

CHAPTER-1

Introduction

Census of Large-Scale Manufacturing Industries (CMI) is conducted under sections 9 & 10 of General Statistics Act 1975 and section 5 & 6 of Industrial Statistics Act 1942. The first CMI was conducted in 1954 and the last one was completed for the year 2000-01.

Objectives

Production pattern and industrial structure changes over time. The CMI measures production and structural changes of large-scale manufacturing industries (LSMI). Census of Manufacturing Industries provides data on quantities and values of inputs and outputs, census value added, contribution to GDP, fixed assets, stocks, employment & employment cost and industrial taxes. It takes into account the new developments in the industrial field, capture new industrial products and establishments and develop new weights for Production Index of Manufacturing.

Scope and coverage

CMI covers manufacturing establishments which are registered or which qualify for registration under Factories Act, 1934. If an establishment is engaged in more than one activity and separate accounts are maintained by the establishment for each activity, then separate returns are collected for each such activity. The defence and government workshops engaged in manufacturing activities registered under Factories Act are, however excluded. The report covers the period from July 2005 to June 2006.

Planning and execution of the Census

The Census of Large-Scale Manufacturing Industries (CMI) 2005-2006 has been conducted as a joint effort by the Federal Bureau of Statistics (FBS), Provincial Directorates of Industries and Bureaus of Statistics (BOS), contributing as per following.

§ Federal Bureau of Statistics

1. Planning of Census
2. Preparation of questionnaire, editing checks and tabulation plan
3. Collection of returns from establishments located in Federal Capital Territory
4. Editing, coding and processing of questionnaires received from Federal Capital Territory, Islamabad. (For CMI 2005-06, this job was done by FBS for NWFP and Baluchistan also).
5. Preparation of tables at national and provincial levels including Islamabad and publication of CMI report.

§ Directorates of Industries

1. Printing of questionnaires¹ (FBS published the questionnaires for Balochistan and Federal Capital Territory area of Islamabad)
2. Notification of the questionnaires in the government gazette.

¹ See Annexure-1 for CMI questionnaire

3. Mailing out of questionnaires on the basis of the list of establishments as available
4. Collection of filled-in questionnaires from manufacturing establishments
5. Classification & preliminary editing of CMI returns.

§ Provincial Bureaus of Statistics

1. Editing, coding and processing of CMI questionnaires and supply of tabulated data to FBS.
2. Estimation of data in case of non-response cases.

Collection of returns and non-response

CMI questionnaires are issued to the establishments by the provincial Directorates of Industries as per list of manufacturing establishments maintained by Provincial Directorates of Labour Welfare. CMI 2005-06 frame was enhanced using industrial directory prepared by Punjab Directorate of Industries as well as results of Economic Census 2001 conducted by Federal Bureau of Statistics. CMI is conducted through mail enquiry supplemented by field visits. The collection is done by the Provincial Directorates of Industries, appointed for the purpose under the Industrial Statistics Act 1942. This act empowers the provincial governments to appoint an officer to collect the data in connection with census. The Provincial Directorates of Industries, after collection, pass on the returns to Provincial Bureaus of Statistics (BOS) for further processing.

The position about the coverage of Census of Manufacturing Industries and non-response is given at Table-1.1.

Table-1.1: Coverage Position of CMI 2000-01 and CMI 2005-06

Items		Pakista n	Punja b	Sind h	NWFP	Balochista n	Islamaba d
CMI 200-01							
1	No. of establishments on mailing List	9,823	5,866	3,228	300	240	189
2	Filled-in questionnaires received	4,809	2,616	1,768	242	98	85
3	No. of establishments qualified for tabulation	4,528	2,357	1,768	236	93	74
4	No. of returns rejected for irrelevant activities	281	259	-	6	5	11
5	Closed or ceased to exit as reported by Provincial Directorates of Industries	2,438	2,063	161	18	106	90
6	No. of non-responding factories	2,576	1,187	1,299	40	36	14
CMI 2005-06							
1	No. of establishments on Mailing List	13,146	8,239	3,288	972	309	338
2	Filled-in questionnaires received	7,236	4,072	2,093	731	221	119
3	No. of establishments qualified for tabulation	6,417	3,590	1,825	673	212	117

4	No. of returns rejected for irrelevant activities	819	482	268	58	9	2
5	Duplicate in the frame	333	333	0	0	0	0
6	Closed or ceased to exit as reported by Provincial Directorates of Industries	2,364	1,403	770	165	14	12
7	No. of non-responding factories	3,213	2431	423	76	74	209

Adjustment for non-response

The problem with the CMI's as well as with other economic statistics in Pakistan is unit non-response (i.e. the establishments as a whole are not reporting), and also item non-response (i.e. some of the variables are left out in reporting). There are two reasons why it is necessary to deal with non-response and to estimate missing results: first of all, the census should give a comprehensive scope. Secondly, the growth rates and the structural changes between two subsequent censuses must not depend on different intensities to avoid defaulting.

Accordingly, the contribution to GDP has also been adjusted for non-response. The procedure of adjustment for non-response is explained in more detail later on in this report. Researchers or analysts who prefer to apply their own raising techniques or to utilize data as they originate from the survey may refer to the census (un-raised) figures. The tables, charts and figures presented in this report cover non-adjusted census results while the Contribution to GDP (at basic prices) adjusted for non-response has been given in Chapter -2 (Table 2.12) and Annexure-3.

Industrial Classification

An establishment is classified in a particular industry on the basis of value of major products & by-products or services rendered, falling within the scope of manufacturing activity according to Pakistan Standard Industrial Classification (PSIC-2007), which is comparable at 4-digit level with International Standard Industrial Classification, ISIC Rev3.1. The classification consists of sections, divisions, groups, classes and sub-classes. For example, refined vegetable oils and fats are classified as per following:

Section	Division	Group	Class	Sub-class	Description
D					Manufacturing
	15				Food products & beverages
		151			Meat, fruit, vegetables, oils & fats
			1514		Vegetables & animal oils & fats
				15144	Refined oils & fats except residues

PSIC at 2-digit (Division) level is given at Table-1.2 below.

Table 1.2: Pakistan Standard Industrial Classification (PSIC-2007)

Division	Description	Division	Description
15	Food & Beverages	26	Other non-metallic mineral products
16	Tobacco	27	Basic metals
17	Textiles	28	Fabricated metals
18	Wearing apparel	29	Machinery & equipment
19	Leather	31	Electrical machinery & apparatus
20	Wood products	32	Radio, TV & communication products
21	Paper products	33	Medical & optical instruments
22	Printing & publishing	34	Motor vehicles & trailers
23	Petroleum	35	Other transport equipment
24	Chemical products	36	Furniture
25	Rubber & Plastics	37	Recycling

Manufacturing Activity

Manufacturing activity is defined as the mechanical or chemical transformation of inorganic and organic substances into new compounds whether the work is carried out by hand or through driven machine in a factory or in the worker's house. Manufacturing activities include treating, processing, assembling, repairing and services.