeration areas which were selected with probability proportional to size (PPS). In the second stage, the ultimate sampling units or handloom establishments were selected by using systematic sampling method.

### **Estimation procedures**

According to the specified sampling procedures, the basic weight for the establishments in each stratum would be equal to the sampling interval, and the certainty establishments would have a basic weight of 1. Following the data collection, these basic weights need to be adjusted for non-response. The adjustment procedures are explained in the following articles below.

### **Adjustment factors for non- response**

Using list collected the 2001-2002 CMI data and area frames of establishments employing more than 10 persons. It was necessary for adjustment of basic sampling weights (expansion factors) to take into account of non-interview/non-response. Given the different nature of frames, the non-response/ non-interview adjustment procedures were different for the establishments in the two survey frames.

### **Adjustments for List Frame/Directory of establishments**

In case of list frame for manufacturing establishments (excluding handloom), the basic sampling weights varied by stratum. The certainty stratum had a basic weight of 1. In order to ensure an appropriate non-interview adjustment to the weights, an interview status code was introduced for each sample establishment. The following 2-digist interview status codes were introduced to ensure proper adjustment to weights:

- (01) Completed questionnaire
- (02) Incomplete information-not used
- (03) Refused
- (04) Respondent not available
- (05) Mail-out questionnaire-not returned/not follow-up
- (06) Not found (after follow-up)
- (07) Transferred-no information
- (08) Closed-temporary
- (09) Closed permanent
- (10) Change of industry-out of scope
- (11) Number of TPE-out of scope
- (12) Fake establishment
- (13) Duplicate
- (14) New establishment-not in frame

Some of these codes applied mostly to the manufacturing sector, where the data collection began with a mail-out of the questionnaires, followed by personal interviews for most of the establishments, which did not respond in time. The last category (14) was for new establishments not in the frame but which were identified and interviewed by the enumerators.

After the status code had been entered for each establishment in the file, the total number of sample establishments by status code for each stratum was calculated. The following non-interview adjustment factor was then calculated separately for each stratum:

$$A_h = \frac{\text{No. of establishments with status codes 01 through 08 in stratum h}}{\text{No. of establishments with status code 01 in stratum h}}$$

Where  $A_h$  = non-interview adjustment factor for stratum h.

The numerator of the adjustment factor was the number of valid establishments and the denominator was the number of respondent establishments.

The adjustment factor was not applied to the weight of questionnaire with status code 14 (new establishments not in frame), since they were simply to be added to the file with a weight of 1. The final weight for the remaining establishments in stratum h were calculated by using the relationship:

$$W_h = A_h * w_h$$

where  $w_h$  = basic weight for stratum h.

### **Adjustments for list/area frame for handloom establishments**

For the area/list frame, each sample enumeration area had a unique weight, since the sample areas were selected with probability proportional to size (PPS) and its weight was adjusted in the first stage of sampling. For this purpose, it was necessary to determine the number of valid (10+) establishments in the sample area and the number of completed interviews for each sample area. The basic weight for the sample area was multiplied by the following non-interview adjustment factor.

$$A_{hi} = \frac{\text{No. of valid establishments in the sample area}}{\text{No. of respondent establishments interviewed in the area}}$$

Where  $A_{hi}$  = adjustment factor for the i-th sample area in stratum h.

