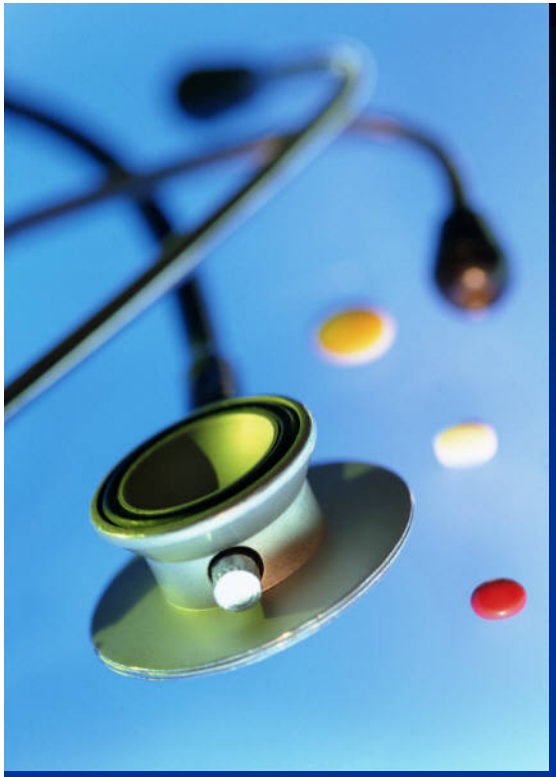


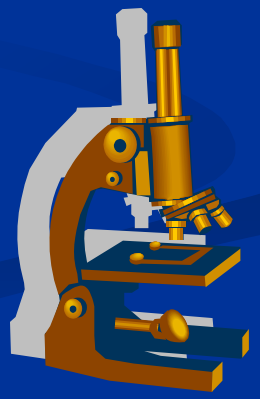
Health Care Services and Government Spending in Pakistan

Muhammad Akram

PhD Student, QAU

Faheem Jehangir Khan

Research Economist, PIDE



Introduction

- Health plays the key role in determining the human capital
- Better health improves the efficiency and the productivity of the labor; ultimately contributes to the economic growth and leads to human welfare
- A positive relationship exists between the public sector expenditures and the economic growth
  {Rasmus (2001), Robert (2003), ESCAP (2003)}
- To attain better, more skillful, efficient and productive human capital resources, Governments subsidize the health care facilities for its people
- Public sector pays whole or some part of the cost of utilizing health care facilities

Introduction (Contd.)

- The size and distribution of these in-kind transfers to health sector differs from country to country but the fundamental question is how much these expenditures are productive and effective?
- 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 resources.
- How much these expenditures are distributed and 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

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 basic health expenditures are the *progressive* Jorge (2001) while the specialized hospitals services are *regressive* one Blejer (1990), Castro (2000).

- 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)

Objectives of the Study

1. To analyze the ***incidence*** of the government expenditure on health 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 Health Care Services in Pakistan

- Pakistan is in the middle of epidemiological transition where almost ***40 percent*** of total burden of disease (BOD) is accounted for by infectious/communicable diseases.
- These include diarrhoeal diseases, acute respiratory infections, malaria, tuberculosis, hepatitis B&C, and immunizable childhood diseases.
- Another ***12 percent*** is due to reproductive health problems.
- Nutritional deficiencies particularly iron deficiency anemia, Vitamin-A deficiency, iodine deficiency disorders account for further ***6 percent*** of the total BOD.
- Non-communicable diseases (NCD), caused by sedentary life styles, environmental pollution, unhealthy dietary habbits, smoking etc. including cardio vascular diseases, cerebro-vascular accidents, diabetes and cancers account for almost ***10 percent*** of the BOD in Pakistan.

Source: MTDF (2005-10)

Policies Emphasizing Health Care Services in Pakistan

Health related Indicators (Regional Comparison)

	Total Population (000)	**Life Expectancy at Birth** (Years)	**Probability of Dying** (per 1000) Under age 5 years	**1 Year old Fully Immunized** (%)		**Population Growth Rate** (%)	**Physicians** (per 100,000 people)
		both sexes	both sexes	against TB	against Measles	1994-2004	1990-2004
Bangladesh	139,215	62	77	95	77	2.0	26
Bhutan	2,116	63	80	92	87	2.2	5
China	1,315,409	72	31	94	84	0.8	106
India	1,087,124	62	85	73	56	1.7	60
Nepal	26,591	61	76	85	73	2.3	21
Pakistan	**154,794**	**62**	**101**	**80**	**67**	**1.9***	**74**
Sri Lanka	20,570	71	14	99	96	1.0	55

