

GROWTH OF MANUFACTURING INDUSTRIES IN PAKISTAN: NATIONAL AND PROVINCIAL CONTEXT

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Abstract: Growth of manufacturing in Pakistan and the provinces is analyzed in terms of changes at national and provincial levels, mainly from 1969-70 (after restoration of provinces) to the year 2005-06. To measure the industrial growth two significant structural variables i.e. average daily employment (ADE) and value added (VA) have been employed. In Pakistan manufacturing employment increased continuously but was marked by high and low growth rates. After nationalization of industry in 1972, the growth rate declined to the lowest ever (0.80 per cent) over the decade 1969-70 to 1979-80. The revival of manufacturing through private initiative gave a boost which became pronounced in the period 2001 to 2006, attaining an exceptionally high average annual growth rate (AAGR) of 7.22 percent. Punjab witnessed remarkable growth of ADE, almost 150 per cent increase during the period 1969-70 to 2005-06. Sindh recorded continuous growth, especially with 2.35 per cent growth rate in the year 2005-06. Both in N.W.F.P. (now Khyber Pakhtunkhwa) and Balochistan progress in manufacturing was slow and marked by fluctuations in industrial employment from time to time. High increases in VA were continuously recorded throughout the past sixty years with an AAGR from 22.90 percent, the lowest during the decade 1990-91 to 2000-01, to that of 43.21 percent for the five-year period, 2000-01 to 2005-06. In Punjab the growth pattern of VA was similar to that of Pakistan with high growth rates in various periods. In Sindh high growth rates of VA were recorded throughout which considerably increased i.e. 30.30 per cent over the 5-year period 2000-2001 to 2005-06. N.W.F.P.(Khyber Pakhtunkhwa) showed high growth rates in VA, though the growth rate was slow in 1980s. In Balochistan the industrial growth since 1970 was appreciable with high increases in VA, particularly during the period 2000-01 to 2005-06.

Introduction

Since independence in 1947 Pakistan has emerged as a transformed economy from predominantly agrarian to an agricultural-industrial entity. The industrial development which went apace during the past sixty years was a major factor impacting almost all sectors of national economy (Ahsanullah and Hussain Ahmad, 2001). In the area of foreign trade the entire structure witnessed a drastic change as the country became an exporter of finished goods and an importer of industrial raw- materials. Manufacturing in Pakistan progressed at different rates and spread to

more than five hundred locations across the country (Hussain Ahmed, 1995). Though in the beginning manufacturing concentrated in a few metropolises, but with passage of time it came to be established in several locations overall the provinces (Govt. of Pakistan, 1984). Because of highly favorable circumstances, Punjab and Sindh acquired dominant share of manufacturing.

The paper in hand analyzes the pattern of growth of manufacturing industries in Pakistan and its provinces over the period from 1969-70 to 2005-06. The analysis uses

the data published by the Census of Manufacturing Industries (CMI).

Materials and Methods

Growth is assessed in terms of variables and measures changing over time-periods that show distinct pace of progress. The methodology of assessing growth and different phases involves a three step procedure:

1. Selection of key growth variables and the years (as time-posts) whose data should provide the bases for assessment of growth and measurement of growth rate,
2. Measuring and analyzing the growth rate over different time-periods,
3. Identification of growth phases on the basis of various growth rates over different time-periods.

For analysis of growth two chief variables have been selected: (1) average daily employment, and (2) value added (Wright, 1938; Hartshone, 1936; Macarty, 1940; Florance et al., 1943). The years chosen for growth analysis are represented by annual time-periods of 1969-70, 1979-80, 1990-91, 2000-01 and 2005-06. The selected years are so chosen as to present a span more or less a decade. The last mentioned year 2005-06 is one when the latest CMI had been undertaken (but published in the year 2010). The analysis uses the conventional measures of percentage increase and decrease and average annual growth rate which have been calculated for different selected time periods.