## CHAPTER II

### SUMMARY AND CONCLUSION

#### 2.1 Legal and ownership status

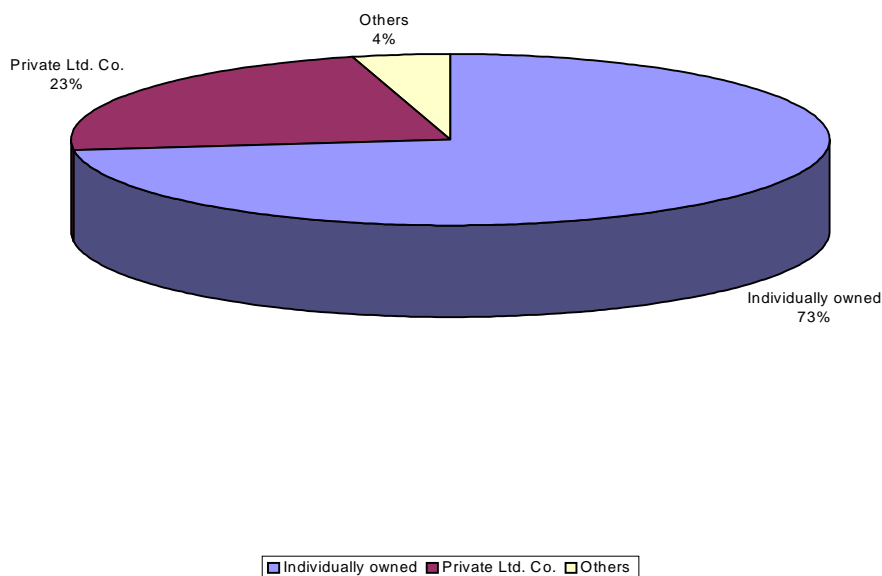
There were 138 manufacturing establishments in government ownership out of a total of 28065 establishments listed in the CMI frame. A total of 27833 establishments were in the private sector and only 94 establishments were under joint-venture ownership. The table below presents the number of establishments by ownership and legal status.

**Table 2.1a Number of establishments by ownership and legal status**

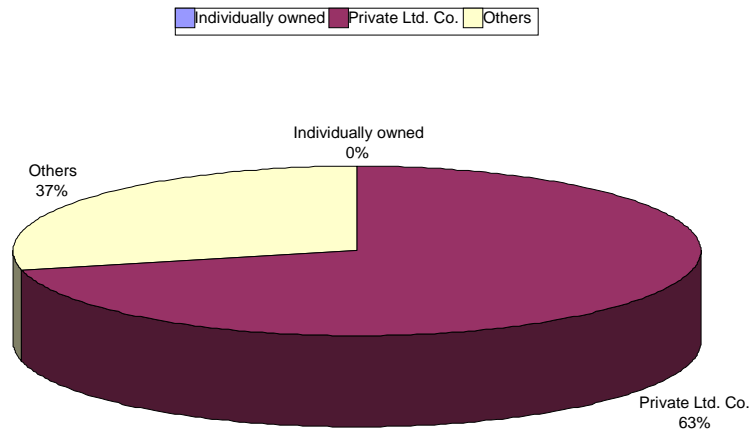
Type of ownership	Legal status of establishments						
	Total	Individually owned	Partnership	Private Ltd. Co.	Public Ltd. Co.	Nationalized	Others
Government*	138	-	-	-	-	138	-
Private	27833	19440	638	7275	402	-	78
Joint venture	94	-	20	59	15	-	-
Total	28065	19440	658	7334	417	138	78

Note : \* includes nationalized government owned establishments.

**Figure 1. Legal status manufacturing establishments (Private)**

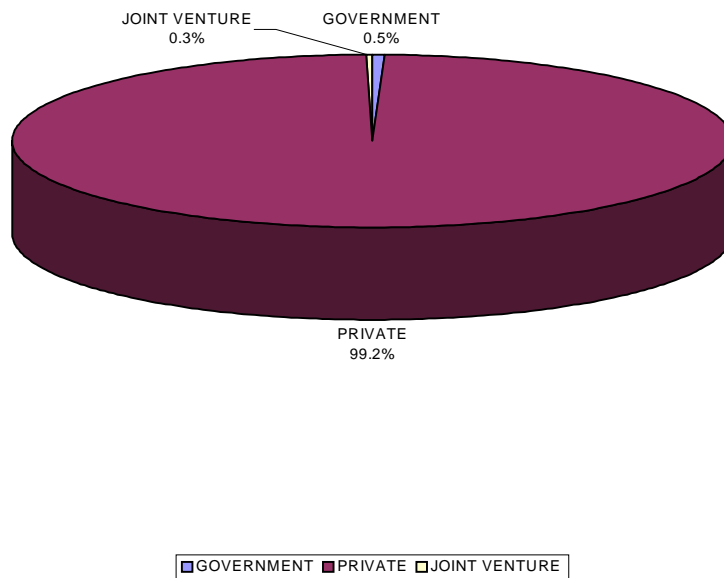


**Figure 2. Legal status of manufacturing establishments (Joint Venture)**



417 manufacturing establishments were under public limited companies and 138 establishments were under nationalized corporations. The individually owned establishments were as high as 69.27%. Only about 1.5 % of the establishments were in the public sector in 2001-2002.

