



## GROWTH OF THE PROVINCIAL ECONOMIES

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The time for formulation of Provincial Growth Strategies (PGS) has come. These strategies should form the basis for the allocation among sectors of the funds in the respective Annual Development Programs (ADPs). This role of the Provinces in promoting the growth of their respective economies has been greatly facilitated by the passage of the 18th Amendment. This Amendment has led to the abolition of the Concurrent List in the Constitution and the resultant transfer of the large number of functions in this List to the Provinces.

Unfortunately, not much is known currently about the size, composition and growth of the Provincial economies. Pakistan, unlike India, does not have a tradition of constructing and maintaining Regional Income Accounts so as to estimate and derive the trends in the Provincial Gross Domestic Products (PGDPs). This has rendered it extremely difficult to engage in meaningful planning at the Provincial level.

The Pakistan Bureau of Statistics (PBS), in coordination with the Provincial Bureaus of Statistics, should have undertaken the task of distributing the national GDP into the PGDPs on the basis of allocators for each sector. This has not happened because planning has been very much in the Federal domain under the Planning Commission, Government of Pakistan. The approach now required is a 'bottom-up' process whereby Provincial development plans are first prepared and then aggregated into the National Plan. The task for the Federal Planning Commission is to ensure that there is a consistent sectoral and macroeconomic framework to support the Provincial and Federal plans.

The objective of this report is to present estimates by sector of the PGDPs for the period, 1999-2000 to 2014-15. In the process, there is substantial deepening of the knowledge on the economy of Pakistan, especially in terms of the location of different activities.

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The report is organized as follows: Section 2 describes the methodology used for constructing the regional income accounts to yield estimate of the PGDPs. Sections 3 and 4 presents the results of the application of the methodology and conclusions derived regarding the relative size, composition and growth of the four Provincial economies. Section 5 quotes or constructs other indicators of regional growth to judge the consistency of the PGDP estimates. Section 6 asks the question as to whether regional inequality has been increasing or decreasing in Pakistan over the last fifteen years? Section 7 identifies the sub-sectors which can act as potential drivers of growth in each Province. Finally, in Section 8 are presented a summary of the major findings and recommendations.

## 2. METHODOLOGY FOR ESTIMATION OF THE PGDPs

The first attempt at estimating by sector the PGDP of the four Provinces is by Bengali and Sadaqat [2001] under the technical guidance of Professor Hafiz Pasha. The estimates are for the period, 1972-73 to 1999-2000. This report represents extension of the methodology developed in this paper.

This finalization of the methodology is also based on a comprehensive review of literature of papers by Nair [1987] and Tiwari [1971] on India, Walters [1987] on Australia, Adler [1970] on Canada, Arndt [1973] on Indonesia, Brown and Woodward [1969] on the U.K, Sourroile [1976] on Indonesia and Graham and Romans [1971] on the USA.

The methodology essentially involves the identification of appropriate regional allocators of the value added in different sectors/ sub-sectors. The choice depends also on the availability of data. There are three possible approaches including estimation of factor incomes, output or expenditure.

Table 1 gives the allocator used for each sub-sector. The total number of sub-sectors is 17. The factor income approach has been adopted for four sectors, the output method for seven sectors and the expenditure approach for the remaining six sub-sectors. Eight sources of data have been used.



**Table 1**  
**Regional Allocators for Different Sectors/Sub-Sectors**

Sector/Sub-Sector	Allocator	Data Sources*
<b>AGRICULTURE</b>		
Major Crops	Share in Output of major crops	PDS, ASYB
Minor Crops	Share in Output of minor crops	PDS,ASYB
Livestock	Share in Consumption Expenditure	HIES
Forestry	Share in Expenditure on Forest Products	HIES
Fishing	Share in Output	PDS,AYSB
<b>INDUSTRY</b>		
Mining and Quarrying	Share in Output of Crude Oil, Natural Gas and Coal	PDS, EYB
Large-Scale Manufacturing	Share in Output of 100 industries	PDS, PES <sup>a</sup>
Small-Scale Manufacturing	Share in Informal Sector Employment in Manufacturing	LFS
Slaughter	Share in Consumption Expenditure on Livestock Products (excluding milk)	HIES
Electricity, Gas and Water	Shares in electricity generation, electricity consumption, gas consumption and canal water withdrawal	PDS,EYB,ASYB
Construction	Income-Adjusted Share in Employment	HIES,LFS
<b>SERVICES</b>		
Transport, Storage and Communications	Shares in Consumption of POL and number of cellular phone subscribers	OCAC,PTA
Wholesale, and Retail Trade, Hotels and Restaurants	Share in trade margins in marketing of goods and in employment in hotels and restaurants	HIES, LFS
Finance and Insurance	Share in bank advances	SBP
Ownership of Dwellings	Share in actual and imputed rents	HIES
Public Administration and Defense	Income-Adjusted share in employment	HIES,LFS
Community, Social and Personal Services	Income-Adjusted share in employment	HIES,LFS
<sup>a</sup> data was only available for selected industries, for other industries data was obtained directly from the Punjab Bureau of Statistics and Pakistan Bureau of Statistics *Punjab Development Statistics, ASYB=Agricultural Statistics Year Book, HIES=Household Integrated Economic Survey, LFS=Labor Force Survey, OCAC=Oil Companies Advisory Committee, PTA=Pakistan Telecommunication Authority, SBP=State Bank of Pakistan, EYB=Energy Yearbook		

Before presenting the PGDP estimates for the more recent period, the earlier growth patterns by Province are presented in Table 2, as revealed for different epochs by the estimates from Bengali and Sadaqat [2001]. A remarkable empirical regularity is observed. On a long-term basis, over a period of 27 years from 1972-73 to 1999-2000, three Provincial economics of Punjab, Sindh and Khyber-Pakhtunkhwa have grown at virtually the same rate of close to 5%. The only Province which has shown a significantly lower growth rate is Balochistan.

<b>Table 2</b>				
<b>Annual Growth Rate of the Provincial Economies in different Epochs</b>				
	<b>1973-77 (Bhutto)</b>	<b>1977-88 (Zia ul Haq)</b>	<b>1988-1999 (BB+NS)</b>	<b>1973-1999</b>
Punjab	3.2	6.0	4.4	4.9
Sindh	1.9	7.0	4.1	5.0
Khyber-Pakhtunkhwa	1.1	7.0	4.3	5.0
Baluchistan	2.5	4.9	4.6	4.4
<b>Pakistan</b>	<b>2.5</b>	<b>6.4</b>	<b>4.5</b>	<b>4.9</b>

**Source:** Bengali and Sadaqat [2001] BB=Benazir Bhutto, NS= Nawaz Sharif

There is also another pattern in terms of the impact of business cycles. When the economy is growing fast, as in the Zia ul Haq period, Sindh performs relatively well. In low growth periods, as from 1973 to 77, Punjab manages a somewhat higher growth rate. The question is whether these patterns are also observed in the more recent period?