Source: WHO 2006

Policies Emphasizing Health Care Services in Pakistan

- Millennium Development Goals (2015)
- Medium Term Development Framework (2005-10)
- Poverty Reduction Strategy Papers
- National Health Policy (Health Sector Reform)

Public Health Care Service Delivery in Pakistan

- During the last two decades, living standards of the poor has improved.
- In the **1980s**, it was due to high economic growth, inflow of remittances and foreign aid during the afghan war.
- The trend was reversed during the **1990s** due to unstable political environment, frequent changes in the government leadership and ultimately Pakistan faced economic sanctions after nuclear–tests in 1998.
- The poverty trend shows that there was 26.1 percent poor in 1990-91 against 32.1 percent in 2000-01.

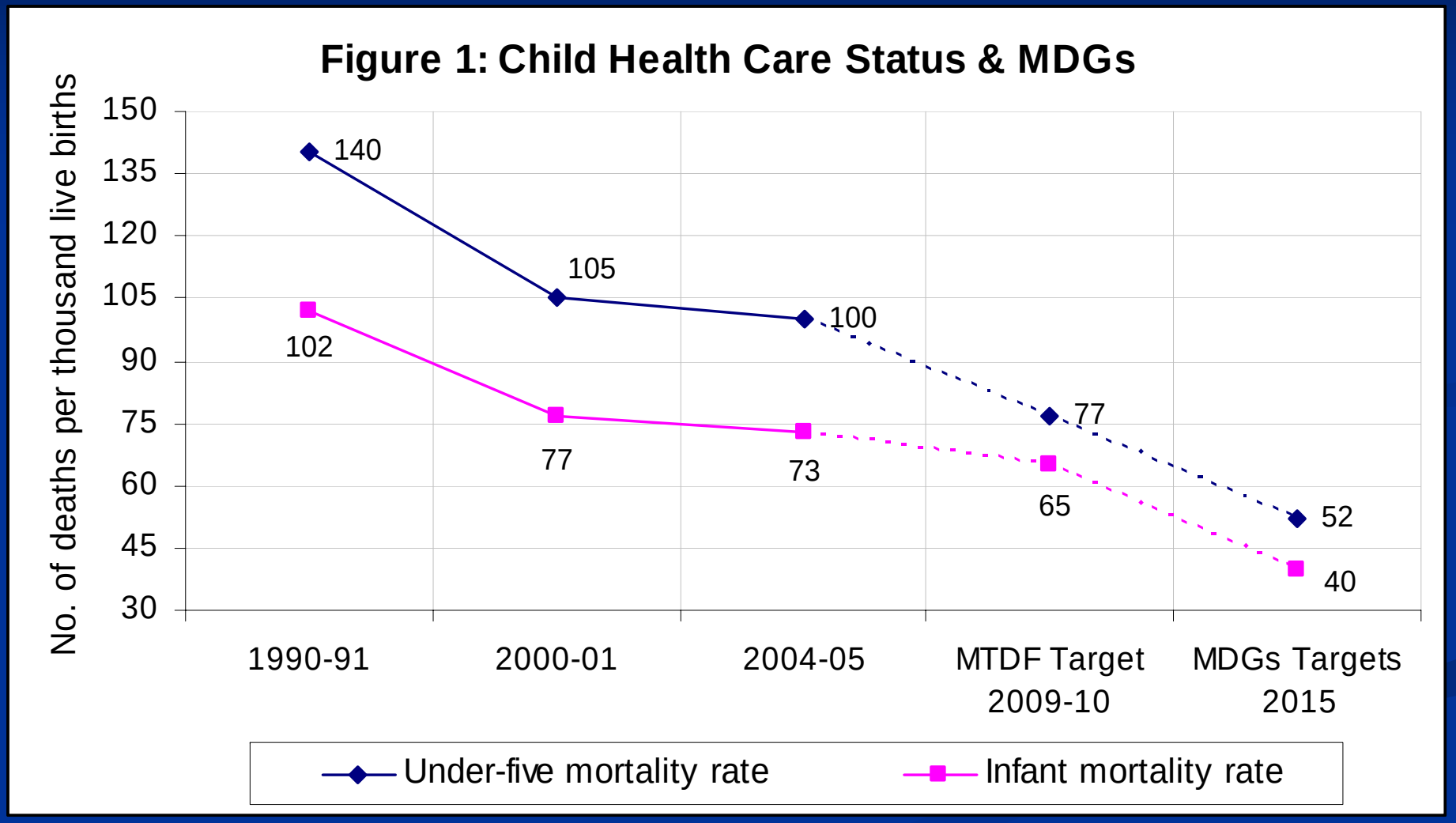
Public Health Care Service Delivery in Pakistan