**Figure 3. Ownership of manufacturing establishments**



**Table 2.1b. Summary statistics of large, medium and handloom establishments**

(Value in Million tk)

Indicators	2001 - 2002						
	Large establishments			Medium establishments			Handloom establishments
	Handloom	Without handloom	Total	Handloom	Without handloom	Total	
No. of establishments	179	7944	8122	7606	12337	19942	7784
No. of persons engaged	13104	2459967	2473071	96590	249389	345979	109694
Wages, salaries & others	216	94959	95175	1570	5192	6768	1792
Value of fixed assets	131	298696	298826	852	36466	37319	983
Industrial cost	444	559420	559864	4164	46998	51162	4608
Value of gross output	736	830064	830800	6953	64184	71136	7689
Gross value added	292	270644	270936	2789	17186	19974	3081
Value added at factor cost	290	182977	183267	2736	12659	15395	3026

## 2.2 Fixed assets

The total fixed assets of the 138 establishments in the public sector were Tk. 80435 million as against Tk. 249553 million for the 27833 establishments in the private sector. The average fixed assets per joint -venture establishment was TK 65.50 million .

**Table 2.2a Total fixed assets, persons engaged by ownership**

Ownership	No. of establishments	Total fixed assets (Million Tk.)	Total persons engaged (No.)	Average fixed assets per establishment (Million Tk.)	Average fixed assets per person (Million Tk)
Government	138	80435	148762	582.86	0.54
Private	27833	249553	2637440	8.96	0.09
Joint venture	94	6157	32849	65.50	0.18
Total	28065	336145	2819050	11.97	0.11

The total end year fixed assets in 2001-2002 were 336145 million Tk. of which total physical capital formation acquired through additions was 36586 million. Tk. Thus, the total capital formation was 10.9 % of total net year end value of all fixed assets.

**Table 2.2b Ownership and total person engaged by fixed assets size classification in year 2001-2002**

Fixed assets size (in thousand)	No. of establishments	Ownership of establishment		
		Government	Private	Joint venture
Total	28065	138	27833	94
Up-to Tk. 50	414	3	411	-
51 To Tk. 100	154	-	154	-
101 To Tk. 200	1633	-	1633	-
201 To Tk. 500	4398	3	4395	-
501 To Tk. 1000	2615	-	2613	2
1001 To Tk. 2000	1500	8	1492	-
2001 To Tk. 5000	3025	-	3021	3
5001 To Tk. 10000	2982	2	2974	7
10000 +	11343	122	11140	82

Only 2.0% of the establishments belonged to the fixed assets size class upto Tk 0.1 million, 30.81% were in fixed assets size class of Tk.0.1 to 1.0 million, 26.74 % were fixed assets size class of Tk 1.0 to 10.0 million and about 40.42% of the establishment had fixed assets above Tk. 10.0 million. The end year fixed assets for land, building, machineries & equipments, transport equipments and others were Tk. 40795, Tk. 70030, Tk. 191812, Tk. 5945 and Tk.27563 million respectively.

### 2.3 Employment

The total number of persons engaged was 2819050 of which 2465697 were employees. Out of the total persons engaged 2142401 or about 76% were production workers.

**Table 2.3 Total persons engaged, wages, salaries and others by sex and type of workers**

Persons engaged by type	No. of persons engaged			Wages , salaries & others (Million Tk)	Average wages and salaries per persons ( '000' Tk )
	Total	Male	Female		
1.Admin, clerical, sales workers	322996	318622	4374	23957	74.17
2. Production & related workers	2142401	1211866	930535	54200	25.29
3. Director/partner & proprietor	30007	28963	1044	2068	70.62
4.Daily hired workers	316059	273025	43034	5110	16.16
5. Unpaid workers	7587	4957	2631	-	-
Total	2819050	1837432	981618	85386	30.28

Of the total persons engaged 1837432 were male workers and 981618 were female workers. The percentage of female workers was around 34.82%. Textiles and food industries together accounted for 80.94% of the total employment. Among all the establishments 19943 units employed between 10-49 persons. A total number of 5341 establishments or about 19.03% of the units each had employment of more than 100 persons.

#### 2.4 Industrial and employment costs

The total industrial cost was Tk.611026 million as against the non-industrial cost of Tk. 92249 million. The indirect taxes net of subsidies was Tk. 32077 million or 3.56% of the gross value of output.