Growth in average daily employment in Pakistan

Since 1969-70 continuous growth in manufacturing employment had taken place, though it was marked by periods of high and low growth and fluctuations in the growth

rate. During the period 1969-70 to 1979-80 there was a limited growth in the average daily employment with as low average annual growth rate as 0.80 per cent. Obviously the growth was marred by the after-effects of the policy of nationalization pursued in 1970s and thereafter feeble attempts by the government at revival of the industrial sector. The period from 1979-80 to 1990-91 clearly marks the vigorous revival and regeneration of manufacturing enterprises under a new economic regime of denationalization and privatization (Economic Survey 1992). In the following period (1990-91 to 2000-01) the manufacturing sector witnessed a notably slow growth with limited addition in industrial employment and very low average annual growth rate (1.05). This low growth is attributed to a combination of factors such as political instability characterized by rapid change of governments, lack of investment for industrial development and the prevailing phenomenon of sickness of a large number of manufacturing establishments in the country (Economic Survey, 1998-99). Industrial development was given a boost after 2001-02 because of investment-friendly policies and a concerted program of industrial development across the country. The manufacturing sector was invigorated by the rapid expansion of foreign investment and participation (Economic Survey, 2002-03). As a consequence the manufacturing activity experienced a high growth of over 36.12 per cent over a period of last five years 2000-01 to 2005-06 with an impressive annual average growth rate of 7.22 (Table 1).

Table 1 Growth of Manufacturing in Pakistan: Average Daily Employment, 1969-70 to 2005-06

Years	Number	Absolute increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	418,360			
1979-80	451,935	33,575	8.03	0.80
1990-91	618,754	166,819	36.91	3.36
2000-01	683,520	64,766	10.47	1.05
2005-06	930,391	246,871	36.12	7.22

Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Growth in average daily employment in Punjab

The growth of average daily employment in Punjab is analyzed and presented in Table 2. There has been almost 158 per cent increase in the average daily employment during the period 1969-70 to 2005-06. The growth over most of the period has been marked by continuous increase but at the same time a notable decrease in the growth rate over a limited period i.e. from 1990-91 to 2000-01. It may be pointed out that the average annual growth rate decreased from 2.77 per cent in 1990-91 to 2.42 per cent in 2000-01 and this coincided with the crisis period of manufacturing that prevailed in the country. After 2001 a high growth in the average daily employment was recorded so

that in the year 2005-06 average annual growth rates attained the figure of 9.72 per cent. It is evident from the table that the entire period shows four distinctive growth phases: (1) a period of slow growth, 1969-70 to 1979-80, recording a low figure of 0.75 per cent as average annual growth, (2) a period of high growth, 1979-80 to 1990 -91, with notably high average annual growth rate of 2.77 per cent, (3) a period of slow growth from 1990-91 to 2000-01 registering average annual growth rate of 2.42 per cent, and (4) a period of exceptionally high growth rate and increase in average daily employment from 2000-01 to 2005-06, recording a high percentage increase of 48.58 per cent over 2000-01 and a very high average annual growth rate at 9.72 per cent (Table 2).

Table 2 Growth of Manufacturing in Punjab: Average Daily Employment, 1969-70 to 2005-06

Years	Number	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	215,988			
1979-80	232,081	16,093	7.45	0.75
1990-91	302,728	70,647	30.44	2.77
2000-01	376,023	73,295	24.21	2.42

2005-06	558,708	182,685	48.58	9.72
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Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Growth in average daily employment in Sindh

In Sindh the average daily employment in manufacturing recorded continuous expansion from 1969-70 to 2005-06. During this period, the size of employment expanded about 71.64 per cent over that of 1969-70. Between the years 1969-70 and 1979-80, the growth was very low recording a figure of 0.68 per cent average annual growth rate. In the decade from 1979-80 to 1990-91 an appreciable increase in average daily employment with considerably high percentage of 41.07 per cent over 1979-80 and an appreciably high average annual growth rate of 3.73 per cent was recorded. In the following period marred by the crises in the manufacturing sector, the growth rate of average daily employment again fell appallingly to an average of 0.18 per cent between the years 1990-91 and 2000-01. The period 2000-01 to 2005-06 witnessed the revival of manufacturing and an appreciable increase in average daily employment which during the five years recorded an average annual growth rate of 2.38 per cent (Table 3).