- During the same time period, the share of total public health expenditure as percentage of GDP was **0.7 percent**
- The GDP growth was declined from 5.6 percent in 1990-91 to 2.2 percent in 2000-01, with the least percentage points in 1996-97, i.e., 1.7 percent; meaning that the constant share of health in real terms was also declined over time

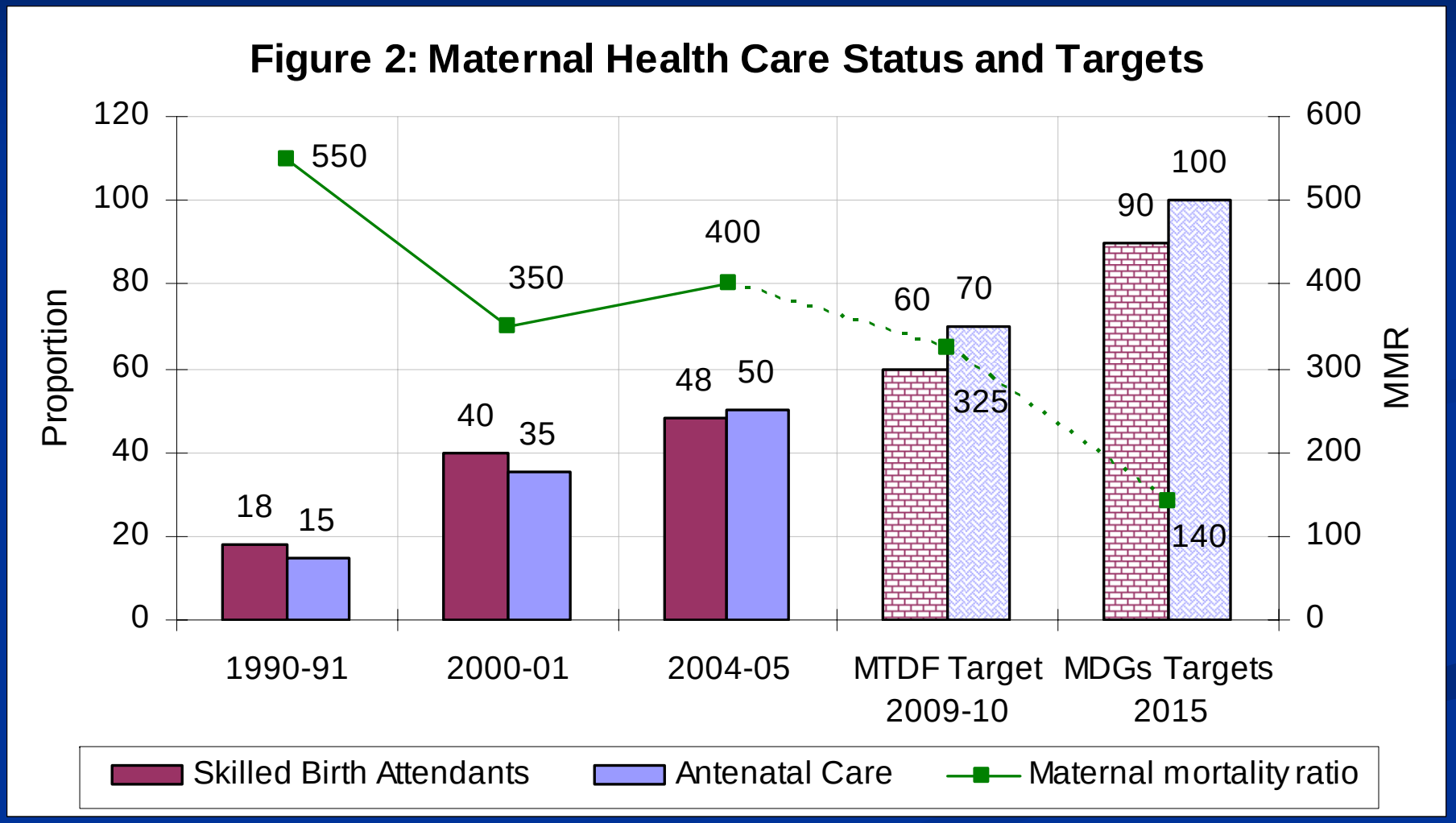
Public Health Care Service Delivery in Pakistan

