

## EXECUTIVE SUMMARY

Manufacturing is a key part of the economy. In FY 2005-06 it contributed about 19 % to the GDP of Pakistan. It is traditionally decomposed into large-scale manufacturing and small-scale manufacturing industries.<sup>1</sup> The Census of Manufacturing Industries (CMI) focuses on the production and investment behaviour of Large Scale Manufacturing Industries (LSMI) covering establishments employing 10 or more employees. Results for small-scale manufacturing would be provided by the Survey of Small and Household Manufacturing Industries (SHMI) presently being conducted by Federal Bureau of Statistics.

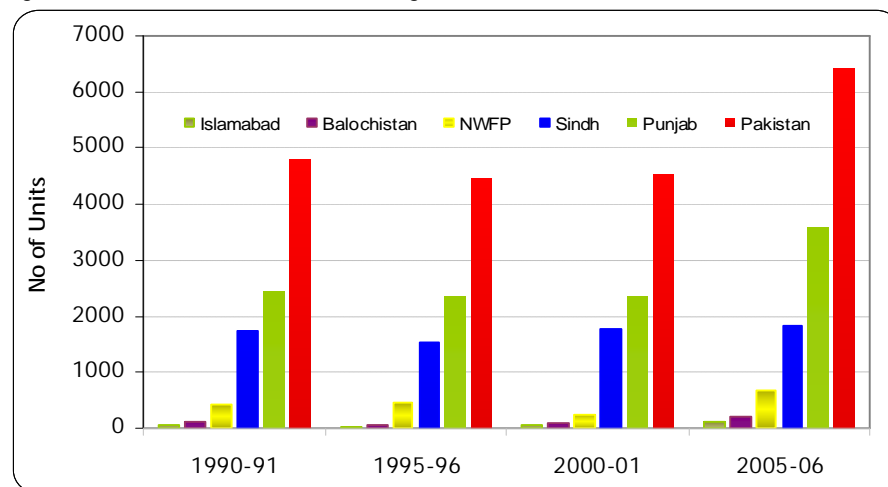
### COVERAGE

The Census of Large Scale Manufacturing Industries is conducted after every five years using the frame of Provincial Labour Departments. CMI 2005-06 frame was enhanced using industrial directories provided by Provincial Directorates of Industries as well as results of Economic Census 2001 conducted by Federal Bureau of Statistics. Intensified efforts were made to improve coverage. The Information was collected through mailed questionnaires followed by field visits by Provincial Directorates of Industries. Annual reports of the establishments listed with stock exchanges were also used to augment the coverage. As a result, number of establishments covered in CMI 2005-06 were 41.7 % higher than CMI 2000-01, as shown at Table-1 and Figure-1.

Table-1: Number of Manufacturing Establishments covered in Latest CMIs

Region	1990-91	1995-96	2000-01	2005-06
Pakistan	4,792	4,474	4,528	6,417
Punjab	2,452	2,364	2,357	3,590
Sindh	1,751	1,528	1,768	1,825
NWFP	425	468	236	673
Balochistan	110	69	93	212
Islamabad	54	45	74	117

Figure-1 Number of Manufacturing Establishments covered in Latest CMIs



<sup>1</sup>Slaughtering is now a part of manufacturing as per revised Pakistan Industrial Standard Classification (PSIC 2007). Slaughtering was neither covered in earlier CMIs nor it has been included in the CMI 2005-06. Its accounts would, however, be estimated separately by FBS for National Accounts purposes.

This also holds for "Publishing of newspapers, journals and periodicals" (PSIC class 2212) which has been omitted in the census though according to the new PSIC-classification they also fall under manufacturing. The reason is that the newspaper agencies do not fall under the Factories Act 1934. These agencies will be covered by a special survey or study during the next months.

## TRENDS IN PRODUCTION AND INVESTMENT

Brief outline of main results of the census including production value, census value added, contribution to GDP and capital stock are given in the following paragraphs.

