



Public Provision of Education and Government Spending in Pakistan

Muhammad Akram

PhD Student, QAU

Faheem Jehangir Khan

Research Economist, PIDE



Introduction and Background

- Education is the **most important instrument** to enhance human capabilities and to achieve the desired objectives of socio and economic development.
- Education enables individuals to make informed choices, broaden their horizons and opportunities and to have a voice in **public decision making**.
- At the **macro level**, education means strong and sustainable economic growth due to productive and skilled labor force.
- At the **micro level**, education is strongly correlated to higher income generating opportunities and a more informed and aware existence.

Introduction and Background (Contd.)

- In Pakistan, education has suffered from a **myriad of issues** including underinvestment, failure to implement five-year plans, and lack of purpose and direction in its policy.
- Since independence, Pakistan has increased the number of primary schools eighteen-fold and multiplied enrolment sixteen times. But these gains have been defeated by **rising population** and **lack of quality education** (*HDR, 1998*).
- According to Economic Survey of Pakistan, 2005-06, Pakistan is spending **2.1 percent** of GDP on education sector.
- Currently, **adult literacy rate** is **53 percent** net, which is lower than the target of the PRSP-I; that was **58 percent** for 2004-05.

Introduction and Background (Contd.)

- **Retention rate** for 2004-05 is observed **61 percent** and significant gender gap at all levels of enrollments especially in rural areas persist.
- On the whole **male literacy rate** is **65 percent** while for female it is **40 percent**.
- In rural areas **female literacy rate** is **29 percent** while in urban areas it is **62 percent**.
- **Female are more underprivileged group** as far as the literacy rate is concerned at provincial and regional levels.
 - In Balochistan, the female literacy rate is **19 percent**, lowest of all and even it presents the worst picture in rural Balochistan that is only **13 percent**; while highest in Punjab, i.e., **44 percent**.
 - While male literacy rate ranges from **58 percent** to **65 percent** at provincial tier.

Introduction and Background (Contd.)

- Today the **illiterate population**, 15 years and above, is larger than the population of the country at the time of independence, in 1947.
- **Poor infrastructure** is also another obstacle facing Pakistan. Schools/colleges lack many basic facilities including: classrooms, toilets, blackboards, furniture and qualified teachers.
- In Pakistan, hardly **10 percent** of the population complete twelve years of schooling due to **high drop out rates**; highest in South Asia.
 - Study shows that at least **50 percent** of the budget is spent on children who drop out of school before completing primary education cycle.
 - Around **25 percent** leave after 8 years of schooling and another **15 percent** by Grade-10.
- Wide spread **teacher absenteeism** is another issue which hinders the provision of education at all levels.

Introduction and Background (Contd.)

- Government **expenditure policies** are implemented in pursuit of the two objectives.
 - First, to increase overall efficiency in the allocation of the resources by optimally providing certain goods and services, which private market fail to provide or fail to provide optimally.
 - Secondly, government wants to enhance equity and improve distribution of the income.
- How these expenditures are distributed who is benefiting and how much?
- This very much depends on the volume and the distribution of these expenditures among the people of different areas of the country?
- The current study is an **extension of the previous research work** on *'Health Care Services and Government Spending in Pakistan'*.

Literature Review

- A comprehensive review of literature, research materials, articles and evaluation reports is done to assess the existing situation and policy debate.
- Public expenditures progressive or Regressive ?
- Sakellariou (2004), Hyun (2006), Jorge (2001) *progressive*,
- Norman (1985), Castro (2000), Hamid (2003) *regressive* ,
- The share of the different segment of income group *varies depending* upon the distribution of the benefits of the public expenditures, Sakellariou (2004)

Literature Review (Contd.)

- The incidence of the public expenditures *varies depending* on the region, caste, religions and the gender. Shahin (2001), Sabir (2003) Blejer (1990) Selden (1992), Norman (1985);
- Rasmus (2001), Primary education expenditures are *progressive*;
- Younger (1999), Secondary and professional education expenditure is either *progressive or regressive*,

Objectives of the Study

1. To analyze the *incidence* of the government expenditure on education on various income groups in Pakistan.
2. To determine its *progressive or regressive* nature. The expenditures are progressive if it benefits more the poor and regressive if it benefits more the rich.
3. To check *extent of inequalities* that exists in distribution of government expenditures among different levels of income groups.

Policies Emphasizing Provision of Education in Pakistan

- The **1973 constitution of the Islamic Republic of Pakistan** recognizes the importance of education and says that the state shall:
 1. **Promote unity** and observance of the Islamic moral standards;
 2. Promote with special care the educational and **economic interests of backward areas**;
 3. Remove illiteracy and **provide free and compulsory secondary education** within minimum possible period;
 4. Make technical and professional education generally available and higher education equally accessible to all **on the basis of merit**;
 5. Enable the people of different areas, through education , training, agriculture and industrial development , and other methods to **participate fully in all form of national activities** including employment in the services of Pakistan; and
 6. Ensure **full participation of women** in all the spheres of national life.

(Source: Dawood, 2005)

Policies Emphasizing Provision of Education in Pakistan (Contd.)