- **Access to Health Care Services**
  - Child Health Care
  - Maternal Health Care
  - Human Capital
- **Government Spending on Health Sector**
  - Total Public Sector Spending (2000-01 and 2005-06)
  - Federal and Provincial Share in Total Spending
  - Share of Health Expenditure as % GDP
  - Distribution of Health Expenditure by Sub-Sectors

Child Health Care Service



Maternal Health Care Service



Human Capital: Health Care Service

Registered Medical and Paramedical Personnel

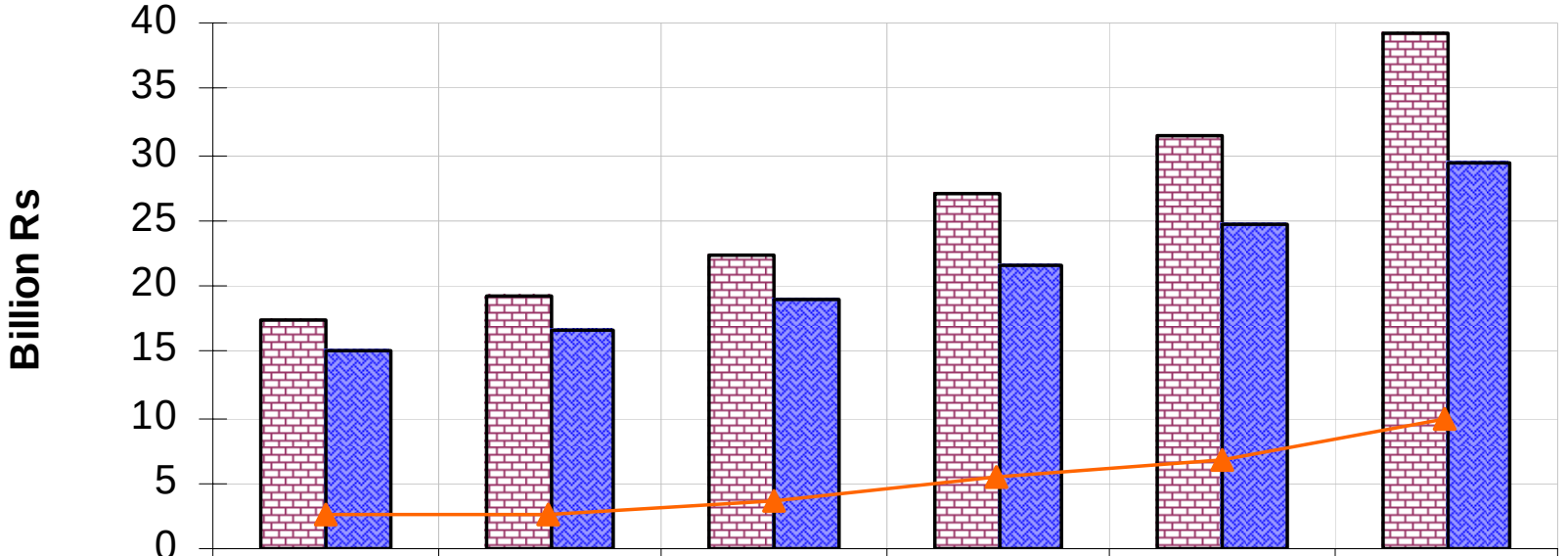
Year	Registered Doctors	Registered Dentist	Registered Nurses	Registered Mid-wives	Registered LHVs	Population per		
						Doctor	Dentist	Nurse
1991	56,478	2,193	18,150	16,299	3,463	1,993	50,519	6,104
2000	92,734	4,164	37,623	22,525	5,443	1,529	33,629	3,732
2001	97,156	4,611	40,019	22,711	5,669	1,516	31,579	3,639
2002	102,541	5,057	44,520	23,084	6,397	1,466	29,405	3,347
2003	108,062	5,530	46,331	23,318	6,599	1,404	27,414	3,296
2004	113,206	6,127	48,446	23,559	6,741	1,359	25,107	3,175
2005	118,160	6,761	33,427	23,897	7,073	1,310	25,297	4,636

Source: Economic Survey of Pakistan (2005-06)