**Table 2.4 Employment cost, industrial and non-industrial cost by ownership**

Ownership	No. of employee	Employment cost (Million Tk.)	Industrial cost (Million Tk.)	Non-industrial cost & indirect taxes (Million Tk.)	% non-industrial cost & taxes over gross output
Government	138242	7855	24307	4527	10.17
Private	2295050	68919	572517	79344	9.58
Joint venture	32405	1384	14202	8378	28.55
Total	2465697	78157	611026	92249	10.22

The total employment cost was Tk. 78157 million. Total wages, salaries and others paid to the production workers was Tk. 54200 million (Tk. 25299 per worker per annum).

#### 2.5 Energy consumed

The value of total energy consumed by the manufacturing industries was Tk. 25771 million or 4.22% of the industrial cost.

**Table 2.5 Type of energy consumed**

Type of energy consumption	Value (Million Tk.)	% of total energy consumed	% of industrial cost
1. Fire wood/coal/hard coke	1763	6.84	0.29
2. Furnace oil, lubricant & other oil	1277	4.93	0.21
3. Diesel/kerosene	379	1.47	0.06
4. Petrol	120	0.46	0.02
5. Natural gas	6968	27.03	1.14
6. Electricity	15268	59.24	2.50
Total	25771	100.00	4.22

The value of total electricity consumption was Tk. 15268 million which was around 59.24% of the total cost of the energy consumed.

## 2.6 Gross output and value added

The total value of gross output was Tk. 901937 million. The values of gross output in government, private and joint venture establishments were Tk. 44480, Tk. 828117 and Tk. 29340 million respectively. The value added at factor cost was Tk. 198662 million which was about Tk. 70.47 thousand per person per annum.

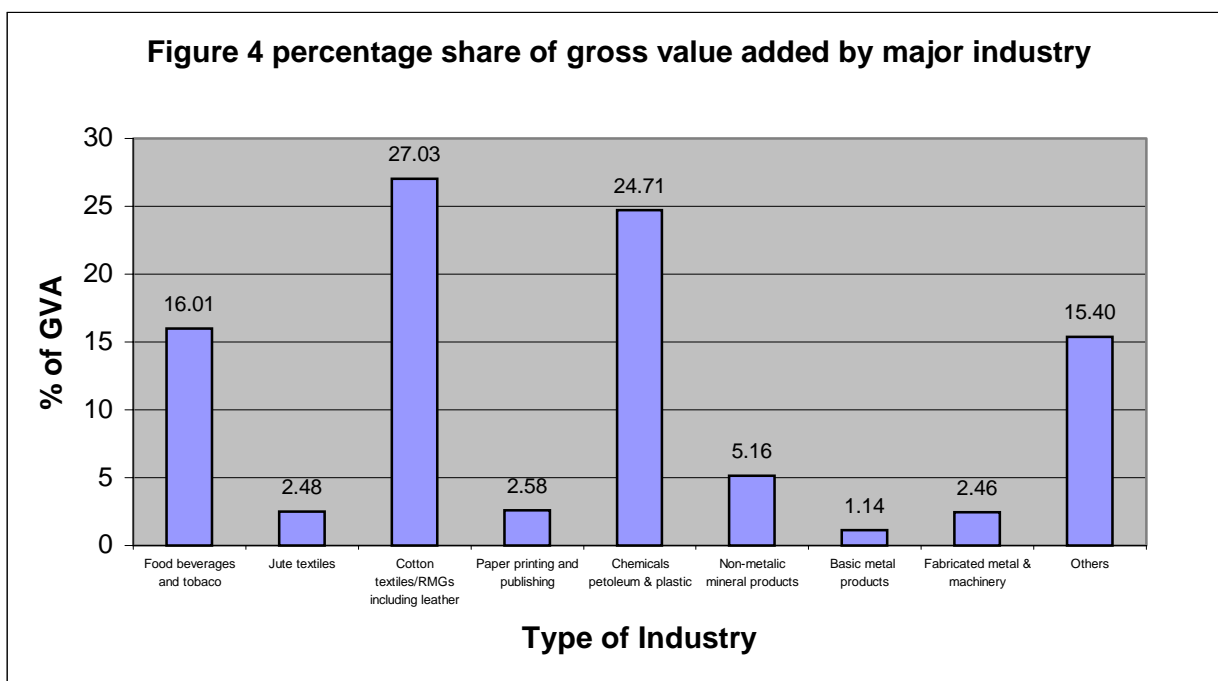
**Table 2. 6a Gross output and value added by ownership**