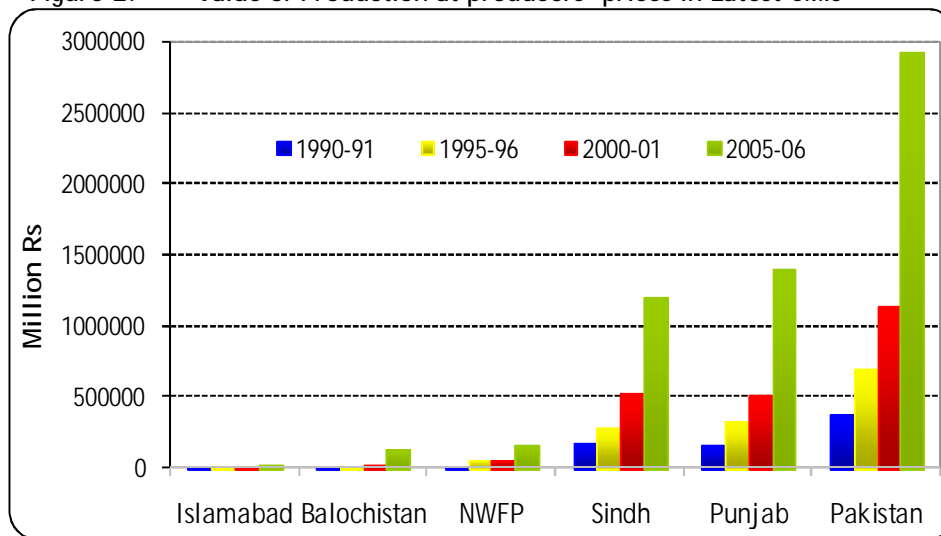
### Production Value

Census of Manufacturing Industries (CMI) 2005-06 shows value of production at Rs 2,929 billion depicting an increase of 165% over Rs 1,104 billion in Census of Manufacturing Industries 2000-01. The values of production at producers' prices recorded at national and provincial levels in last four CMIs are given at Table-2 and Figure-2. It may be noted that these values include all indirect taxes (net of subsidies) except general sales tax. Details about different valuation methods of output and value added may be seen in chapter -3 (Concepts and Definitions).

Table-2: Value of Production at producers' prices in Latest CMIs Million Rs

Region	1990-91	1995-96	2000-01	2005-06
Pakistan	369,664	678,196	1,104,185	2,929,320
Punjab	162,052	321,623	497,708	1,405,699
Sindh	179,736	280,662	522,617	1,200,402
NWFP	14,993	60,689	46,439	164,313
Balochistan	9,822	8,843	23,828	136,582
Islamabad	3,061	6,379	13,593	22,324