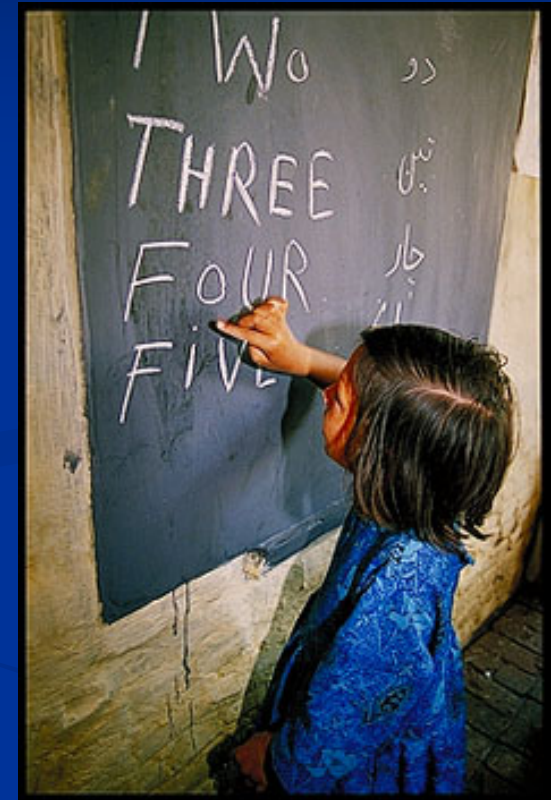
- At the start of the 21st Century, the Government of Pakistan took several initiatives underlining the **education sector reform**.
- These include:
 - National Education Policy (1998-2010);
 - Education Sector Reforms (ESR) 2001-06;
 - Education for All (EFA) by 2015;
 - Ten Years Perspective Development Plan 2001-2011;
 - National Commission for Human Development (NCHD);
 - Poverty Reduction Strategy Papers (PRSP);
 - Medium Term Development Framework (MTDF) 2005-10; and
 - Education Millennium Development Goals.

Provision of Education in Pakistan

- There are number of factors that play into Pakistan's **poor public provision of education**. These include the non-existence of cost-effective schooling, poor curriculum and low level of awareness among parents, especially in rural areas, regarding its outcomes and impact on household welfare.
- Only **41.5 percent** of people older than 15 years of age are literate in Pakistan, the **lowest in South Asian countries**.
- Along with their literacy rates, Pakistan also has one of the **highest dropout rates**, with just over **10 percent** of students finishing twelve years of schooling.
- As of 2004-05, the **literacy rate (age 10+)** in Pakistan was 54 (72 urban, 45 rural) against 45 (64 urban, 36 rural) in 2001-02.

Provision of Education in Pakistan (Contd.)

- The **ratio of the highest to the lowest quintile** was 1.95 (1.69 urban, 1.76 rural) in 2004-05, as compared to 2.41 (2.08 urban, 2.17 rural) in 2001-02.
- Similarly, the **adult literacy rate (age 15+)** was 50 (69 urban, 40 rural) in 2004-05 as compared to 43 (63 urban, 34 rural) in 2001-02.
- The **ratio of the highest to the lowest quintile** was 2.22 (1.89 urban, 1.93 rural) in 2004-05 against 2.52 (2.11 urban, 2.23 rural) in 2001-02.



Provision of Education in Pakistan (Contd.)