### 3. SIZE AND GROWTH OF PROVINCES

The respective size of the Provinces in the initial year, 1999-2000, and in the latest year, 2014-15, is given in Table 3. As expected, Punjab is the largest provincial economy with a share of just over 54% in 2014-15. However, the share of this Province has fallen somewhat since 1999-2000.

The next economy is that of Sindh with a share of 30% in 2014-15. There has been a modest increase in the share of this Province since 1999-2000. The economy of Khyber-Pakhtunkhwa has a share in the national economy of 13%. It has increased its share significantly since 1999-2000. Balochistan is by far the smallest province, with a declining share.

<b>Table 3</b>				
<b>SIZE OF THE PROVINCIAL ECONOMIES*</b>				
<b>(at constant prices of 2005-06, Billion Rs)</b>				
<b>Province</b>	<b>1999-2000</b>	<b>Share (%)</b>	<b>2014-15</b>	<b>Share (%)</b>
Punjab	3147.7	55.3	5757.0	54.1
Sindh	1686.7	29.6	3192.5	30.0
Khyber-Pakhtunkhwa	644.2	11.3	1380.9	13.0
Balochistan	214.5	3.8	313.7	2.9
<b>Pakistan</b>	<b>5693.1</b>	<b>100.0</b>	<b>10644.1</b>	<b>100.0</b>

**Source:** Estimated  
\*Year wise estimates can be made available by IPR on request.

<b>Table 4</b>			
<b>Share of the Provinces in the National Economy by Sector* 2012-13</b>			
	<b>Agriculture</b>	<b>Industry</b>	<b>Services</b>
Punjab	62.3	39.8	55.7
Sindh	23.1	42.2	28.9
Khyber-Pakhtunkhwa	10.5	14.2	13.0
Balochistan	4.1	3.8	2.4
<b>Pakistan</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Source:</b> Estimated.			
*Sub-sectoral estimates can be made available by IPR on request.			

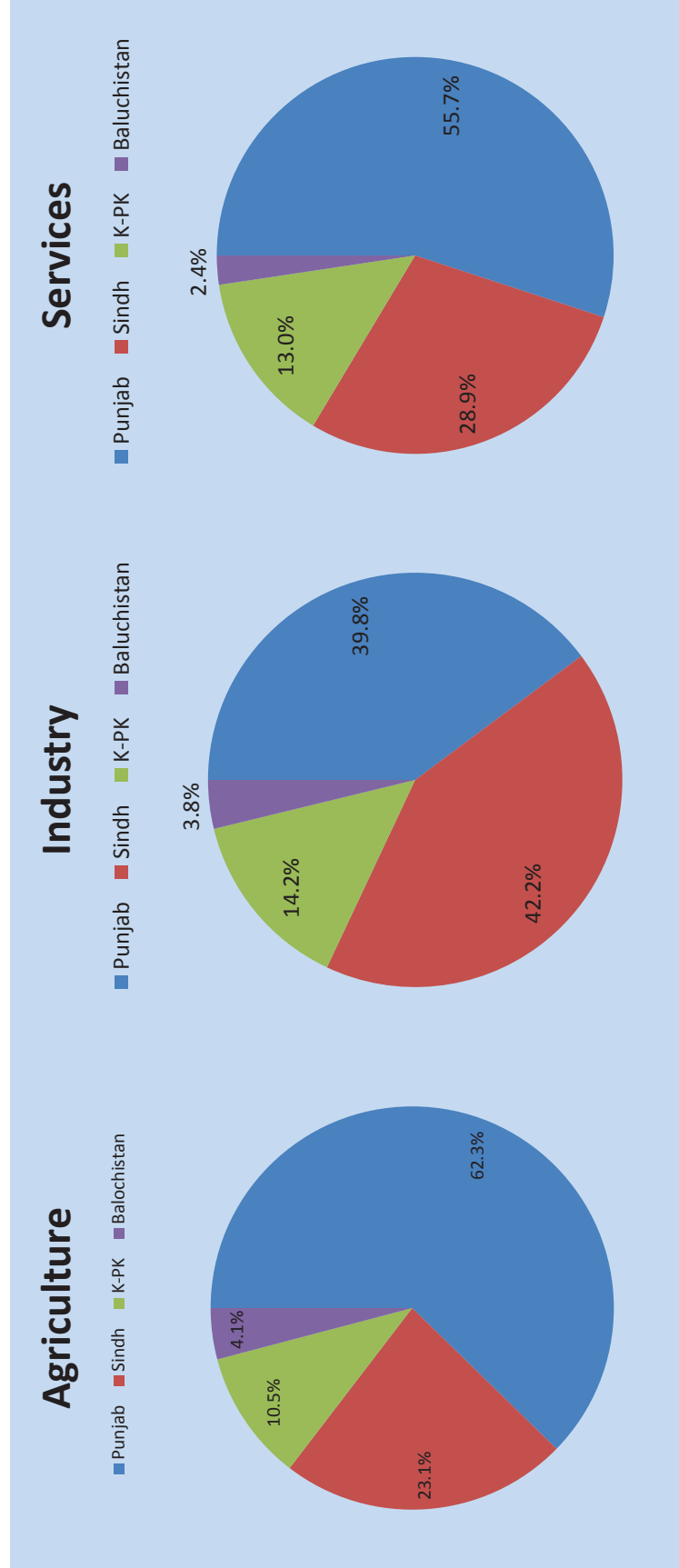
Table 4 presents the sectoral distribution of value added among the Provinces. Punjab dominates in agriculture, with a share of over 62%. It is significant that the industrial sector of Sindh, with a share of 42%, is even larger than that of Punjab. In services, the ranking of size is the same as in agriculture. The shares have been depicted in Chart I.

Turning to the growth rates of the Provincial economies, these have been derived for three periods, as follows:

<b>Musharraf Period:</b>	1999-2000 to 2007-08
<b>PPP Period:</b>	2008-09 to 2012-13
<b>PML (N) Period:</b>	2013-14 and 2014-15

Table 5 presents the Provincial growth rates in the above periods. The performance of the four regional economies is also visually presented in Chart II.