Figure-2: Value of Production at producers' prices in Latest CMIs



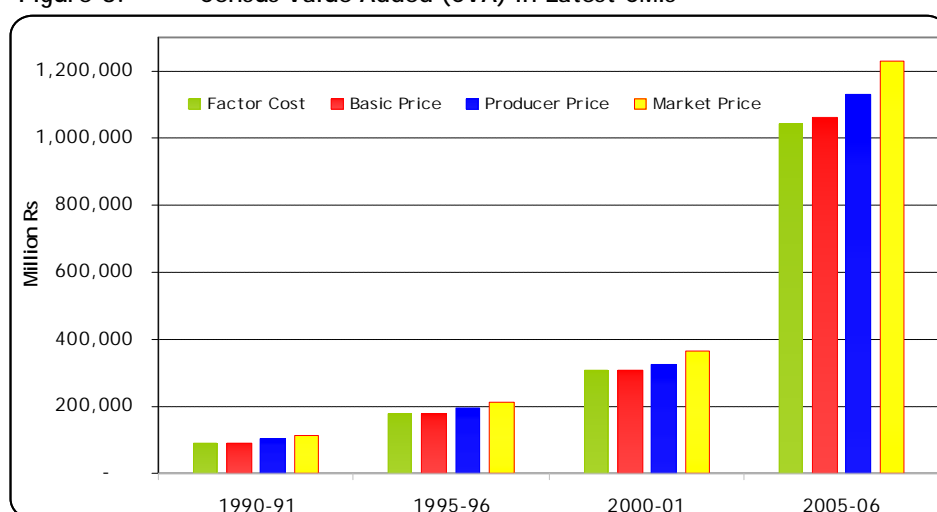
### Census Value Added

Value of production (inclusive of sales tax) minus industrial cost gives Census Value Added (CVA) at market prices, which comes to Rs 1,204 billion in 2005-06 as compared to Rs 366 billion in 2000-01 showing an increase of 229% over last five years. Detailed description of Census Value Added calculated at market prices, producer prices, basic prices and factor cost for the last four Censuses of Manufacturing Industries is given at Table-3 and Figure-3.

Table-3: Census Value Added (CVA) in Latest CMIs Million Rs

S #	Aggregate	1990-91	1995-96	2000-01	2005-06
1	Census Value Added ( <i>market prices</i> )	111,006	212,559	365,989	1,204,281
2	Minus Sales Tax	5,195	14,815	40,879	100,867
3	Census Value Added ( <i>producers' prices</i> ) (1-2)	105,812	197,744	325,110	1,103,414
4	Minus Import/excise duties & other taxes less subsidies on products	12,677	19,654	16,279	68,384
5	Census Value Added ( <i>basic prices</i> ) (3-4)	93,135	178,090	308,831	1,035,030
6	Minus Provincial /District Taxes (Net) <sup>2</sup>	955	1,559	1,259	11,471
7	Census Value Added ( <i>factor cost</i> ) (5-6)	92,179	176,531	307,572	1,023,559

Figure-3: Census Value Added (CVA) in Latest CMIs



### Contribution to GDP (Gross Value Added)

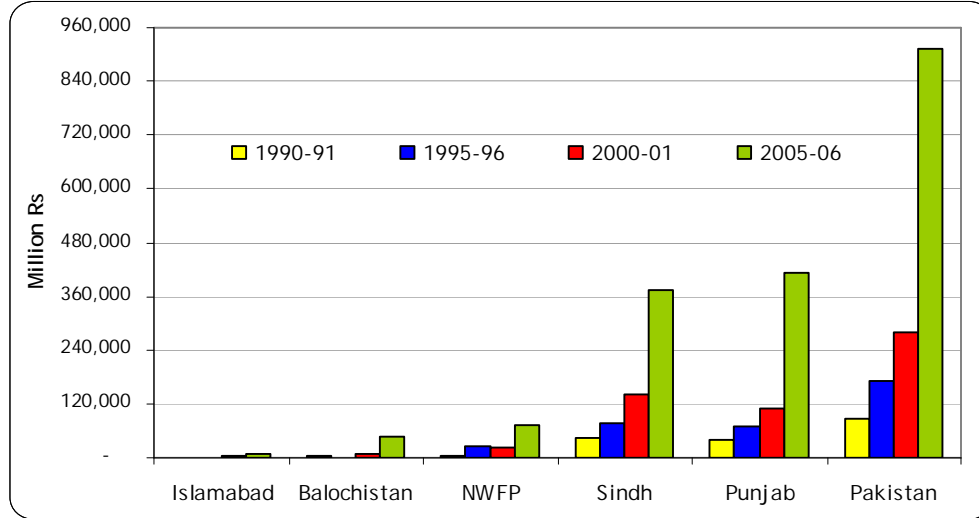
Addition of non-industrial receipts less non-industrial payments into Census Value Added results in value added as measured by National Accounts and termed as contribution to GDP (also termed as Gross Value Added). United Nations System of National Accounts (SNA) 1993 recommends the concepts of contribution to GDP at basic prices and producers' prices (and not at factor cost and market prices). CMI 2005-06 figures show Contribution to GDP at producers' prices (*exclusive of sales tax*) at Rs 912 billion as compared to the previous Census 2000-01 amount of Rs 280 billion as witnessed in Table-4 & Figure-4.