Ownership	No. of persons engaged	Value of gross output (Million Tk)	Gross value added (Million Tk)	Value added at factor cost (Million Tk)	Per capita gross value added (000 Tk)
Government	148762	44480	20173	15646	135.60
Private	2637440	828117	255599	176255	96.91
Joint venture	32849	29340	15138	6761	460.85
Total	2819050	901937	290910	198662	103.19

### 2.6.1 Gross value added by major industry

The total gross value added was Tk. 290910 million. Gross value added of food beverages and tobacco, jute textiles, cotton textiles/RMGs including leather, chemicals, petroleum & plastic and fabricated metal & machinery were 16.01%, 2.48%, 27.03%, 24.71% and 2.46% respectively.

**Table 2. 6b Percentage share of Gross value added by major industry (2-digit)**

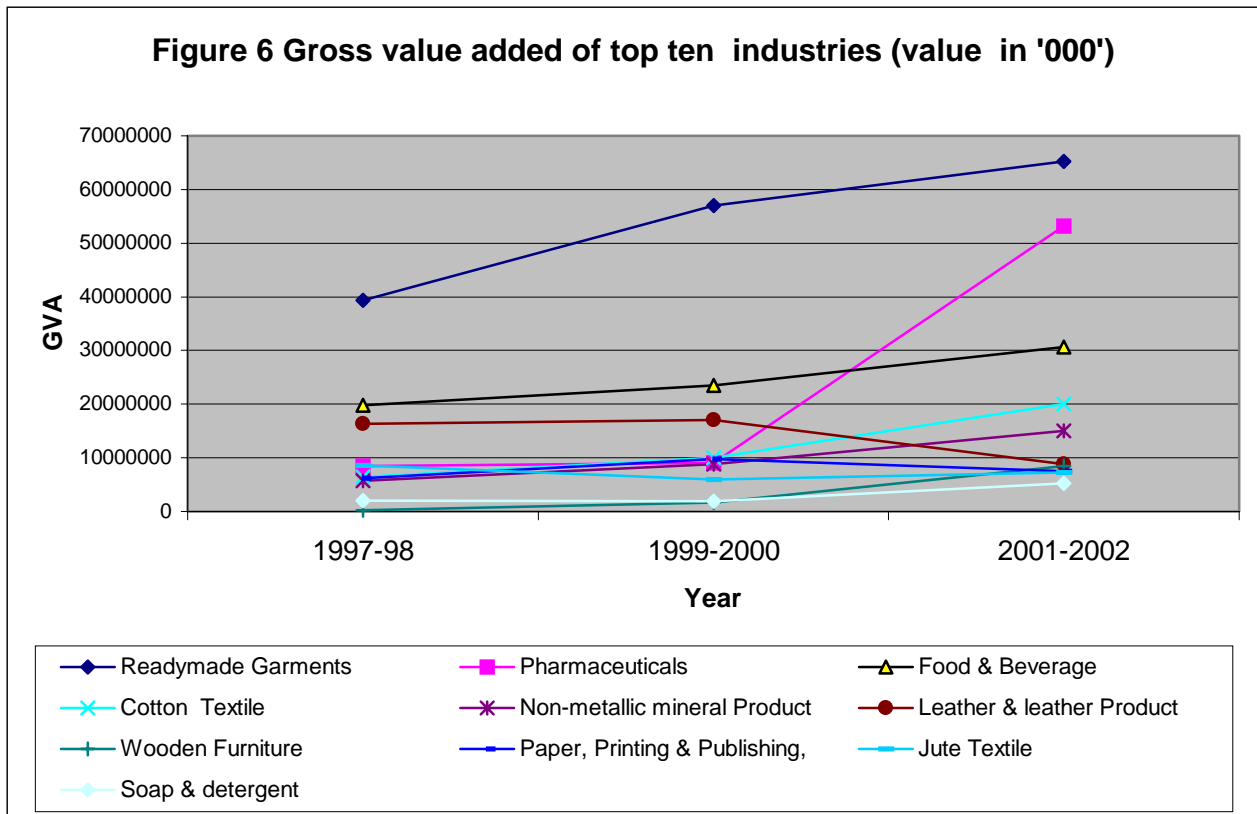


### 2.6.2 Gross value added of top ten industries

The total census value added for the manufacturing industries was estimated at Tk. 290911 million in 2001-2002. Gross value added of Readymade garments, Pharmaceutical, Food & beverage, Cotton textile, Non-metallic mineral product, Leather & leather product, Wooden furniture, Paper, printing & publishing, Jute textile and Soap & detergent were Tk. 65282, 53146, 30657, 20002, 15006, 8817, 8457, 7491, 7218 and 5302 million respectively.