CHART I  
 PROVINCIAL SHARES IN THE NATIONAL ECONOMY\* BY SECTOR





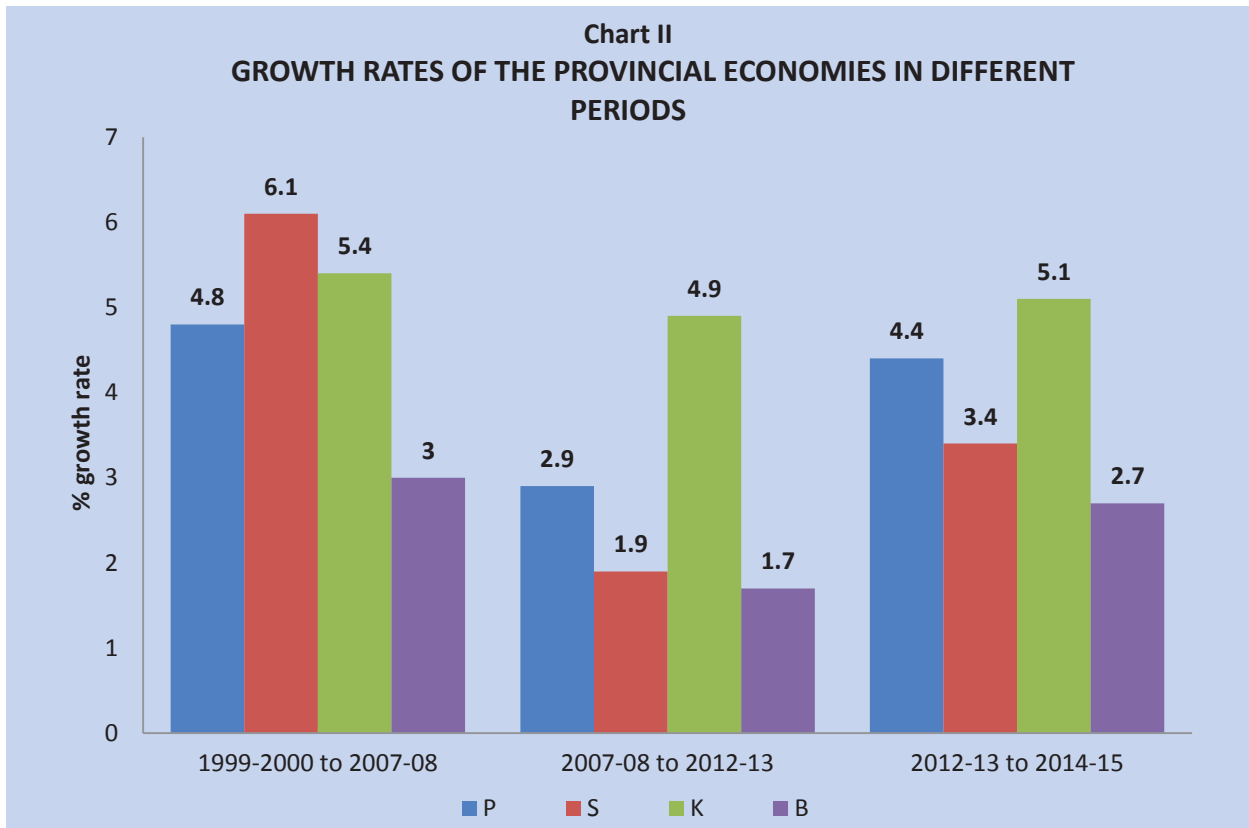
**Table 5**  
**Annual Growth Rates of the Provincial Economies in Different Periods**

(%)

Province	1999-2000 to 2007-08	2008-09 to 2012-13	2013-14 and 2014-15	1999-2000 to 2014-15
Punjab	4.8	2.9	4.4	4.1
Sindh	6.1	1.9	3.4	4.3
Khyber-Pakhtunkhwa	5.4	4.9	5.1	5.2
Balochistan	3.0	1.7	2.7	2.5
<b>Pakistan</b>	<b>5.6</b>	<b>2.8</b>	<b>4.1</b>	<b>4.4</b>

**Source:** Estimated

During the Musharraf period, the economy achieved relatively fast rates of growth. Sindh was the best performing economy with a growth rate in excess of 6%. In the slow growth period of the PPP Government, the growth rate of Sindh's economy has plummeted to below 2%, with some recovery in the last two years. This is consistent with the earlier finding that the performance of Sindh fluctuates more with the business cycle. The economy of Punjab has maintained an intermediate growth rate. In the Musharraf period, its growth rate was below that for the national economy. It has since shown somewhat higher growth than the rest of the country.



The real surprise is the dynamism of the economy of Khyber-Pakhtunkhwa. It has maintained a growth rate close to 5% throughout the fifteen years and achieved the highest growth rate since 2007-08. Explanations for this performance are offered in the subsequent section. Hitherto, there has been the common perception that the economy of Khyber-Pakhtunkhwa is the most adversely affected region by the war on terror.

Balochistan has been a straggler, with a growth rate, which has not exceeded 3% at any time during the last fifteen years. This is one of the really worrying features of the growth process since 1999-2000. The people of Balochistan are probably suffering today from a greater sense of deprivation and exclusion.

A detailed description of the growth performance of each economy is given in the following section.

## **4. GROWTH PERFORMANCE OF INDIVIDUAL PROVINCES**

### **4.1. PUNJAB**

The sectoral value added estimates are presented for Punjab in Table 6. The dominance of agriculture is the most pronounced in Punjab. The latest estimate of the share of this sector in the Provincial economy is over 24%, as compared to 20% for the rest of Pakistan.

Clearly, in the presence of strong forward and back word linkages, the performance of the agricultural sector has a vital role to play in the growth process of the Province.

Unfortunately, the emerging structural problem for Punjab is the loss of dynamism of agriculture. This sector grew at the rate of almost 4.5 % in the decade of the 90s, but since then it has managed a growth rate of only about 2%. The fundamental problem is the lack of buoyancy in the production of major crops, as highlighted in Box 1. This is a reflection especially of the growing water constraint, diminishing returns to fertilizer use (especially urea) and increasing land degradation due to water logging and salinity. The cotton crop, in particular, is more vulnerable to pest attacks. Further, floods, especially in 2010-11 and more recently, have also damaged crops.

The industrial sector of Punjab performed well in the Musharraf period, especially in textiles and other agro-based industry. The rise in the incidence of power outages after 2008 has impacted severely on industrial production. The small-scale sector has been hit badly and exports affected.

The services sector also maintained a high growth rate between 1999-2000 and 2007-08. But the fall in buoyancy of the commodity producing sectors has inevitably impacted on the dynamism of this sector.