Table-4: Contribution to GDP (GVA) at Producers' Prices in Latest CMIs Million Rs

Region	1990-91	1995-96	2000-01	2005-06
Pakistan	87,852	169,207	279,821	912,147
Punjab	38,230	67,403	105,093	411,990
Sindh	42,323	74,736	147,131	373,429
NWFP	4,430	23,747	20,600	72,983
Balochistan	2,445	1,652	5,724	47,682
Islamabad	423	1,669	1,273	6,064

<sup>2</sup> For simplicity it is assumed that provincial and district taxes / subsidies are the ones which are levied or granted to production as such (i.e. on inputs) in contrast to the taxes and subsidies on products (i.e. on outputs) such as excise duties.

Figure-4: Contribution to GDP (GVA) at Producers' Prices in Latest CMIs



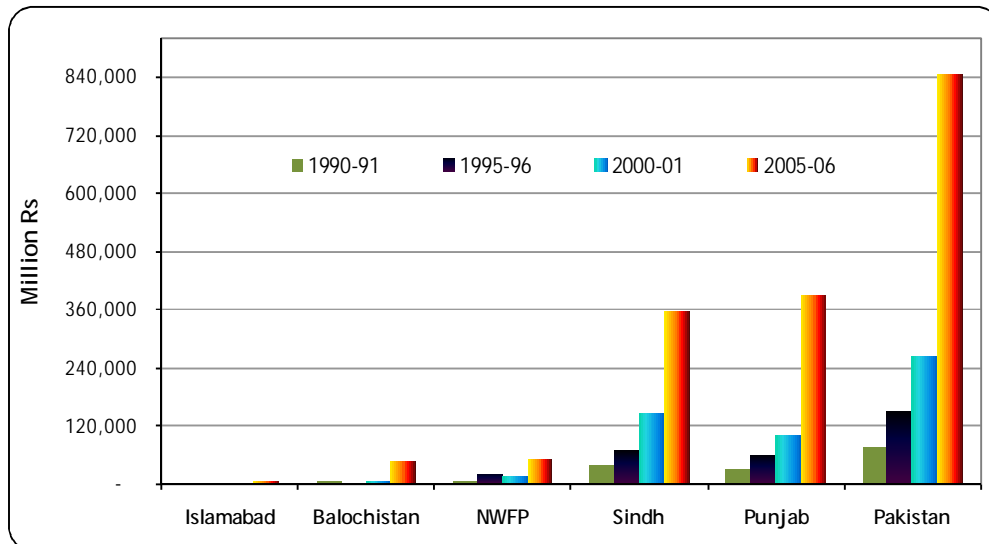
### Contribution to GDP (GVA) at Basic Prices

If we deduct import/excise duties and other taxes net of subsidies on products from contribution to GDP at producers' prices, we get contribution to GDP at basic prices. CMI 2005-06 figures show Contribution to GDP at basic prices at Rs 844 billion as compared to previous Census 2000-01 amount Rs billion 264 as witnessed in Table-5 & Figure-5.

Table-5: Contribution to GDP (GVA) at Basic Prices in Latest CMIs Million Rs

Region	1990-91	1995-96	2000-01	2005-06
Pakistan	75,174	149,554	263,541	843,762
Punjab	30,753	56,847	97,790	387,612
Sindh	38,499	69,802	143,903	353,942
NWFP	3,567	20,313	15,523	50,670
Balochistan	2,148	1,511	5,591	46,269
Islamabad	207	1,081	734	5,271