- **Doctor to Nurses Ratio**
  - Pakistan **3 : 1**
  - International/WHO **1 : 3**
- **Doctor/ Population**
  - International/WHO **1 000**

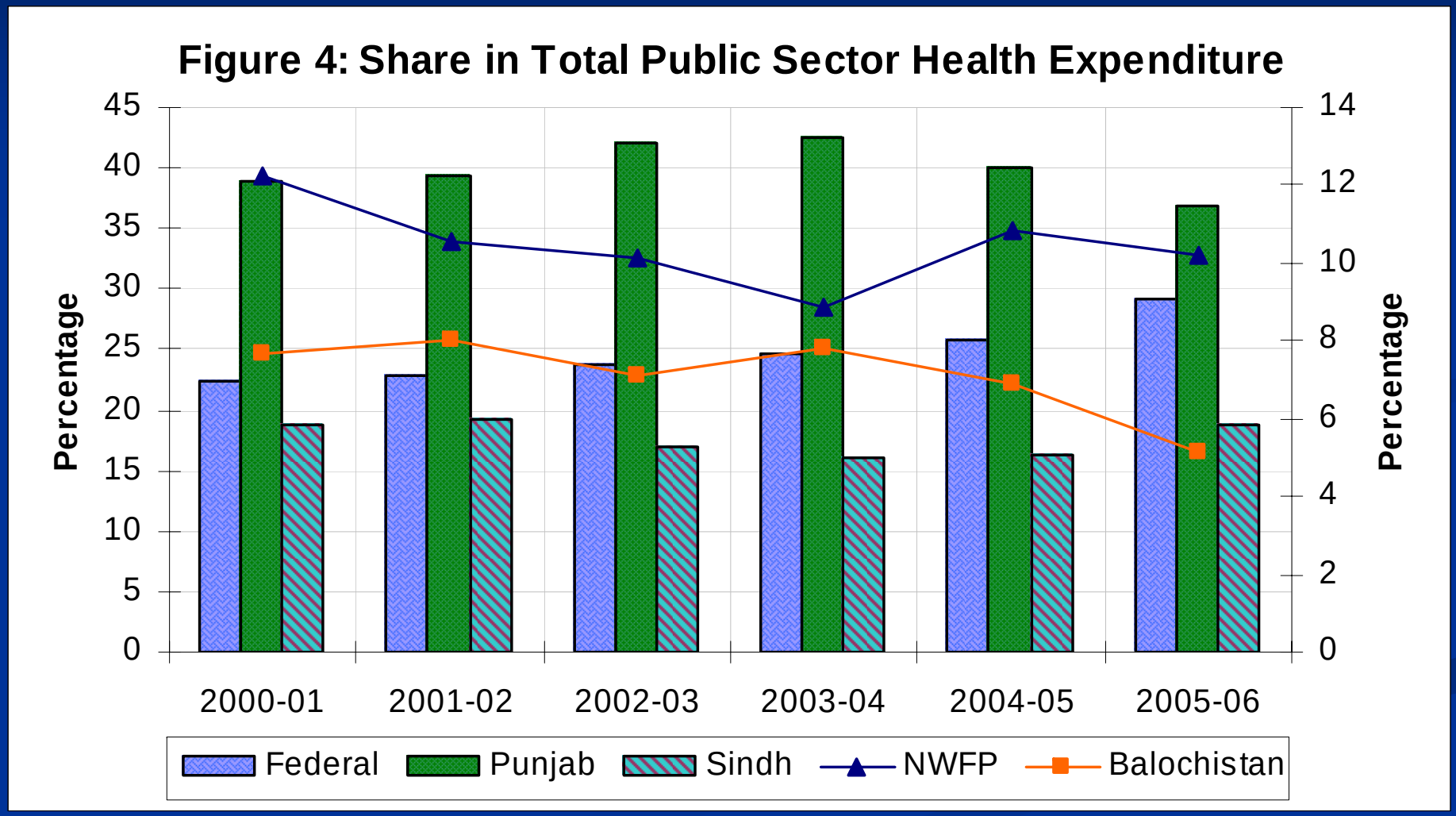
Public Spending on Health Sector (Total)