Growth in average daily employment in Khyber Pakhtunkhwa

Manufacturing in N.W.F.P. (Khyber Pakhtunkhwa) is considerably of far smaller size as compared with the Punjab or Sindh. The industrial employment was 6.7 per cent of Pakistan's total manufacturing employment in the year 2005-06. During the period, 1969-70 and 2005-06, small increases in manufacturing employment were recorded for the selected years as shown in the Table 4. The overall growth has been very slow and in the period from 1990-91 to 2000-01 the crises in manufacturing contributed to a decline in manufacturing employment so that average annual growth rate during this period was - 2.14 per cent. The industrial expansion in the province accelerated between 2000-01 and 2005-06 to record a high percentage increase of 70.74 per cent in the year 2005-06 over that of 2000-01 and a remarkably high annual average growth rate of 14.15 per cent for a period of 5 years (Table 4).

Table 3 Growth of Manufacturing in Sindh: Average Daily Employment, 1969-70 to 2005-06

Years	Number	Absolute Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	169,172			
1979-80	180,712	11,540	6.82	0.68
1990-91	254,925	74,213	41.07	3.73
2000-01	259,483	4,558	1.79	0.18

2005-06	290,376	30,893	11.91	2.38
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Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Table 4 Growth of Manufacturing in (Khyber Pakhtunkhwa): Average Daily Employment, 1969-70 to 2005-06

Years	Number	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	31,018			
1979-80	34,174	3,156	10.17	1.02
1990-91	46,528	12,354	36.15	3.29
2000-01	36,548	-9,980	-21.45	-2.14
2005-06	62,403	25,855	70.74	14.15

Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Growth in average daily employment in Balochistan

The size of manufacturing in Baluchistan has been very limited. The manufacturing employment of Baluchistan was only about 2.06 per cent of Pakistan's manufacturing employment during the year 2005-06. The growth rate prior to 1990-91 was quite higher but like N.W.F.P, average daily employment recorded a decline during the period 1990-91 to 2000-01 and recorded an average annual growth rate -2.13 per cent. Thereafter, the industry witnessed revival with a high percentage increase of 67.64 per cent recorded for the year 2005-06 over that of 2000-01 and a high average annual growth

rate of 13.50 per cent during this period of five years (Table 5).

Growth in average daily employment in Islamabad

Manufacturing in Islamabad is a recent development and is very limited in its size. The average daily employment during the year 2005-06 was 1.17 per cent of total manufacturing of Pakistan. The growth rate has been considerably high particularly in the five-year period from 2000-01 to 2005-06 which recorded an annual growth rate of 13.00 per cent (Table 6).

Table 5 Growth of Manufacturing in Balochistan: Average Daily Employment, 1969-70 to 2005-06

Years	Number	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	2,182			

1979-80	4,968	2,786	127.68	12.77
1990-91	14,573	9,605	193.34	17.58
2000-01	11,466	-3,107	-21.32	-2.13
2005-06	19,204	7,738	67.49	13.50

Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Table 6 Growth of Manufacturing in Islamabad: Average Daily Employment, 1969-70 to 2005-06

Years	Number	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70				
1979-80				
1990-91	4,626			
2000-01	6,602	1,976	42.72	4.27
2005-06	10,892	4,290	64.98	13.00