**Table 6**  
**Estimated PGDP Of Punjab By Sector, 1999-2000 to 2014-15**

(Rs in Billion at Constant Prices of 2005-06)

SECTOR	1999-2000	Share (%)	2007-08	Share (%)	2012-13	Share (%)	2013-14	Share (%)	2014-15	Share (%)
Agriculture	994.9	31.61	1162.3 (1.96)*	25.37	1296.9 (2.22)	24.58	1347.1 (3.87)	24.45	1385.8 (2.87)	24.07
Industry	418.9	13.30	708.4 (6.79)	15.46	816.6 (2.88)	15.48	852.9 (4.44)	15.48	883.8 (3.62)	15.35
Services	1733.9	55.09	2710.7 (5.74)	59.17	3162.8 (3.13)	59.95	3308.9 (4.62)	60.06	3487.4 (5.39)	60.58
<b>PGDP</b>	<b>3147.7</b>	<b>100.00</b>	<b>4581.4</b> (4.80)	<b>100.00</b>	<b>5276.1</b> (2.86)	<b>100.00</b>	<b>5508.9</b> (4.41)	<b>100.00</b>	<b>5757.0</b> (4.50)	<b>100.00</b>

\* Annual Compound Growth Rate

Source: Estimated

### Box 1

#### THE SLOWDOWN IN GROWTH OF MAJOR CROPS IN PUNJAB

- Punjab accounts for 75% of the national value added in the major crops sector of agriculture.
- The agricultural economy of the Province performed well in the decade of the 90s. It has faltered since then as shown below:

	Share of National Output (%)	Nineties	(annual growth rate %)	
			1999-2000 to 2007-08	2007-08 to 2012-13
Wheat	7.7	6.6	-0.7	3.5
Rice	63	7.7	3.6	1.1
Sugarcane	67	1.7	5.1	1.3
Cotton	73	5.1	0.4	1.0

**Source:** PBS, Govt. of Punjab, PDS

## 4.2. SINDH

The economy of Sindh showed exceptional dynamism in the Musharraf period. The leading sector was industry with double-digit growth rate of 10% as shown in table 7. Currently, the economy of Sindh has the highest share of industry in its PGDP of 29%.

Conditions in Sindh changed fundamentally after 2008. The breakdown of law and order in the Metropolitan city of Karachi has led to a severe loss of economic momentum, from over 6% in the earlier years to below 2% after 2008. This implies a loss to the regional economy of almost Rs. 400 billion per annum.

Industry has actually contracted since 2008. Box 2 highlights the major industries, which have exhibited negative growth rates. Agriculture of Sindh has also performed poorly over the last fifteen years, with an average growth rate of less than 2%. The services sector, especially trade, has also been impacted by periodic closures and lack of security. The growth rate has fallen to just over 3%.

**Table 7**  
**Estimated PGDP Of Sindh By Sector, 1999-2000 to 2014-15**

(Rs in Billion at Constant Prices of 2005-06)

SECTOR	1999-2000	Share (%)	2007-08	Share (%)	2012-13	Share (%)	2013-14	Share (%)	2014-15	Share (%)
Agriculture	379.2	22.48	440.3 (1.88)*	16.23	480 (1.74)	16.09	498.4 (3.83)	16.16	512.7 (2.87)	16.06
Industry	412.9	24.48	884.6 (10.00)	32.61	864.8 (-0.45)	28.99	903.5 (4.48)	29.30	936.2 (3.61)	29.32
Services	894.6	53.04	1387.5 (5.64)	51.15	1637.8 (3.37)	54.91	1681.9 (2.69)	54.54	1743.6 (3.66)	54.62
<b>PGDP</b>	<b>1686.7</b>	<b>100</b>	<b>2712.4</b> (6.11)	<b>100.00</b>	<b>2982.6</b> (1.92)	<b>100.00</b>	<b>3083.8</b> (3.39)	<b>100.00</b>	<b>3192.5</b> (3.52)	<b>100.00</b>

Source: Estimated

## Box 2

### GROWTH OF MANUFACTURING IN SINDH

- Index of Industrial Production grew at 10% between 1999-2000 to 2007-08.
- Some industries showed phenomenal growth rates like sugar (24%), cement (17%), cotton fabrics (14%), beverages (9%) and vegetable ghee (8%).
- There was a slump in the manufacturing sector after 2007-08. Many industries showed negative growth rates up to 2012-13, including fertilizer (-14%), cars (-8%), POL refining (-7%), sugar (-5%), cotton yarn (-5%) and cotton fabrics (-1%)

**Source:** GOS, Sindh Development Statistics

### 4.3. KHYBER-PAKHTUNKHWA

Contrary to expectations, Khyber-Pakhtunkhwa has performed well despite being a front-line state in the war on terror as shown in Table 8. The basic contributing factor is the large inflow in per capita terms of remittances, both foreign and domestic. Almost 20% of household income in the Province comes from remittances, as compared to less than 10% in Punjab and below 3% in Sindh and Balochistan. Consequently, it is estimated that almost 27% of the national home remittances flow into Khyber-Pakhtunkhwa. These remittances have shown rapid growth of over 15% in recent years.

Today, K-PK has acquired the characteristics of a remittance-led service economy, with a limited indigenous production base. Box 3 gives the growth in individual services as compared to the whole country. Reasons for the high growth are also given in the Box. In 2014-15, the services sector accounted for 60% of the provincial economy. This is the highest share among the Provinces.

### 4.4. BALOCHISTAN

The Province of Balochistan has remained the slowest growing Province since 1999-2000. The insurgency in the Province and actions taken in response by the military have affected investment and economic activity, and in some years the real per capita income may have actually fallen, as shown in Table 9.

However, there is one side of the story of Balochistan, which has not been highlighted. The Province has had spectacular success in the production of fruits and vegetables, which have made it the fastest growing province in agriculture. Box 4 shows that in some products, Balochistan contributes a large share of the national output.

The favorable 7th NFC Award to Balochistan is beginning to have some positive impact on the economic growth rate. From below 2% between 2007-08 to 2012-13, it has risen to above 2.5% in the last two years.