**Table 2.6d Gross value added of top ten industries (value in '000')**

Name	Gross value added		
	1997-98	1999-2000	2001-2002
Readymade garments	39350586	56994590	65,282,477
Pharmaceuticals	8434412	9073565	53,146,102
Food & beverage	19762109	23435906	30,657,203
Cotton textile	6470676	10013860	20,001,691
Non-metallic mineral product	5750683	8856723	15,006,158
Leather & leather product	16283065	17052619	8,816,822
Wooden furniture	264266	1722994	8,456,584
Paper, printing & publishing,	6212528	9814705	7,491,459
Jute textile	8578965	6006395	7,217,582
Soap & detergent	2059332	1923016	5,301,847



## 2.7 Summary statistics

The summary statistics of 1997-98, 1999-2000 and 2001-2002 CMIs are presented below in Tables 2.7A through 2.7C for comparison and user's convenience.

**Table 2.7a. Summary statistics by different characteristics of 1997-98 and 2001-2002 CMIs.**

Characteristics	1997-98	1999-2000	2001-2002
1. No. of establishments	29573	24752	28065
2. No. of establishments by administrative divisions:			-
Total	29573	24752	-
Dhaka	13900	11588	-
Chittagong	4428	4235	-
Khulna	4114	2359	-
Rajshahi	7131	6570	-
3. Ownership of establishments (No.):			
- Government	158	147	138
- Private	29347	24520	27833
- Joint venture	68	85	94
4. Legal structure (No):			
- Individually owned	22708	17930	19440
- Partnership	602	564	658
- Private limited company	5612	4634	7334
- Public limited company	446	432	417
- Nationalized corporations	151	137	138
- Co-operatives and others	53	55	78
5. Fixed assets (Million Tk.):			
- Total	214704	243805	336145
- Land & improvement to land	24011	29543	40795
- Buildings (residential, non-residential & others)	43391	44320	700030
- Machineries & equipments	130257	147680	191812
- Transport and others	17044	22262	33508
6. Persons engaged (No.):			
- Total	2590755	2613564	2819050
- No. of employees	2104247	2259717	2465697
- Operatives (production workers)	1838667	2005038	2142401
7. Number of all employees:			
- Both sexes	2104247	2259717	2465697
- Male	1394958	1421734	1530588
- Female	709289	837983	935109
8. Establishments by employment size (No):			
-Less than 10**	5488	-	-
- 10-19	9420	10479	7094
- 20-49	6980	5471	12849
- 50-99	2472	3839	2782
-100-999	5057	4722	5000
-1000 and above	156	240	341
9. Establishments by fixed asset size			
Up to Tk. 50,000	3229	2052	414
Tk. 50,001 - 100,000	2823	2696	154
Tk. 100,001 - 1,000,000	15978	12228	8646
Tk. 1,000,001 – 10,000,000	6024	5937	7507
Tk. 10,000,001 and over	1520	1838	11343

Characteristics	1997-98	1999-2000	2001-2002
10. Employment cost (million Tk.)			
Total employment cost	55789	58706	78157
- Wages and salaries	45843	56706	69350
- Other cash benefits and non-cash benefits	8582	1754	7825
- Employer's contribution	1363	246	981
11. Taxes (million Tk.)			
- Total taxes	27674	32222	32077
- Excise duties	25949	30200	26765
- Sales taxes	1724	2022	5311
12. Value of gross output (million Tk.)	576655	639220	901937
13. Industrial cost (million Tk.)	372695	403778	611026
14. Gross value added (million Tk.)	203959	235443	290910
15. Indirect taxes (million Tk.)	27674	32222	32077
16. Value added at factor cost (million Tk.)	133685	155820	198662
17. Fixed assets and output by ownership (million Tk.)			
Government:			
- Fixed assets	88212	83359	804435
- Gross value of output	54471	50266	44480
Private:			
- Fixed assets	116389	150762	249553
- Gross output	481482	548971	828117
Joint venture:			
- Fixed assets	10102	9684	6157
- Gross value of output	40702	39984	29340

**Table 2.7b. Industrial statistics from the year 1973-74 to 2001-2002**

(Value in million Tk.)