Source :CMI, 1990-91,2000-01,2005-06

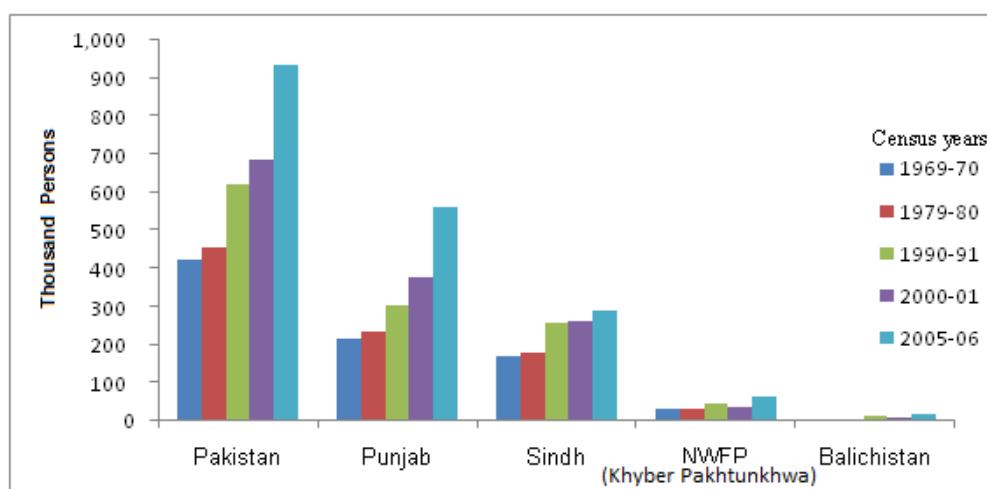


Fig.1. Growth of manufacturing in Pakistan: average daily employment by province, 1969-70 to 2005-06

Growth of value added in Pakistan

Table 7 analyzes the growth trend of manufacturing in Pakistan in terms of value added. The growth has been continuous and sizable with high average annual growth rates in all the periods shown by the selected years. It may be noted that even during the crises

period spanning from the year 1990-91 to 2000-01, the absolute increase in value added was remarkably high, though the average annual growth rate for the period was the lowest i.e. 22.90 per cent, in sharp contrast to the growth rates of both preceding and following years. The five year period (2000-01 to 2005-06) recorded exceptionally high

increase in value added with an average annual growth rate of 43.2 per cent which surpassed all the previous growth records.

Table 7 Growth of Manufacturing in Pakistan: Value Added, 1969-70 to 2005-06

Years	Value Added (Thousand Rupees)	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	4,811,309			
1979-80	24,660,963	19,849,654	412.56	41.26
1990-91	110,352,298	85,691,335	347.48	31.59
2000-01	363,071,000	252,718,702	229.01	22.90
2005-06	1,147,561,628	784,490,628	216.07	43.21

Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

average annual growth rate for the same period at the country level.

Growth of value added in Punjab

As shown by Table 8, the growth pattern of value added in Punjab from the year 1969-70 to 2000-02 follows the growth pattern of Pakistan. This also means that the increase of value added in the province of Punjab clearly influenced the overall growth trend of Pakistan .Throughout the period considerably high increases were recorded with high average annual growth rate for various periods. In Punjab the increase in the value added during the crises period was remarkably high but the average annual growth rate i.e. 21.31 per cent was the lowest. This situation was reflected at the national level. Following 2000-01 the increase in value added was exceptionally high as within this five-year period the average annual growth rate went up to 51.88 per cent which also exceeded the

Growth of value added in Sindh

The growth pattern of value added in Sindh during the period (1969-70 to 2005-06) shows close similarity with the growth pattern of Pakistan. High increases of value added were recorded for all the periods including the crises period following the year 1990-91 for which the average annual growth rate was 23.35 per cent, the lowest. The increase of value added from the year 2000-01 to 2005-06 was notably very high with an average annual growth rate of 30.30 per cent. This high increase with its average annual growth rate was however much lower than that of the Punjab. This may be the long term effect of the problems faced by the industries in Sindh during the crises period (Table 9).

Table 8 Growth of Manufacturing in Punjab: Value Added, 1969-70 to 2005-06

Years	Value Added (Thousand Rupees)	Average Increase/ Decrease	Percentage Increase/Decrease	Average Annual Growth Rate
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			Over Preceding Year	(in Percentage)
1969-70	2,224,178			
1979-80	10,443,888	8,219,710	369.56	36.96
1990-91	47,925,419	37,481,531	358.88	32.63
2000-01	150,261,000	102,335,581	213.53	21.35
2005-06	540,005,000	389,744,000	259.38	51.88

Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Table 9 Growth of Manufacturing in Sindh: Value Added, 1969-70 to 2005-06

Years	Value Added (Thousand Rupees)	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	2,209,858			
1979-80	11,802,444	9,592,586	434.08	43.41
1990-91	53,500,657	41,698,213	353.30	32.12
2000-01	178,415,000	124,914,343	233.48	23.35
2005-06	448,702,628	270,287,628	151.49	30.30

Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Growth of value added in Khyber Pakhtunkhwa

The increase in value added in N.W.F.P from 1969-70 to 2005-06 has been both continuous and considerable for various time periods as recorded in Table 10. The growth pattern differs from that of Pakistan or those of Punjab and Sindh in that the expansion of the industry as indicated by the increase of value added even during the crises period was conspicuously very high, recording the average annual growth rate of 39.2 per cent for the years between 1990-91 and 2000-01 .The size of value added and the high average annual growth rate of 48.72 per cent recorded for the years 2000-01 to 2005-06 indicated a growth pattern almost parallel with that of Punjab (Table 2.10).

Growth of value added in Balochistan

Since 1969-70 the industrial development of Balochistan has shown remarkable growth, as evident by high percentage increases. The period from 2000-01 to 2005-06 was marked by exceptionally high growth in value added which is an indication of extra- ordinary expansion of manufacturing activity in the province (Table 11).

Growth of value added in Islamabad

The manufacturing industry in Islamabad is a recent addition in the industrial development of Pakistan. Table 12 shows no data was published in the CMI for the first two selected years. The growth of manufacturing from 1990-91 to 2005-06 was appreciably high with high average annual growth rate over the recorded periods.

Table 10 Growth of Manufacturing in Khyber Pakhtunkhwa: Value Added, 1969-70 to 2005-06

Years	Value Added (Thousand Rupees)	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	367,723			
1979-80	2,195,395	1,827,672	497.02	49.70
1990-91	5,390,191	3,194,796	145.52	13.23
2000-01	26,570,000	21,179,809	392.93	39.29
2005-06	91,288,000	64,718,000	243.58	48.72

Source :CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Table 11 Growth of Manufacturing in Balochistan: Value Added, 1969-70 to 2005-06

Years	Value Added (Thousand Rupees)	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70	9,550			
1979-80	219,236	209,686	2195.66	219.57
1990-91	3,536,031	3,316,795	1512.89	137.54
2000-01	7,825,000	4,288,969	121.29	12.13
2005-06	67,566,000	59,741,000	763.46	152.69

Source: CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

Table 12 Growth of Manufacturing in Islamabad: Value Added, 1969-70 to 2005-06

Years	Value Added (Thousand Rupees)	Average Increase/ Decrease	Percentage Increase/Decrease Over Preceding Year	Average Annual Growth Rate (in Percentage)
1969-70				
1979-80				
1990-91	654,110			
2000-01	2,917,000	2,262,890	345.95	34.59
2005-06	8,191,000	5,274,000	180.80	36.16