Literacy Rate (10 Years and Above): Pakistan and Provinces

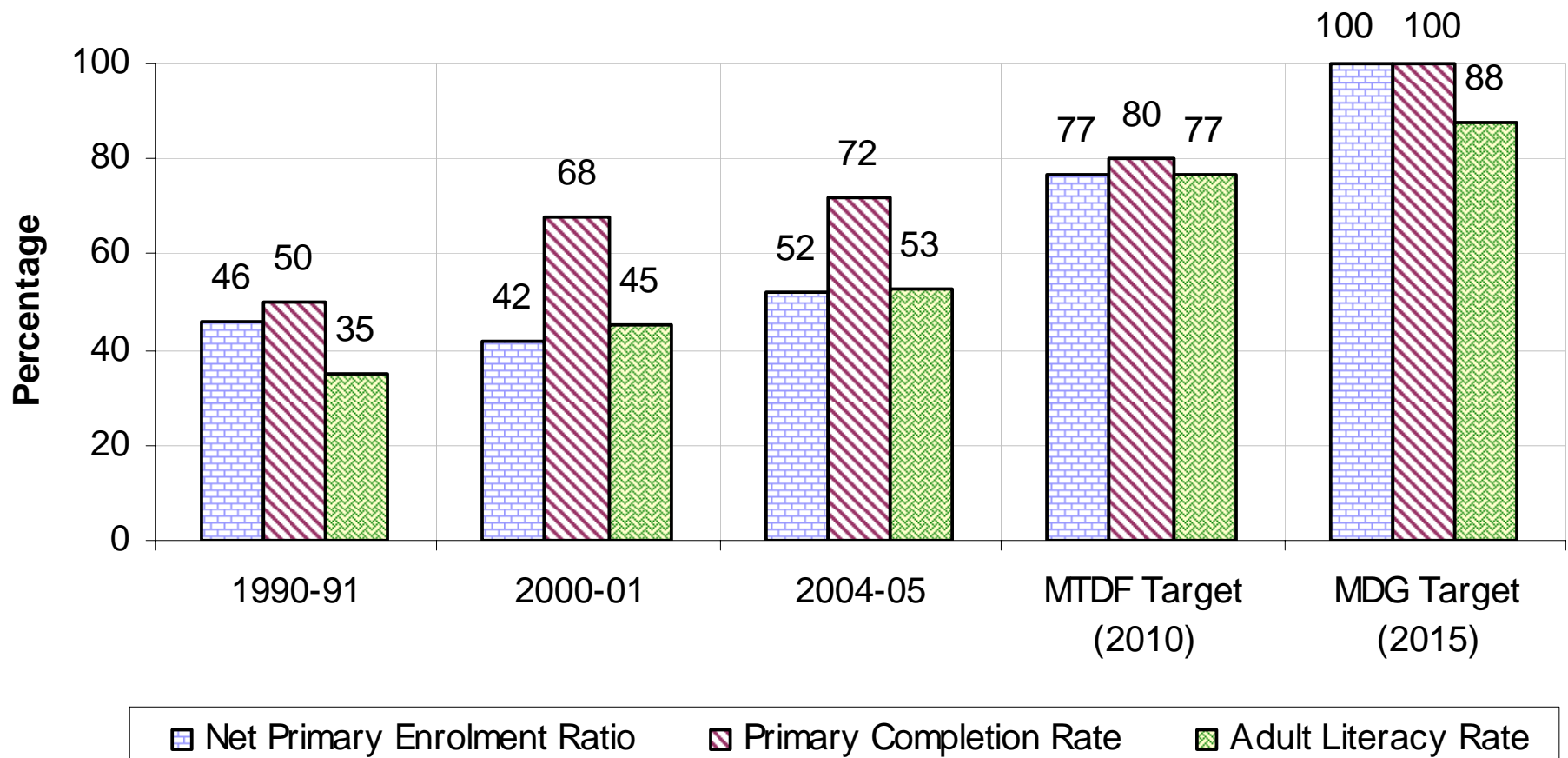
Percentage

Province/ Area	2001-02 PIHS			2004-05 PSLM		
	Total	Male	Female	Total	Male	Female
Pakistan	45	58	32	53	65	40
<i>Rural</i>	36	51	21	44	58	29
<i>Urban</i>	64	72	56	71	78	62
Punjab	47	57	36	55	65	44
<i>Rural</i>	38	51	26	47	59	35
<i>Urban</i>	66	71	60	72	78	66
Sindh	46	60	31	56	68	41
<i>Rural</i>	33	51	14	38	56	18
<i>Urban</i>	64	74	54	72	80	62
NWFP	38	57	20	45	64	26
<i>Rural</i>	35	55	16	41	61	23
<i>Urban</i>	56	70	41	61	75	47
Balochistan	36	53	15	37	52	19
<i>Rural</i>	32	49	11	32	47	13
<i>Urban</i>	54	71	36	60	74	42

Source: PSLM 2004-05

Provision of Education in Pakistan (Contd.)

Primary NER, GER and Adult Literacy Rate



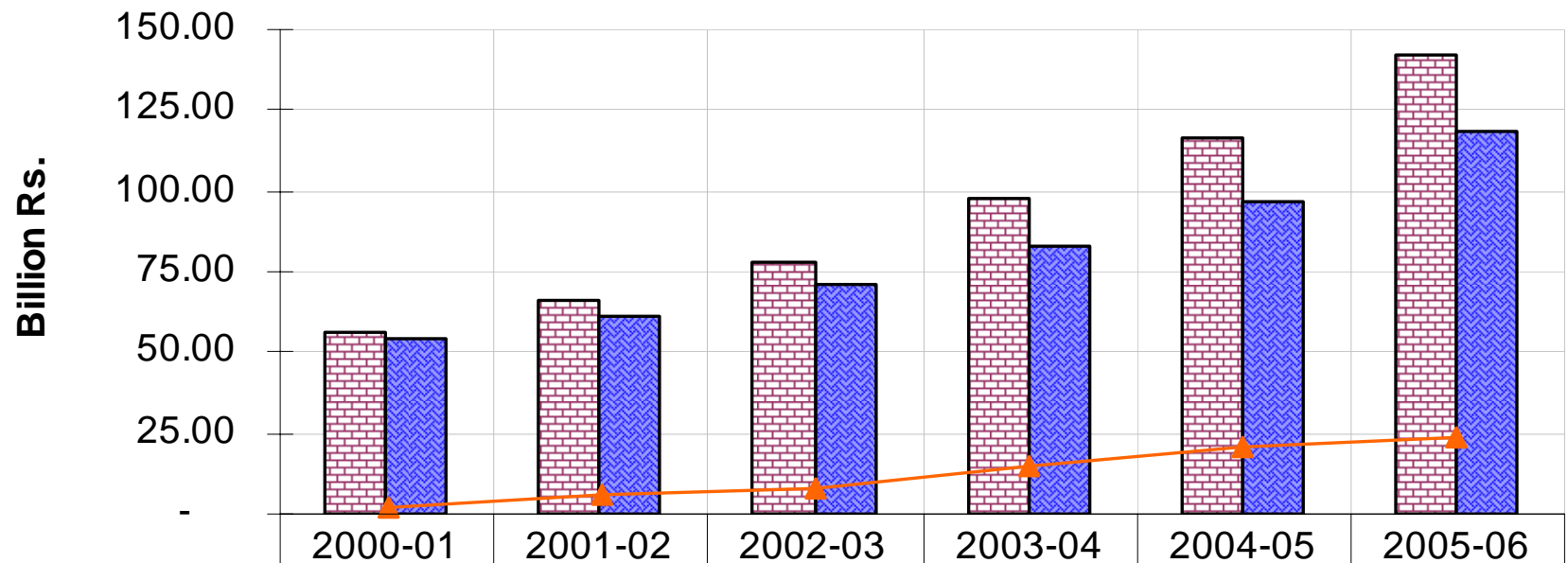
Education Statistics: Number of Institutes, Teachers and Enrolment by stage and kind of Provision