**Table 8**  
**Estimated PGDP Of Khyber Pakhtunkhwa, 1999-2000 to 2014-15**

(Rs in Billion at Constant Prices of 2005-06)

SECTOR	1999-2000	Share (%)	2007-08	Share (%)	2012-13	Share (%)	2013-14	Share (%)	2014-15	Share (%)
Agriculture	163.1	25.32	182.5 (1.41)	18.57	218.1 (3.63)	17.45	226.4 (3.81)	17.25	232.9 (2.87)	16.87
Industry	113	17.54	224.8 (8.97)	22.87	292.2 (5.38)	23.37	305 (4.38)	23.24	316.1 (3.64)	22.89
Services	368.1	57.14	575.7 (5.74)	58.57	739.8 (5.14)	59.18	781.2 (5.60)	59.52	831.9 (6.49)	60.24
<b>PGDP</b>	<b>644.2</b>	<b>100</b>	<b>983.0</b> (5.42)	<b>100.00</b>	<b>1250.1</b> (4.92)	<b>100.00</b>	<b>1312.6</b> (5.00)	<b>100.00</b>	<b>1380.9</b> (5.20)	<b>100.00</b>

Source: Estimated

### Box 3

#### BOX ON GROWTH OF SERVICES IN K-PK

- The services sectors of K-PK have shown exceptional dynamism, as revealed by the following table:

Sub- Sectors	Growth Rate of Services 1999-2000 to 2012-13, %		Share of K-PK in Pakistan (%)
	Kyber- Pakhtunkhwa	Pakistan	
• Transport, Storage and Communications	5.8	4.6	14
• Wholesale and Retail Trade	4.7	4.4	9
• Finance & Insurance	2.9	5.3	7
• Ownership of Dwellings	6.5	4.0	10
• Public Administration & Defense	5.8	5.8	10
• Social and Community Services	7.0	5.9	13
<b>Services Total</b>	<b>5.6</b>	<b>4.8</b>	<b>12</b>

- Afghan transit trade and NATO supply movement have contributed to the higher growth in the transport sector. The ownership of dwellings sub-sector has achieved a high growth rate of 6.5% due to the investment in housing from home remittances. These inflows have also created high demand for economic and social services.



**Table 9**  
**ESTIMATED PGDP OF BALUCHISTAN, 1999-2000 to 2014-15**

(Rs in Billion at Constant Prices of 2005-06)

SECTOR	1999-2000	Share (%)	2007-08	Share (%)	2012-13	Share (%)	2013-14	Share (%)	2014-15	Share (%)
Agriculture	59.7	27.83	70.3 (2.06)	25.78	85.2 (3.92)	28.68	88.3 (3.64)	28.86	90.9 (2.94)	28.97
Industry	56.4	26.29	73.4 (3.35)	26.92	77.1 (0.98)	25.95	80.5 (4.40)	26.31	83.5 (3.72)	26.61
Services	98.4	45.88	128.9 (3.43)	47.28	134.7 (0.88)	45.35	137.1 1.78	44.81	139.3 (1.00)	44.40
<b>PGDP</b>	<b>214.5</b>	<b>100.00</b>	<b>272.6</b> (3.04)	<b>100.00</b>	<b>297.0</b> (1.72)	<b>100.00</b>	<b>305.9</b> (3.00)	<b>100.00</b>	<b>313.7</b> (2.54)	<b>100.00</b>

#### Box 4

### BOX ON GROWTH OF MINOR CROPS

- The growth rate in the minor crops has been impressive since 1999-2000, at over 5% per annum. In 2012-13, minor crops accounted for 45% of total agricultural value added in Balochistan as compared to 12% for the country as a whole.
- The share of Balochistan in national production of some minor crops and the growth rate are given below:

Sub- Sectors	Share of National Output (%)	Annual Growth Rate (%)	
		Balochistan	Rest of Pakistan
Tomato	40	18	3
Other Vegetables	16	11	0
Apples	81	5	-1
Apricot	93	6	-4
Grapes	98	5	0

Source: ASYB

## 5. PROXY INDICATORS

### 5.1. Per Capita Household Income

This section tests for the reliability of the trends revealed by the PGDP estimated above. In specific terms, is there other evidence to support the findings that Khyber-Pakhtunkhwa has shown exceptional dynamism, that Balochistan has been a straggler, that Sindh grew fast initially and has since visibly slowed down and that Punjab has performed moderately well?

The first set of data is that of per capita income from the Household Integrated Economic Survey (HIES) carried out by the PBS periodically. Table 10 shows the Provincial rankings in terms of per capita household income in different HIES.

The findings are largely consistent with the results on rates of economic growth. K-PK has steadily moved up in the rankings, from the bottom position in 2001-02, to 3rd in 2007-08 and to 2nd in 2013-14. According to the survey, K-PK now has a per capita household income even higher than that of Sindh.

Punjab has ascended from second to first place. Sindh has slipped from first to third place, while Balochistan has fallen from 3rd to 4th place. Overall, there have been dramatic changes in the ranking of the four Provinces over the last fifteen years.

	2001-02	2007-08	2013-14
Punjab	2	1	1
Sindh	1	2	3
K-PK	4	3	2
Balochistan	3	4	4

**Source:** PBS, HIES  
\* The rankings are the same with respect to per capita consumption expenditure

## 5.2. Employment

The level and growth of employment in each Province is given in Table 11. This data has been extracted from the **Labor Force Surveys**, carried out periodically by the PBS. The indicator used to get a sense of the dynamism of a regional economy is the growth of non-agricultural employment. Agricultural employment is not considered a good indicator because of the presence of high levels of 'disguised unemployment'.

In the first period, 1999-2000 to 2007-08, the fastest growth rate of employment of almost 4.5% per annum is in Sindh. This is consistent with the dynamism of the Sindh economy during these years. The surprise is the relatively slow growth of jobs in Punjab in this period.

The rise of employment in the non-agricultural sector has a very different pattern in the latter period, 2007-08 to 2012-13. The fastest growth of over 4% is observed in Khyber Pakhtunkhwa, especially in the informal sector of the Province, mostly in services. There has been a visible pickup in the employment growth of Punjab. Here again, the good performance of the economy of Khyber Pakhtunkhwa in recent years is highlighted.