Period	No. of reporting establishment	Value of fixed assets	Employment		Value of gross output	Gross value added	Value added at factor cost
			All employee (No.)	Operational (No.)			
1973-74	1427	3654	307404	260444	7350	3737	-
1974-75	2847	4640	370097	309515	11800	4569	3431
1975-76	2216	5475	353640	292040	15930	6240	4384
1976-77	2057	6526	347385	281880	18734	6682	4403
1977-78	2728	7693	400670	317623	27120	10263	6694
1978-79	2728	7693	400670	317623	27120	10263	6094
1979-80	3006	8791	417298	330463	34784	13061	9275
1980-81	3152	11509	438044	341425	40717	14130	9579
1981-82	3356	13962	456291	356139	47630	15711	10363
1982-83	3538	14467	448951	348932	50623	18832	13380
1983-84	3740	22873	452436	349660	62042	23068	16913
1984-85	3934	27170	468606	364086	69917	23956	17245
1985-86	4473	30293	466636	369433	75483	29567	20142
1986-87	4519	35520	478696	381669	41216	31954	22404
1987-88	4793	36173	489500	390663	89177	32549	23975
1988-89	23752	83279	991689	822210	177568	60663	47242
1989-90	25283	83393	1084583	910871	201836	65815	47489
1990-91	25890	87758	1110582	941869	208383	66412	45518
1991-92	26446	102415	1156204	984792	222868	73249	51090
1992-93	26677	106312	1248708	1069002	256436	84459	55639
1993-94	27247	126645	1203018	1040804	329682	143572	109515
1995-96	28920	206830	1714039	1486875	508460	182233	121162
1997-98	29573	214704	2104247	1838667	576655	203959	133685
1999-00	24752	243805	2259717	2005038	639220	235443	155820
2001-02	28065	336145	2465397	2142401	901937	290910	198662

**Table 2.7c. Industrial statistics by employment, gross output, value added by public and private sector from the year 1972-73 to 2001-2002**

(Value in million Tk.)

Period	Public (Government)				Private (including joint venture)			
	No. of establishment	All Employee	Gross output	Gross Value added	No. of establishment	All Employee	Gross output	Gross value added
1972-73	136	119069	1705	747	1850	63023	1386	627
1974-75	277	251602	6368	2561	2570	118495	5462	2008
1975-76	291	268330	10001	3045	1925	85310	5929	3195
1976-77	416	272003	10560	3682	1641	75382	8174	3000
1977-78	315	298956	15930	5303	2451	95362	6899	2800
1978-79	303	310188	18591	7065	2425	90482	8529	3198
1979-80	297	316736	23053	8279	2709	100562	11730	4782
1980-81	292	325549	26739	8584	2860	112495	13978	5546
1981-82	290	328906	30235	8679	3066	127385	17395	7032
1982-83	227	246189	27524	9617	3356	202762	23099	9215
1983-84	196	223914	31520	11429	3544	228522	30522	11639
1984-85	194	230159	34043	11357	3740	238447	35875	12599
1985-86	174	217897	34734	13699	4299	248739	40749	15868
1986-87	170	219714	36996	14081	4349	258982	47220	17873
1987-88	167	222994	38913	14496	4626	266506	50263	19054
1988-89	210	277078	47488	23158	23542	714612	130080	37504
1989-90	226	309933	48354	19369	25057	774650	153482	46446
1990-91	230	280230	48816	18972	25660	830352	159568	47440
1991-92	210	280273	45436	16908	26236	1047014	177432	56341
1992-93	235	244337	41516	18567	26442	1004370	214920	65892
1993-94	191	143362	35687	22778	27056	1059655	293994	120793
1995-96	167	182528	42756	20761	28753	1531509	465705	161462
1997-98	158	187376	54471	32769	29415	1916871	522184	171190
1999-00	147	157882	50266	28446	24605	2101835	588955	206998
2001-02	138	138242	44480	20173	27833	2327455	857457	270738