Source: CMI, 1969-70,1979-80,1990-91,2000-01,2005-06

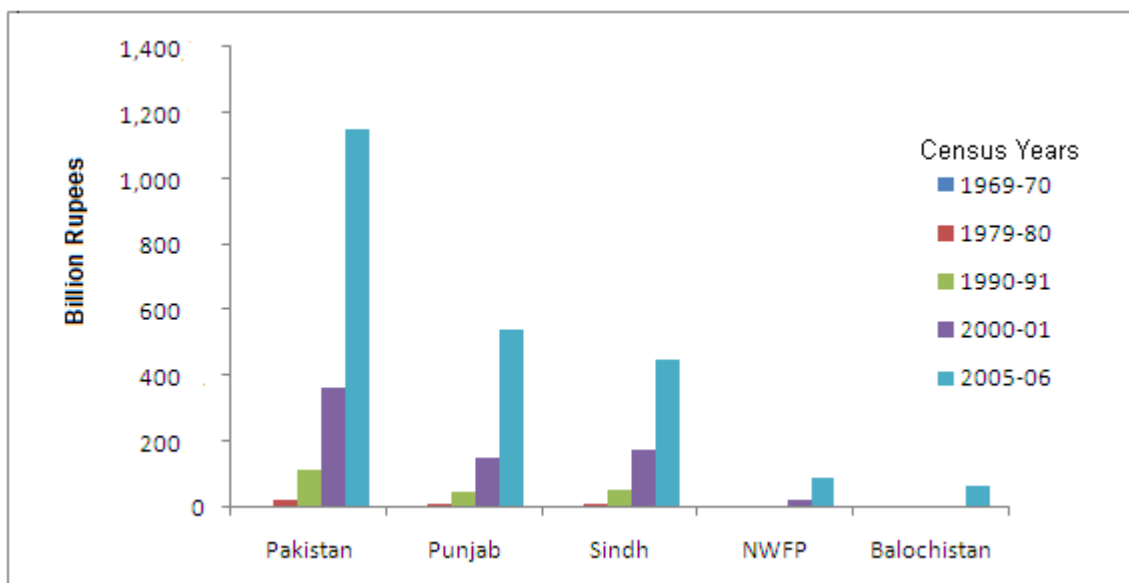


Fig.2. Growth of manufacturing in Pakistan: value added by province, 1969-70 to 2005-06

Conclusion

In Pakistan manufacturing employment increased continuously but was marked by high and low growth rates. After nationalization of industry in 1972, the growth rate declined to the lowest ever (0.80 percent) over the decade 1969-70 to 1979-80. The revival of manufacturing through private initiative gave a boost which became pronounced in the period 2001 to 2006 attaining an exceptionally high average annual growth rate (AAGR) of 7.22 percent. Growth of average daily employment (ADE) in Punjab was remarkable in that it achieved almost 150 percent increase during the period 1969-70 to 2005-06. A slight decline in the ADE occurred in the decade spanning from 1990-91 to 2000-01 after which the ADE increased considerably to achieve an extraordinary high

AAGR (9.72 percent) in the year 2005-06. Sindh recorded continuous growth in ADE with the exception of the period / decade of the 90s which was marked by a lowest AAGR (0.18 percent). Thereafter manufacturing gained appreciable increase in employment resulting in a comparatively much higher growth rate (2.35 percent) recorded for the year 2005-06. In NWFP the overall growth of manufacturing industry has been slow and restricted to a much smaller size in comparison with Punjab and Sindh. The industry suffered a considerable decline from 1990-91 to 2000-01 when its AAGR was -2.14 percent. However, in the next six year 2000-01 to 2005-06 remarkable development took place giving notable high AAGR of 14.15 percent for the five years. The size of the manufacturing sector in Baluchistan has been very limited. The AAGR between the year 1969-70 and 1990-91 was notably high but after 1990-91 industrial employment declined so that in the year 2000-01 AAGR came down to be negative (-2.13). Revival in the industry

after 2000 pushed the AAGR to a high figure (13.50) in 2005-06. Industrial development of Islamabad has been limited in size and has recent origin. During 1990-91 and 2000-01 the AAGR recorded was 4.72 percent and thereafter it increased to 13.00 percent over the next five-year period.

High increases in value added were continuously recorded throughout past sixty years. With an AAGR from 22.90 percent, the lowest for the period or decade 1990-91 to 2000-01, to that of 43.21 percent for the five-year period 2000-01 to 2005-06. In Punjab the growth pattern of value added was similar to that of Pakistan. Considerably high increases have been recorded giving a high AAGR for various periods. The growth showed the lowest rate 21.35 percent during the 90s but was exceptionally high within the short five-year period from 2000-01 to 2005-06 i.e. 51.88 percent, far exceeding the AAGR for Pakistan in the same period. In Sindh manufacturing recorded high increase throughout, even over the period of the crisis-ridden 90s with lowest AAGR of 23.35 percent. The subsequent growth produced a substantial increase in value added resulting in higher AAGR of 30.30 percent over the five-year period. Manufacturing in NWFP recorded high growth in value added from 1969-70. The growth had slowed down in the decade of 80s when it achieved a low rate of 13.23 percent in sharp contrast to much higher growth rate in rest of the periods. Considerable industrial development took place in Baluchistan since 1970. Considerably high increases in value added were recorded in the decade of 80s and also in the five-year period from 2000-01 to 2005-06. Since 1991 industrial development in Islamabad proceeded at an appreciable rate recorded substantial increase in value added with high AAGR.

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