**Table 11  
GROWTH OF EMPLOYMENT BY SECTOR**

**(Million)**

	2001-02	2007-08	ACGR (%)	2012-13	ACGR (%)
<b>K-PK</b>					
<b>Number of Employed</b>	<b>4.95</b>	<b>5.73</b>	<b>2.46</b>	<b>6.14</b>	<b>1.39</b>
<b>Agricultural</b>	<b>2.19</b>	<b>2.56</b>	<b>2.63</b>	<b>2.26</b>	<b>-2.46</b>
<b>Non-Agricultural</b>	<b>2.76</b>	<b>3.17</b>	<b>2.33</b>	<b>3.88</b>	<b>4.12</b>
Formal	0.98	0.85	-2.34	0.91	1.37
Informal	1.78	2.32	4.51	2.97	5.06
<b>Balochistan</b>					
<b>Number of Employed</b>	<b>1.74</b>	<b>2.13</b>	<b>3.42</b>	<b>2.48</b>	<b>3.09</b>
<b>Agricultural</b>	<b>0.87</b>	<b>1.12</b>	<b>4.30</b>	<b>1.30</b>	<b>3.02</b>
<b>Non-Agricultural</b>	<b>0.87</b>	<b>1.01</b>	<b>2.52</b>	<b>1.18</b>	<b>3.16</b>
Formal	0.44	0.45	0.38	0.40	-2.33
Informal	0.43	0.56	4.50	0.78	6.85
<b>Sindh</b>					
<b>Number of Employed</b>	<b>9.45</b>	<b>12.26</b>	<b>4.43</b>	<b>13.96</b>	<b>2.63</b>
<b>Agricultural</b>	<b>3.55</b>	<b>5.66</b>	<b>8.08</b>	<b>5.99</b>	<b>1.13</b>
<b>Non-Agricultural</b>	<b>5.90</b>	<b>6.60</b>	<b>1.89</b>	<b>7.97</b>	<b>3.84</b>
Formal	2.82	2.29	-3.41	2.70	3.34
Informal	3.08	4.31	5.75	5.27	4.10
<b>Punjab</b>					
<b>Number of Employed</b>	<b>27.03</b>	<b>28.97</b>	<b>1.16</b>	<b>33.43</b>	<b>2.91</b>
<b>Agricultural</b>	<b>11.58</b>	<b>12.58</b>	<b>1.39</b>	<b>14.93</b>	<b>3.48</b>
<b>Non-Agricultural</b>	<b>15.45</b>	<b>16.39</b>	<b>0.98</b>	<b>18.50</b>	<b>2.45</b>
Formal	4.58	3.80	-3.06	4.30	2.50
Informal	10.87	12.59	2.48	14.20	2.43
<b>Pakistan</b>					
<b>Number of Employed</b>	<b>43.17</b>	<b>49.09</b>	<b>2.16</b>	<b>56.01</b>	<b>2.67</b>
<b>Agricultural</b>	<b>18.17</b>	<b>21.92</b>	<b>3.17</b>	<b>24.48</b>	<b>2.23</b>
<b>Non-Agricultural</b>	<b>25.00</b>	<b>27.17</b>	<b>1.40</b>	<b>31.53</b>	<b>3.02</b>
Formal	8.86	7.39	-2.98	8.32	2.40
Informal	16.14	19.78	3.45	23.21	3.24

Source: PBS, LFS

### **5.3. Other Indicators**

One sensitive indicator of the underlying growth of incomes in an economy is the rate of annual increase in income tax revenues. This data has become available from the Year Books of FBR. Between 2008-09 and 2012-13, the fastest annual growth in revenues is observed in Khyber-Pakhtunkhwa of almost 18%. Next is Sindh with growth rate of 15%, followed by Punjab, Balochistan and Islamabad of between 12% to 13%. Yet again, the exceptional buoyancy of Khyber-Pakhtunkhwa is demonstrated.

Finally, information on the growth in value of owner-occupied housing is extracted from the HIES. Here again, the biggest rate of increase is observed in Khyber-Pakhtunkhwa of almost 20% per annum, between 2007-08 and 2013-14, as compared to 13% for the country as a whole. Clearly, this reflects the impact of the large and rapidly growing remittances to the Province of Khyber-Pakhtunkhwa.

Overall, the findings from estimates of PGDP are mostly confirmed. The evidence largely points to the dynamism of the economy of Khyber-Pakhtunkhwa, especially after 2007-08. This is perhaps the most unexpected finding from this research.

## **7. TRENDS IN REGIONAL INEQUALITY**

The basic question is as follows: Has inter-provincial inequality increased or decreased in the last fifteen years? During the Musharraf era the fastest growth of Sindh province, with the highest per capita PGDP, is likely to have accentuated the extent of inequality. In the more recent period, the emergence of Khyber Pakhtunkhwa could imply a reduction in inequality. However, the slow growth since 1999-2000 in Balochistan, the Province with the lowest per capita GDP, has been a constant factor in perpetuating inequality.

The per capita GDP of each Province, at constant prices of 1999-2000 is given in Table 11 for the period, 1999-2000 to 2014-15. Deviations from the national average have also been quantified and highlighted visually in Chart 3.

The per capita GDP of Punjab was 4% below the national average in 1999-2000. This gap increased to 6% by 2007-08. It has since come down once again to 4%. Sindh has a per capita PGDP substantially above the national average. It was 25% higher in 1999-2000, rising to 31% by 2007-08. Since then, it has come down to 22%.

K-PK has caught up significantly. It had a per capita PGDP 18% below the national average in 1999-2000. The gap has been reduced to only 6% by 2014-15. Balochistan has fallen further behind, from a 26 % gap in 1999-2000 to almost 45% by 2014-15.

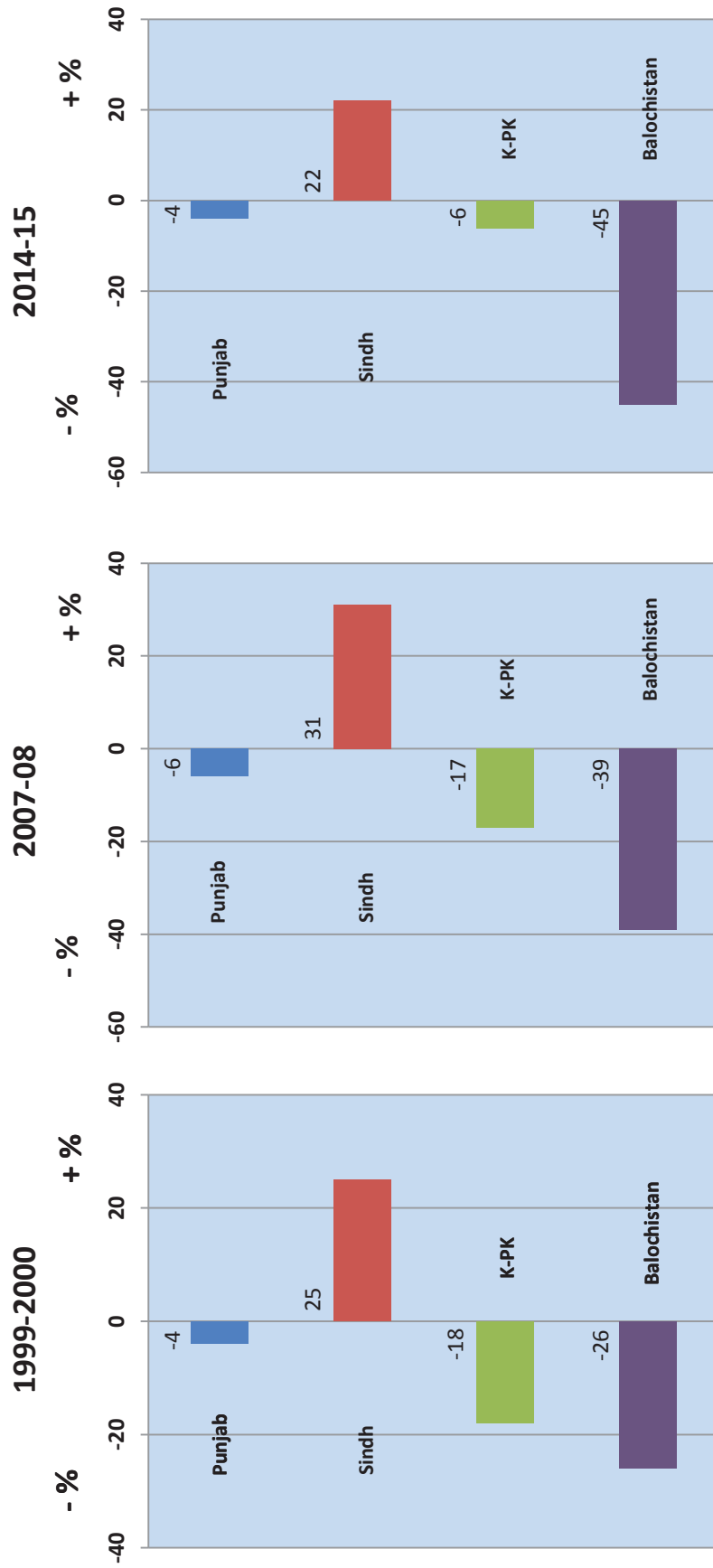
Given the contrasting trends, a summary measure needs to be developed to quantify the extent of inter-provincial inequality.