Figure-5: Contribution to GDP (GVA) at Basic Prices in Latest CMIs



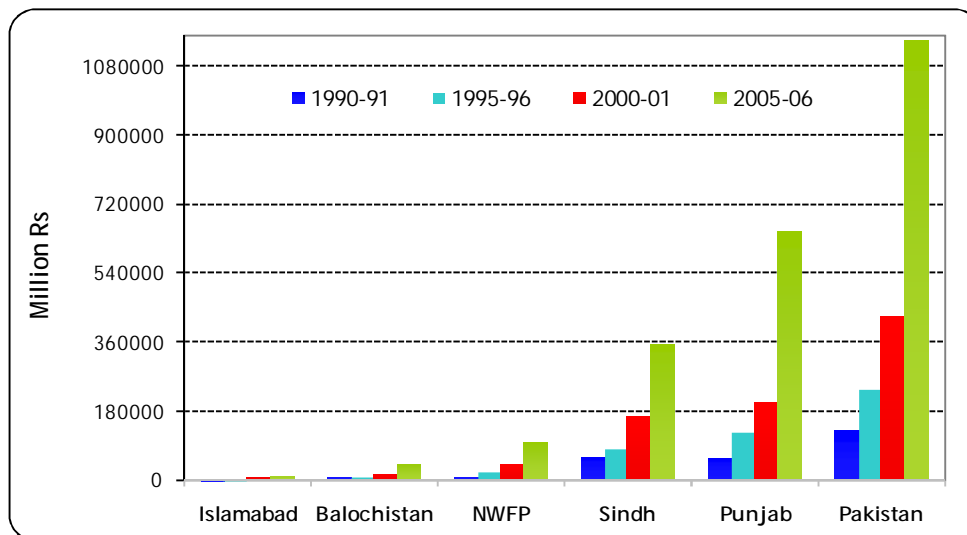
## Capital Stock (Fixed Assets)

Capital stock or value of fixed assets at the end of fiscal year 2005-06 have been calculated as the value of fixed assets at the beginning of fiscal year plus investment during the fiscal year 2005-06 (purchases less sales of fixed assets plus additions to fixed assets out of own production). It amounted to Rs 1,147 billion at the end of fiscal year 2005-06 as compared to Rs 428 billion at the end of fiscal year 2000-01, showing 168% increase. Values of fixed assets calculated during last four CMIs are given in Table-6 & Figure-6.

Table-6: Value of Fixed Assets at the end of Fiscal Year in Latest CMIs Million Rs

Region	1990-91	1995-96	2000-01	2005-06
Pakistan	125,618	235,774	427,670	1,147,318
Punjab	52,915	123,683	201,105	648,435
Sindh	57,863	81,034	168,816	351,637
NWFP	5,773	22,785	41,836	97,494
Balochistan	6,726	6,414	12,976	39,101
Islamabad	2,341	1,858	2,937	10,651

Figure-6: Value of Fixed Assets at the end of Fiscal Year in Latest CMIs



## Industrial Classification

Pakistan Standard Industrial Classification (PSIC) 2007<sup>3</sup>, developed on the basis of UN International Standard Industrial Classification ISIC Rev-3.1, has been used to classify manufacturing activities. Under this classification, cotton ginning, pressing and baling activity is now a part of agriculture. This is, however, still commonly considered one of the major manufacturing activities and Provincial Directorates of Industries have covered 456 cotton ginning & baling units in Punjab and 84 units in Sindh in CMI 2005-06. The statistics of these units have, therefore, been included in the report against sub-class 15142 for making it comparable with results of earlier CMIs.

<sup>3</sup> CMI 2005-06 was conducted in 2006-07 using PSIC developed during 2006-07.

It has already been mentioned that in this CMI as well as in the previous ones slaughtering is not included. This also holds for PSIC class 2212 "Publishing of newspapers, journals and periodicals" which has been omitted though according to the new PSIC-classification they also fall under manufacturing.

### Structural Changes (weights)

An important objective of the censuses is to inform about structural changes within manufacturing. These changes can best be measured by weights of selected variables of Large Scale Manufacturing Industries. Such weights have been developed activity wise according to PSIC -2007. Major changes have been observed in the weights of following activities.