	Stage	Institutions	Teachers	Enrolment
Public	Pre-Primary	287	301	8,670
	Mosque	14,035	22,097	796,758
	Primary	105,525	308,596	10,761,355
	Middle/ Elementary	14,335	112,109	2,788,727
	Secondary	9,471	165,747	4,544,724
	Higher Secondary	1,079	27,418	753,789
	Total		144,732	636,268
Private	Pre-Primary	794	3,405	52,694
	Mosque	88	299	6,146
	Primary	16,823	86,148	1,671,885
	Middle/ Elementary	24,115	194,244	3,864,143
	Secondary	13,484	194,263	3,778,322
	Higher Secondary	1,056	20,575	396,690
	Total		56,360	498,934
Total	Pre-Primary	1,081	3,706	61,364
	Mosque	14,123	22,396	802,904
	Primary	122,348	394,744	12,433,240
	Middle/ Elementary	38,450	306,353	6,652,870
	Secondary	22,955	360,010	8,323,046
	Higher Secondary	2,135	47,993	1,150,479
	Total		201,092	1,135,202

Source: National Education Census (2005), Ministry of Education

Government Spending on Education

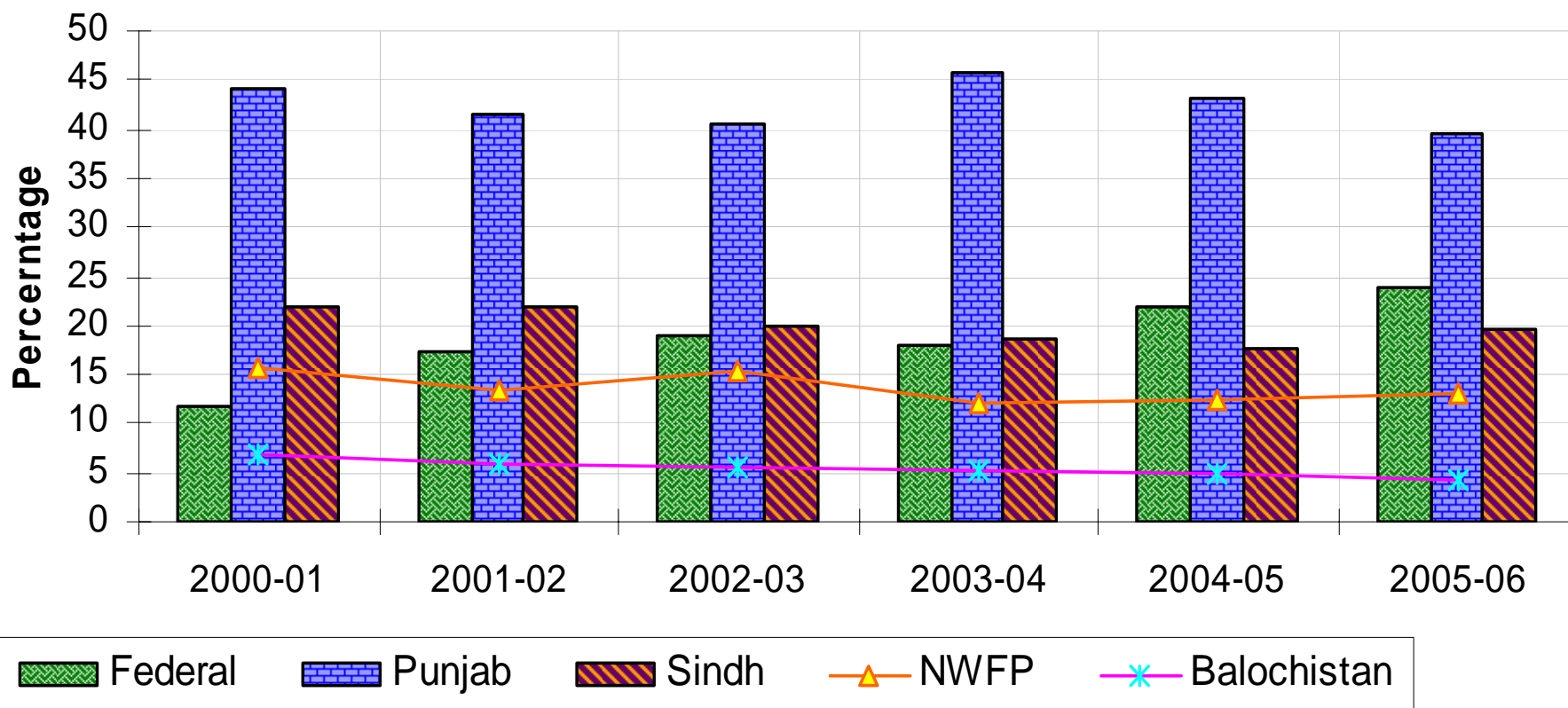
Government Spending on Education Sector



	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Total	56.54	66.29	78.45	97.70	116.87	141.70
Current	54.57	60.80	70.94	82.42	96.58	118.27
Development	1.96	5.49	7.51	15.28	20.29	23.43