**Table 12**  
**PER CAPITA PGDP BY PROVINCE, 1999-2000 to 2014-15**

(at constant prices of 1999-2000)

	1999-2000	2007-08	2012-13	2014-15
<b>Punjab</b>				
PGDP (billion Rs)	3147.7	4581.4	5276.1	5757.0
Population* (million)	77.65	91.98	101.49	105.30
<b>Per Capita GDP (000)</b>	<b>40.537</b>	<b>49.808</b>	<b>51.986</b>	<b>54672</b>
<b>Deviation from National Average (%)</b>	<b>-3.8</b>	<b>-5.7</b>	<b>-4.0</b>	<b>-3.9</b>
<b>Annual Growth Rate (%)</b>		<b>2.61</b>	<b>0.85</b>	<b>2.55</b>
<b>Sindh</b>				
PGDP (billion Rs)	1686.7	2712.5	2982.7	3192.5
Population* (million)	32.02	39.19	44.17	45.99
<b>Per Capita GDP (000)</b>	<b>52.676</b>	<b>62.214</b>	<b>67.529</b>	<b>69.417</b>
<b>Deviation from National Average (%)</b>	<b>+25.0</b>	<b>+31.0</b>	<b>+24.6</b>	<b>+22.0</b>
<b>Annual Growth Rate (%)</b>		<b>3.47</b>	<b>-0.49</b>	<b>1.38</b>
<b>Khyber-Pakhtunkhwa</b>				
PGDP (billion Rs)	644.2	983.0	1250.0	1380.9
Population* (million)	18.5	22.5	24.8	25.8
<b>Per Capita GDP (000)</b>	<b>34.709</b>	<b>43.688</b>	<b>50.403</b>	<b>53523</b>
<b>Deviation from National Average (%)</b>	<b>-17.6</b>	<b>-17.3</b>	<b>-6.9</b>	<b>-6.0</b>
<b>Annual Growth Rate (%)</b>		<b>2.92</b>	<b>2.90</b>	<b>3.05</b>
<b>Balochistan</b>				
PGDP (billion Rs)	214.5	272.6	297.0	313.7
Population* (million)	6.9	8.4	9.8	10.0
<b>Per Capita GDP (000)</b>	<b>31.086</b>	<b>32.452</b>	<b>30.306</b>	<b>31.370</b>
<b>Deviation from National Average (%)</b>	<b>-26.2</b>	<b>-38.6</b>	<b>-44.0</b>	<b>-44.9</b>
<b>Annual Growth Rate (%)</b>		<b>0.53</b>	<b>-1.36</b>	<b>1.74</b>
<b>Pakistan</b>				
PGDP (billion Rs)	5693.1	8549.5	9816.3	10644.1
Population* (million)	135.13	161.841	181.255	187.033
<b>Per Capita GDP (000)</b>	<b>42.130</b>	<b>52.826</b>	<b>54.157</b>	<b>56.910</b>
<b>Annual Growth Rate (%)</b>		<b>2.86</b>	<b>0.50</b>	<b>2.51</b>

Chart III  
**DEVIATION OF PER CAPITA PGDP FROM  
 NATIONAL AVERAGE, BY PROVINCE**



The indicator used is the population-weighted coefficient of variation, as follows:

$$CV_t = \sum_{i=1}^4 w_{it} d_{it}^2 \text{ ----- (1)}$$

Where  $CV_t$  = coefficient of variation in year  $t$ ;  $w_{it}$  = population share of the  $i$ th province in year  $t$  and  $d_{it}$  = percentage deviation of the  $i$ th province in year  $t$  from the national average.

The estimated values are as follows:

Year	Coefficient of Variation
1999-2000	234.15
2007-08	370.14
2014-15	267.72

The results indicate that inter-provincial inequality increased sharply during the Musharraf period. Following the return to democracy, it has come down. Over the fifteen year period, it has remained, more or less, unchanged.

Turning to intra-provincial inequality, the HIES gives the shares of the bottom and top quintiles in household incomes within a province. The ratio of shares is given for various years in table 12.

Contrary again perhaps to perceptions, the largest intra-provincial inequality is observed in Punjab, not Sindh. Here again, the province of Khyber-Pakhtunkhwa performs better with less inequality among households within the Province. However, the lowest inequality is observed in Balochistan.

<b>Table 13</b>	
<b>INCOME INEQUALITY AMONG HOUSEHOLDS IN A PROVINCE</b>	
Ratio of	$\frac{\text{Income Share of Top 20\%}}{\text{Income Share of Bottom 20\%}}$
	<b>2013-14</b>
<b>Pakistan</b>	<b>4.52</b>
Punjab	5.31
Sindh	4.19
K-PK	3.92
Balochistan	3.43
<b>Source: PBS, HIES</b>	



## 8. GROWTH DRIVERS BY PROVINCE

We finally focus on the sub sectors in which a particular province has a comparative advantage. If the growth strategy of a province focuses on these sub-sectors of comparative advantage, then it is likely to be more consistent with the factor endowments of the province, including the natural resources.