Table-7: Major changes in weights by activity as % of contribution to GDP (BP)

Industry		Weights in % of total large scale manufacturing			
PSIC code	Short description	CMI adjusted for non-response 2000-01	CMI 2005-06	CMI adjusted for non-response 2005-06	CMI adjusted for non-response 2005-06 excluding Cotton Ginning
15	Food Products & Beverages	14.83	15.32	14.51	15.20
16	Tobacco products	3.06	2.22	2.03	2.13
17	Manufacture of textiles	28.14	26.53	26.03	27.27
18	Wearing Apparel	3.36	3.94	5.20	5.45
19	Leather products	2.30	0.91	0.91	0.95
21	Paper & paper products	1.00	2.70	2.80	2.93
24	Chemicals & chemicals Products	15.03	14.35	12.89	13.50
26	Other Non – metallic mineral Products	5.21	7.28	6.28	6.58
27	Basic metals	3.55	4.57	5.39	5.65
29	Machinery & equipment n.e.c	2.96	1.99	1.91	2.00
34	Motor vehicles & trailers	4.18	4.50	4.21	4.41
35	Other transport equipment	0.28	1.26	1.12	1.18

### Limitations of Census Data

The Census of Large-Scale Manufacturing Industries is based on the lists of factories registered or establishments qualifying for registration under the Factories Act 1934:

- a) The CMI frame may be incomplete since
  - (i) some factories eligible for registration with Provincial Labour Departments may not have got themselves registered.
  - (ii) some factories might have gone out of operation but their names appear in the frame.
- b) There is considerable amount of non-response, as 3,213 establishments stand defaulters (Table-8). The CMI results, therefore, need to be adjusted with the results of non-response estimates.
- c) Quantities of outputs and inputs are not given in all cases; hence, their quantitative aggregates at activity level as well as overall aggregates are often not meaningful.

Table-8: Number of Establishments and Non - response in CMI 2005-06

PSIC Code	Industry Major Groups	Total	Covered	Closed	Defaulters					
					Pakistan	Punjab	Sindh	NWFP	Balo-chistan	Islamabad
	ALL INDUSTRIES	13,146*	6,417	2,364	3,213	2,431	423	76	74	209
151	Meat, fruit & vegetables	271	146	95	30	16	10	1	-	3
153	Grain milling & animal feed	1,403	901	219	283	203	14	13	28	25
154	Other food products	324	190	72	62	34	13	2	3	10
171	Manufacture of textiles	2,153	1,081	672	400	270	114	5	11	-
172	Other textiles	325	140	91	94	76	13	1	1	3
173	Knitted & crocheted products	260	108	58	94	65	26	-	-	3
181	Wearing apparel	841	324	155	362	273	75	-	-	14
191	Tanning & dressing of leather	251	106	77	68	62	6	-	-	-
210	Paper & paper products	294	133	59	102	81	11	3	1	6
242	Other chemical products	639	394	99	146	87	18	8	5	28
252	Plastic products	221	142	35	44	22	12	3	4	3
269	Non-metallic mineral products	613	448	71	94	34	2	8	2	48
271	Basic iron & steel	451	245	75	131	100	11	2	2	16
289	Other metal products	171	117	27	27	19	5	-	3	-
292	Special-purpose machinery	211	142	29	40	35	4	1	-	-
293	Domestic appliances n.e.c.	210	162	38	10	7	3	-	-	-
343	Parts of motor vehicles	271	123	45	103	97	4	-	1	1
CG	Cotton ginning	840	540	21	279	279	-	-	-	-
	All Other Industries	2,245	975	426	844	671	82	29	13	49
-	Irrelevant**	819	-	-	-	-	-	-	-	-

\*333 units were found duplicate in the CMI frame of Punjab.

\*\* 819 units were found carrying out activities other than manufacturing.