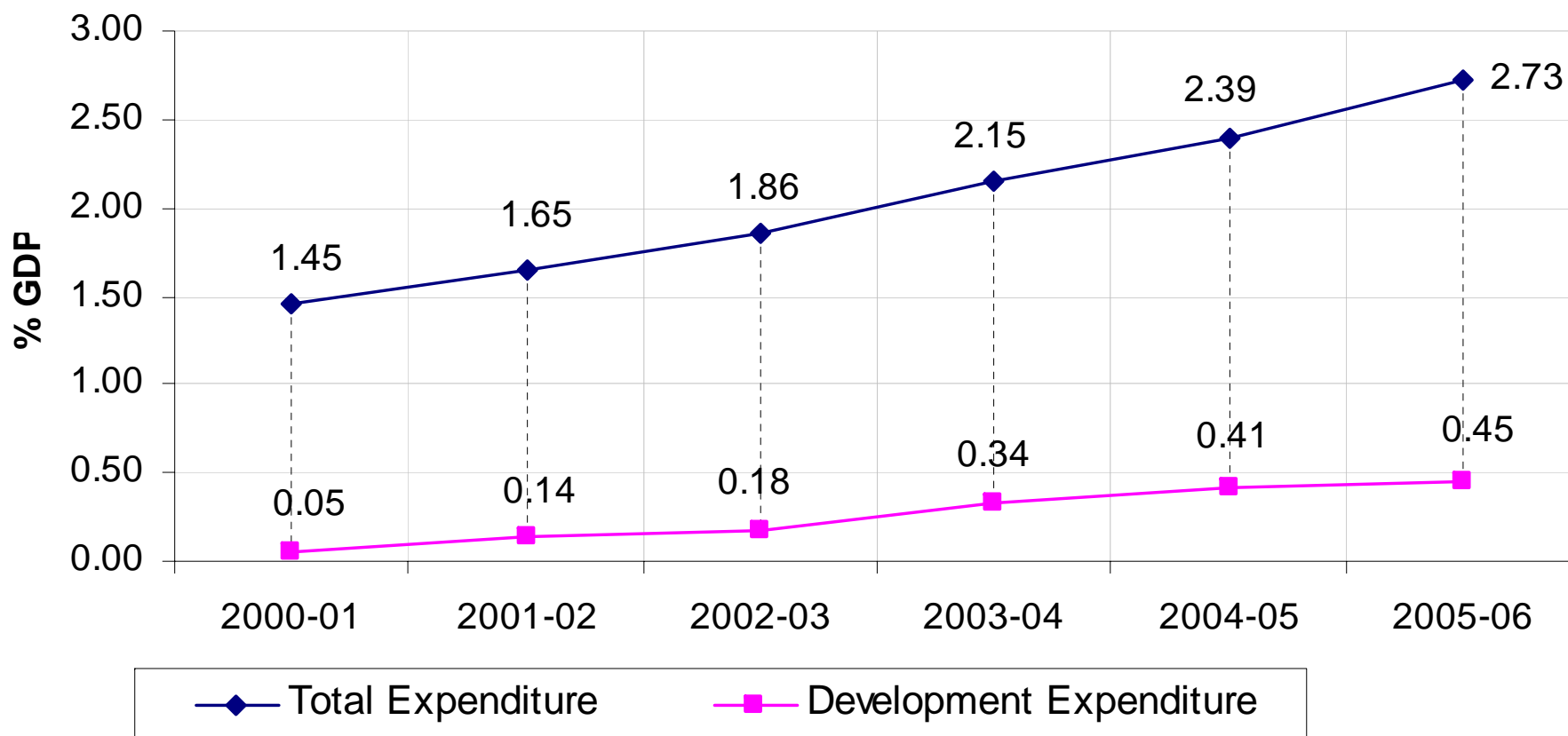
Government Spending on Education (Contd.)

Share in Total Government Spending on Education



Government Spending on Education (Contd.)