The comparative advantage is based on the magnitude of the location quotient. This is derived as follows:

$$LQ_{ij} = \frac{S_{ij}}{S_j} \text{ ----- (2)}$$

where  $LQ_{ij}$  = location quotient of the  $i$ th sector in the  $j$ th province;

$S_{ij}$  = shares of the  $i$ th sector of the  $j$ th province in value added nationally in the  $i$ th sector

$S_j$  = share of the  $j$ th province in the GDP of Pakistan.

Table 13 Presents the sectors of comparative advantage in each Province, where LQ is greater than one, based on data of 2012-13. In summary, these are given below for each Province.

**Punjab:** important (major crops); cotton ginning; livestock (especially milk production); large-scale and small-scale manufacturing; slaughtering; construction; transport and communications; finance and insurance; public administration and defense and economic, social and community services.

**Sindh:** cotton ginning; livestock; fisheries; mining and quarrying; large-scale manufacturing; wholesale and retail trade; finance and insurance and ownership of dwellings.

**Khyber-Pakhtunkhwa:** livestock; forestry; slaughtering, construction; electricity and gas; transport and communications; economic, social and community services; ownership of dwellings.

**Balochistan:** minor crops; fishing; forestry; mining and quarrying; electricity and gas; wholesale and retail trade; public administration and defense.

**Table 14**  
**COMPARATIVE ADVANTAGE OF THE PROVINCES**

<b><math>L_{ij}</math> is greater than 1</b>				
	<b>Punjab</b>	<b>Sindh</b>	<b>K-PK</b>	<b>Balochistan</b>
<b>AGRICULTURE</b>				
Important Crops	✓	-	-	-
Minor Crops	-	-	-	✓
Cotton Ginning	✓	✓	-	-
Livestock	✓	✓	✓	-
Fishing	-	✓	-	✓
Forestry	-	-	✓	✓
<b>INDUSTRY</b>				
Mining and Quarrying	-	✓	-	✓
Large-Scale Manufacturing	✓	✓	-	-
Small-Scale Manufacturing	✓	-	-	-
Slaughtering	✓	-	✓	-
Construction	✓	-	✓	-
Electricity & Gas	-	-	✓	✓
<b>SERVICES</b>				
Transport & Communications	✓	-	✓	-
Wholesale & Retail Trade	-	✓	-	✓
Finance & Insurance	✓	✓	-	-
Ownership of Dwellings	-	✓	✓	-
Public Admin & Defense	✓	-	-	✓
Social and Community Services	✓	-	✓	-
<b>Number of Sub Sectors</b>	<b>11</b>	<b>8</b>	<b>8</b>	<b>7</b>

## 9. FINDINGS AND RECOMMENDATIONS

Not much has been known hitherto about the size, composition and growth of the Provincial economies of Pakistan, from 1999-2000 to 2014-15. The objective of this study has been to fill this major gap.

The findings of research are as follows:

- i. Prior to 1999-2000, earlier research has revealed the long-term convergence of the three Provincial economies Sindh, Punjab and Khyber-Pakhtunkhwa - to, more or less, the same growth rate of their PGDPs of 5%. However, Balochistan has performed poorly in relation to the other Provinces.

- ii. A pattern of growth is also visible. During periods of high growth, like in the 80s, the Province of Sindh performs relatively well. In low growth periods, like in the 70s, Punjab manages a somewhat higher growth rate.
- iii. Punjab has a share of 54% in the national GDP in 2014-15. The next economy in size is Sindh, with a share of 30%. Khyber-Pakhtunkhwa and Balochistan have shares of 13% and 3% respectively.
- iv. Punjab dominates in agriculture, with a share of over 62%. It is significant, however, that the industrial sector of Sindh, with a share of 42%, is even larger than that of Punjab. In services, Punjab has the largest share of almost 56%.
- v. During the Musharraf period, from 1999-2000 to 2007-08, the fastest growing Provincial economy was Sindh, with a growth rate in excess of 6%. Balochistan had the lowest growth rate of only 3%.
- vi. During the period of the PPP Government, from 2008-09 to 2012-13, the growth rate of the Sindh economy has plummeted to 2% only. The fastest growing economy during this period is Khyber-Pakhtunkhwa, at almost 5%. The same pattern is seen, more or less, in the first two years of the PML(N) Government. Balochistan has remained a straggler, with a low growth rate of about 3%.
- vii. The emerging structural problem for Punjab is the loss of the dynamism of agriculture. From a growth rate of almost 5% in the 90s, it has fallen to only 2%. This is a reflection especially of the emerging water constraint. Since 2008, power outages have impacted severely on industrial production in the Province.
- viii. The breakdown of law and order in Karachi has led to a visible loss of momentum in the economy of Sindh. It is estimated that the annual cost of the troubled situation in Karachi is almost Rs 400 billion.
- ix. Contrary to expectations, Khyber-Pakhtunkhwa has performed well despite being a frontline state in the war on terror. A major contributing factor is the large inflow of home remittances, which on average account for 20% of the income of households in the Province. Consequently, it has acquired the characteristics of a remittance-led service economy. However, the indigenous production base remains limited.
- x. The insurgency in Balochistan and the resultant military action have affected economic activity and investment in the Province. In some years, the real per capita income may even have fallen. There is need, however, to highlight the spectacular success of Balochistan in the production of fruits and vegetables, which has made it the fastest growing province in agriculture.
- xi. Other proxy indicators of growth have been used to test for the reliability of the PGDP estimates. These include the trend in household incomes as revealed by the HIES, growth of employment, rise in collection of income tax and growth in value of owner-occupied property.

These indicators also confirm the dynamism of Khyber-Pakhtunkhwa, the loss of buoyancy by the economy of Sindh, the moderate growth performance of Punjab and the persistent low growth of Balochistan.

- xii. The trend in inter-provincial inequality increased sharply during the Musharraf era, due, in particular, to the fast growth of Sindh, with the highest per capita PGDP. Since then inequality has come down, with the fall in the growth rate of Sindh and the exceptional performance of the economy of Khyber-Pakhtunkhwa, a Province with relatively low PGDP. Overall, over the fifteen year period, there has not been much change in the magnitude of inter-provincial inequality.
- xiii. Income inequality within a Province appears to be the highest in Punjab, followed closely by Sindh. It is the least pronounced in Khyber-Pakhtunkhwa.
- xiv. The sub-sectoral estimates for each Province of value added enable the determination of areas of comparative advantage of each Province. Out of the 17 sub-sectors in the national economy, Punjab has a locational advantage in 11, Sindh in 8, Khyber-Pakhtunkhwa in 7 and Balochistan also in 7 sub-sectors. Each Province ought to concentrate on sub-sectors where it has the comparative advantage, if the growth potential is to be maximized.

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