Government Spending on Education as % of GDP



Percentage share in Education Expenditure by Province and Level of Education

	Federal	Punjab	Sindh	NWFP	Balochistan	Pakistan	
2000-01	Primary Education	15.58	56.97	48.39	47.69	41.82	47.79
	Secondary Education	17.28	26.55	30.56	36.92	31.09	28.27
	College & Universities	33.17	9.12	8.58	7.65	5.04	11.30
	Professional	25.34	4.11	5.59	5.10	9.20	7.41
2001-02	Primary Education	9.09	56.41	46.62	35.52	36.75	32.65
	Secondary Education	10.78	24.9	32.25	32.32	28.32	28.51
	College & Universities	29.44	9.39	8.55	6.01	7.70	14.71
	Professional	28.82	5.83	7.24	5.10	8.59	10.21
2002-03	Primary Education	8.79	57.54	45.72	41.55	36.75	42.4
	Secondary Education	11.94	24.27	33.81	35.73	28.32	25.81
	College & Universities	46.59	9.77	9.23	3.09	8.43	15.52
	Professional	16.92	5.17	6.36	3.42	11.86	7.73
2003-04	Primary Education	7.83	60.14	43.08	44.88	34.88	44.32
	Secondary Education	10.25	21.35	32.61	38.52	29.66	24
	College & Universities	50.81	7.30	8.26	7.14	6.83	15.27
	Professional	13.76	4.65	6.11	4.93	7.37	6.74
2004-05	Primary Education	11.46	57.6	42.91	45.84	30.66	42.18
	Secondary Education	8.81	21.56	33.41	41.3	24.44	23.46
	College & Universities	28.70	7.88	8.93	6.22	6.35	12.31
	Professional	40.54	4.49	6.85	4.97	7.79	12.97
2005-06	Primary Education	5.47	55.06	39.73	45.71	30.43	37.99
	Secondary Education	7.82	23.18	32.87	41.14	26.85	23.89
	College & Universities	59.10	8.73	10.29	6.17	6.93	20.62
	Professional	13.12	5.17	6.13	5.31	9.79	7.47

Research Focus

- To explain the nature of the incidence of the public sector spending on education in Pakistan, following research questions/ hypothesis are raised in the current study:
 - Are the government expenditures in education sector progressive in Pakistan, both at provincial and regional level?
 - Who are the beneficiaries from government expenditures in different education sub-sectors?
 - What kind of inequalities exists in the distribution of these benefits from the public sector spending on education, regionally and income wise?

Research Methodology

THE BENEFIT INCIDENCE APPROACH (BIA)

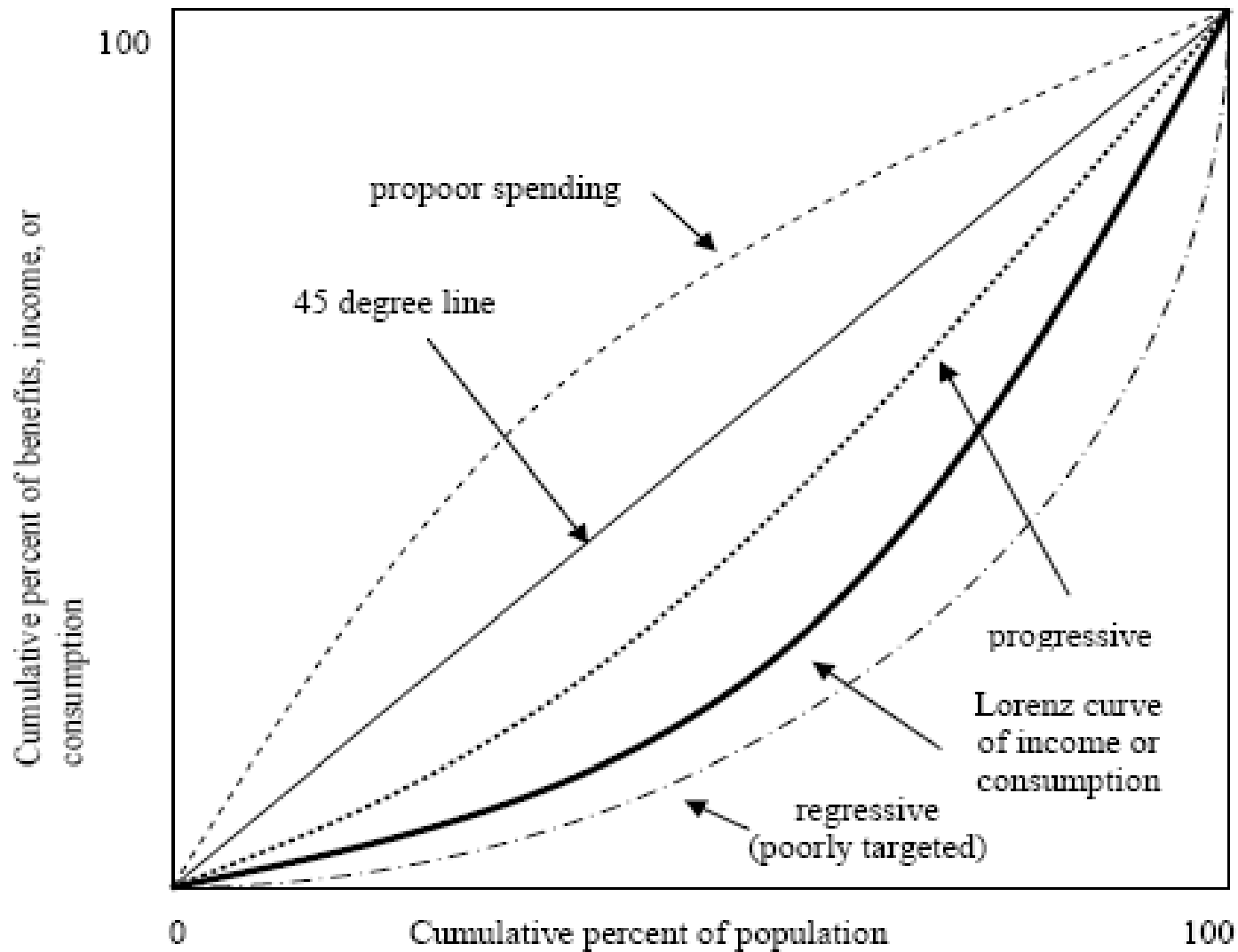
The benefit incidence approach is called the classic approach or non behavioral approach, which was pioneered by twin World Bank studies conducted by Selowasky (1979) for *Colombia* and Meerman (1979) for *Malaysia*.

- Chris Sakellariou and H.A Patrinos (2004) also analyzed incidence of public support to the private education sector in Cote d Ivoire.
- F. Castro-Leal, J. Demery, & K. Mehra (2000) have used this methodology to analyze public spending on health care in Africa.
- Jorge Martinez-Vazquez (2001) applied it to measure the impact of budgets on the poor. In practice the conduct of incidence analysis generally involve three steps:

Three step procedure of BIA

1. Obtain the estimates of the unit cost or subsidy
[Data for this step usually comes from public expenditure accounts. For example, budget data on per student cost or subsidy by level of schooling]
2. Impute the subsidies to individual or household identified as user of the service by using information available on use by different income groups.
[For example clinic visits as reported by different households in consumer expenditure surveys]
3. Aggregate individuals or households in groups ordered by income or expenditure or any other grouping of interests such as; race or gender, distribute the benefits among the different groups and arrive at an estimate of the incidence of per capita subsidies accruing to each group.

Diagrammatical Nature of Incidence



Hypothesis

1. Government expenditures on education are progressive in Pakistan.
2. There are large inequalities in the distribution of government expenditure among different sectors / levels of the education overall Pakistan, at provincial and regional (*urban and rural*) level.

Data Sources

1. The information on the use of the publicly provided education services, income of the household and the individual expenditures on the education have been obtained from the **PSLM Survey (Round-1) 2004-05**, Federal Bureau of Statistics, Government of Pakistan.
2. To find out per capita expenditure on education facilities, the data on population has been obtained from the **National Institute of Population Study (NIPS)**.
3. Total expenditures in different sub-sectors of the education have been taken from the **PRSP Annual Progress Reports**; FY 2000-01 to 2005-06, obtained from the PRSP Secretariat, Ministry of Finance, Government of Pakistan.
4. The data on enrollments in different educational institutions have been taken from **Pakistan Education Statistics, National Education Census (2005) and District Education Statistics – Public Schools (2004-05)**, Academy of Educational Planning and Management, Ministry of Education, Government of Pakistan.

Results and Discussion

R&D Table 1: Distribution of Government Expenditure on Education in 2005-06

Region	Primary Education				Secondary Education				Higher Education			
	Lower 20 % Share in Expenditure	Upper 20 % Share in Expenditure	GINI Coefficient	Concentration coefficient	Lower 20 % Share in Expenditure	Upper 20% Share in Expenditure	GINI Coefficient	Concentration Coefficient	Lower 20 % Share in Expenditure	Upper 20 % Share in Expenditure	GINI Coefficient	Concentration Coefficient
Punjab	18.76	19.98	0.33	0.01	17.74	21.30	0.39	0.04	17.86	21.38	0.39	0.06
<i>Rural</i>	19.01	19.93	0.31	0.02	17.91	23.66	0.34	0.06	18.09	22.86	0.32	0.05
<i>Urban</i>	20.71	20.39	0.35	0.01	19.78	19.93	0.40	0.00	18.25	21.34	0.39	0.06
Sindh	18.27	21.78	0.27	0.03	17.30	23.27	0.32	0.07	21.26	17.79	0.35	0.01
<i>Rural</i>	17.92	22.48	0.25	0.04	18.30	25.32	0.25	0.08	31.07	20.49	0.32	-0.07
<i>Urban</i>	19.47	19.47	0.27	0.02	17.51	19.84	0.32	0.03	17.97	18.19	0.34	0.02
NWFP	18.23	23.35	0.36	0.05	18.68	22.08	0.38	0.04	17.88	22.74	0.35	0.05
<i>Rural</i>	18.39	24.22	0.31	0.05	19.18	21.99	0.30	0.03	18.83	22.20	0.33	0.03
<i>Urban</i>	12.93	15.76	0.42	0.04	17.66	20.90	0.45	0.02	16.76	20.58	0.35	0.05
Balochistan	18.17	23.29	0.27	0.05	15.77	28.97	0.27	0.07	18.75	20.83	0.25	0.03
<i>Rural</i>	18.67	23.07	0.25	0.04	17.51	23.08	0.24	0.06	--	--	--	--
<i>Urban</i>	18.61	19.85	0.26	0.05	18.71	22.87	0.26	0.05	20.00	12.50	0.25	0.03
Pakistan	19.04	21.70	0.32	0.02	16.86	21.77	0.36	0.06	18.79	21.79	0.36	0.04
<i>Rural</i>	18.44	22.00	0.29	0.03	16.83	22.62	0.30	0.06	18.82	22.74	0.32	0.03
<i>Urban</i>	20.73	21.51	0.34	0.02	17.15	20.31	0.38	0.03	20.67	22.37	0.15	0.01

Results and Discussion



R&D Table 2: Distribution of Government Education Expenditure in Professional Education Sector in 2005-06

Region	Lower 20 % Share in Expenditure	Upper 20 % Share in Expenditure	GINI Coefficient	Concentration Coefficient
Pakistan	18.878	22.855	0.397	0.069
Rural	15.240	25.649	0.445	0.113
Urban	20.319	12.788	0.370	0.031
Punjab	25.898	26.201	0.419	0.002
Rural	13.224	36.776	0.499	0.163
Urban	35.147	1.107	0.330	-0.197
Sindh	24.828	24.828	0.347	0.079
Rural	--	--	--	--
Urban	18.752	10.156	0.339	0.063
NWFP	17.084	19.019	0.408	0.118
Rural	18.795	29.315	0.328	0.050
Urban	6.571	8.121	0.397	0.084

Conclusion

- First hypothesis, the **government spending on education in Pakistan is progressive**; is widely accepted.
- The other hypothesis that there exist large **inequalities in the shares** of the different quintiles in benefits of the government spending on education **can not be rejected**.
- The education expenditure in overall Pakistan as well as in all the provinces is progressive in nature. It means that **public subsidies in the education sector are more evenly distributed** as compared to the income distribution. These **expenditures are pro-poor**.
- Overall **poor segment of population is getting more benefits** from the expenditures in different areas of education subheads. However there exist large variations in the shares of the upper quintiles and the lower quintiles in benefits of government education expenditures.
- The **share of lower quintiles is lower than the share of upper quintiles** in all the regions except higher education in Sindh and Balochistan.

Conclusion (Contd.)

- The rural urban inequalities are more reflective. The **rural areas are more underprivileged regions** in education facilities.
- The critical issue will remain **shortage of teachers**, without which it would not be possible to achieve universal primary education and/or good quality education and/or skills of acceptable quality. The profession is not able to attract and/or retain the talented persons, because of continually falling status, working conditions, career perspectives and professional development.
- The **HEC initiative on indigenous and foreign scholarships** and on track salary package for foreign and qualified faculty members in college and universities is an encouraging step.
- Without qualified, competent, motivated and well paid teachers who hold themselves and the profession in high esteem, such programs will remain a mirage. A review of outcomes and costs in all longstanding programs needs to be done with a view to determining their continuation.

Conclusion (Contd.)

- Accurate and updated data collection is necessary to prepare comprehensive national and regional education strategies. The provincial and district level **Education Management Information Systems (EMIS)** should be strengthened.
- Pakistan's education system faces a **number of challenges**. These include: under-funded and inefficient public sector along with a mixed, expensive and unregulated private sector, underdeveloped managerial leadership, academician and academic independence, poor salary structure (especially of primary and secondary school teachers) and lack of physical infrastructure.
- These poor conditions in the education sector **may be attributed to a number of factors** like poverty, malnutrition, unequal access to health facilities, and high population growth, infant mortality, and foremost lesser income generating opportunities in a competitive environment. For equity, efficiency and effectiveness of the education sector, inputs from both the public and regulated private sector would be necessary.

Conclusion (Contd.)

- **On one hand**, poverty and illiteracy appear to be significant factors adversely affecting household decisions to send children to school. **On the other hand**, high population growth rates and lack of sufficient financial commitment has caused illiteracy to rise. There have been commendable efforts in the private and non-government sectors, but the scale of these efforts has not been sufficient to make a difference to the aggregate situation.
- Pakistan has previously **neglected investment in human capital** and thus fosters a persistently high population, deceleration of growth and overruling poverty. In education, the problems are low level of enrollments not only at the primary, but also at the middle, secondary, and higher education levels along with poor quality of public education.
- Pakistan still has to go a long way to reach the **MTDF, PRSP, and MDG targets** and until and unless education is given the due priority that it deserves in the policy framework and allocation of financial resources this sector will continue to show weak performance in the coming years.

Policy Implications

- Distribution of the benefits of the public spending on education among different quintiles is not even. Inequalities are persistent at provincial and regional level. Horizontal and vertical equity in allocation of the funds to education both at provincial and regional level can make the expenditure programs in education more efficient.
- The principle of horizontal equity calls for equal treatment of equal individuals and vertical equity calls for the unequal treatment of unequal individuals. **Government program should target more to specific population rather managing public education.**
- **Reallocation of resources and restructuring of the education policy** that target to benefit the poor more in particular and improve the low income people access to these services is the need of the time. Education policies measures should be targeted towards poor as fee waiver, scholarships, cash transfers and in-kind transfer or any other public support may result increase of subsidy to poor and will enhance the share of lower quintiles.

Policy Implications (Contd.)

- Although the hypothesis that public expenditures education are progressive in Pakistan cannot be rejected. But current indicators of education in Pakistan present the **poor picture of expenditures** on education.
- The government is keen to multiply PhD Doctors and Professionals and thus allocates huge budgets to HEC; however, the current statistics demands **government's concentration on Primary and Secondary level education**.
- As Pakistan is among the countries which has lowest Human Development index (HDI) and other education parameter, the literature demonstrates investment in human capital has larger returns, increase investment in human capital will result more return. **Increase in the expenditures as percentage of GDP on education besides other social sector expenditures is need of the time.**
E.g., Malaysia spends its 23 percent of GDP on education.

A photograph of two young girls with dark hair, smiling and looking at a book together. The girl on the left is wearing a blue long-sleeved shirt and has her hand raised near her head. The girl on the right is also smiling. They are sitting at a desk with a book open in front of them. The background is slightly blurred, showing what appears to be a desk or shelf area.

Thank You