Figure 3: Total Public Sector Expenditure on Health

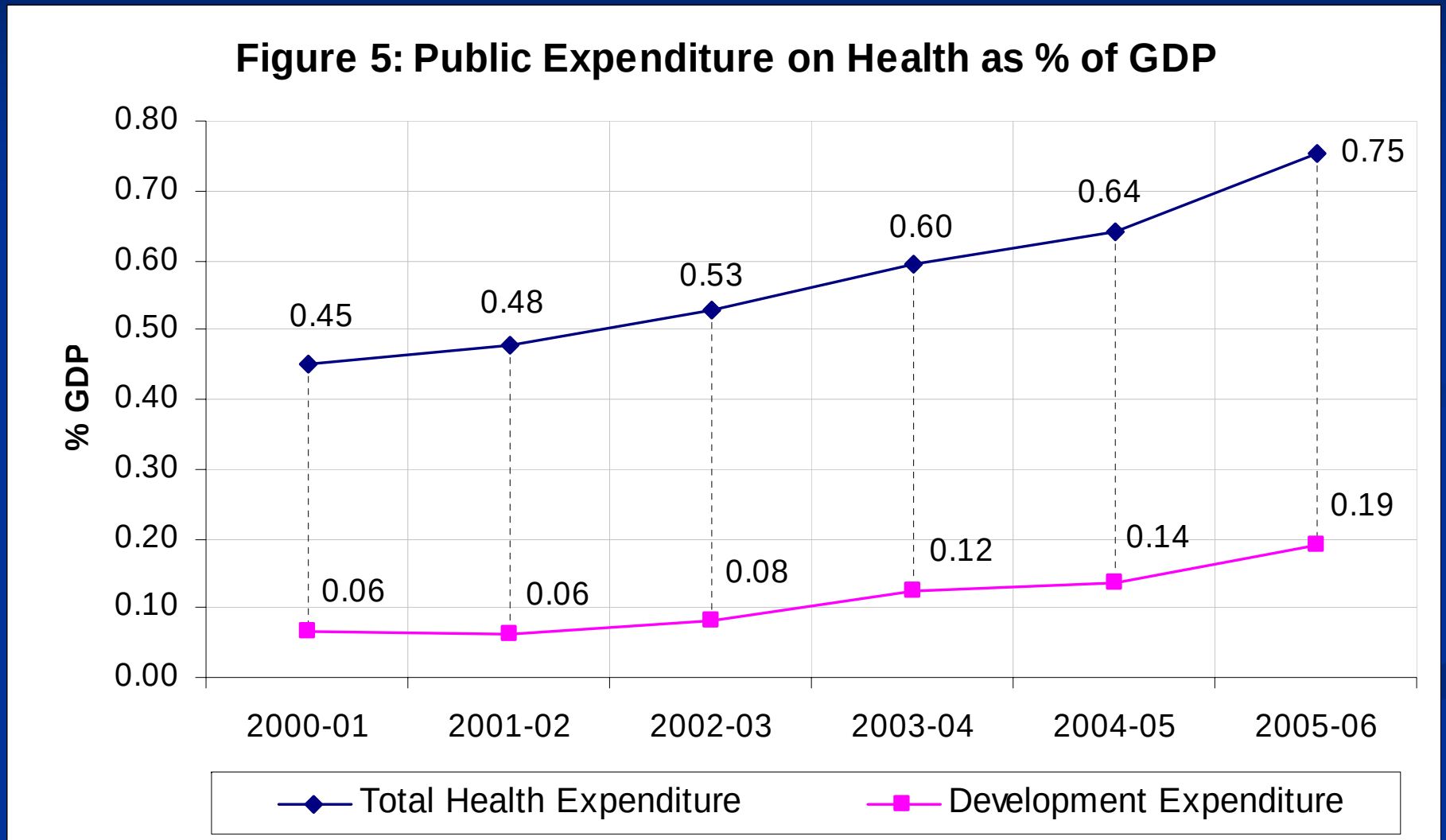


	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Total	17.508	19.211	22.368	27.009	31.426	39.203
Current	14.984	16.717	18.847	21.441	24.777	29.41
Development	2.524	2.494	3.521	5.568	6.649	9.793

Public Spending on Health Sector (Share)



Public Spending on Health Sector (% GDP)



Public Spending on Health Sector (Sub-Sector)

Distribution of Health Expenditure by Sub-Sectors

Percentage

Sector	2001-02	2002-03	2003-04	2004-05	2005-06
General Hospitals and Clinics	71.80	72.10	72.29	69.58	70.32
Mother & Child	0.25	0.27	0.24	0.16	0.55
Health Facilities and Prevention Measures	15.00	15.00	14.67	17.62	18.37
Other Health Facilities	13.00	12.60	12.80	12.64	10.77

Source: PRSP Annual Reports

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

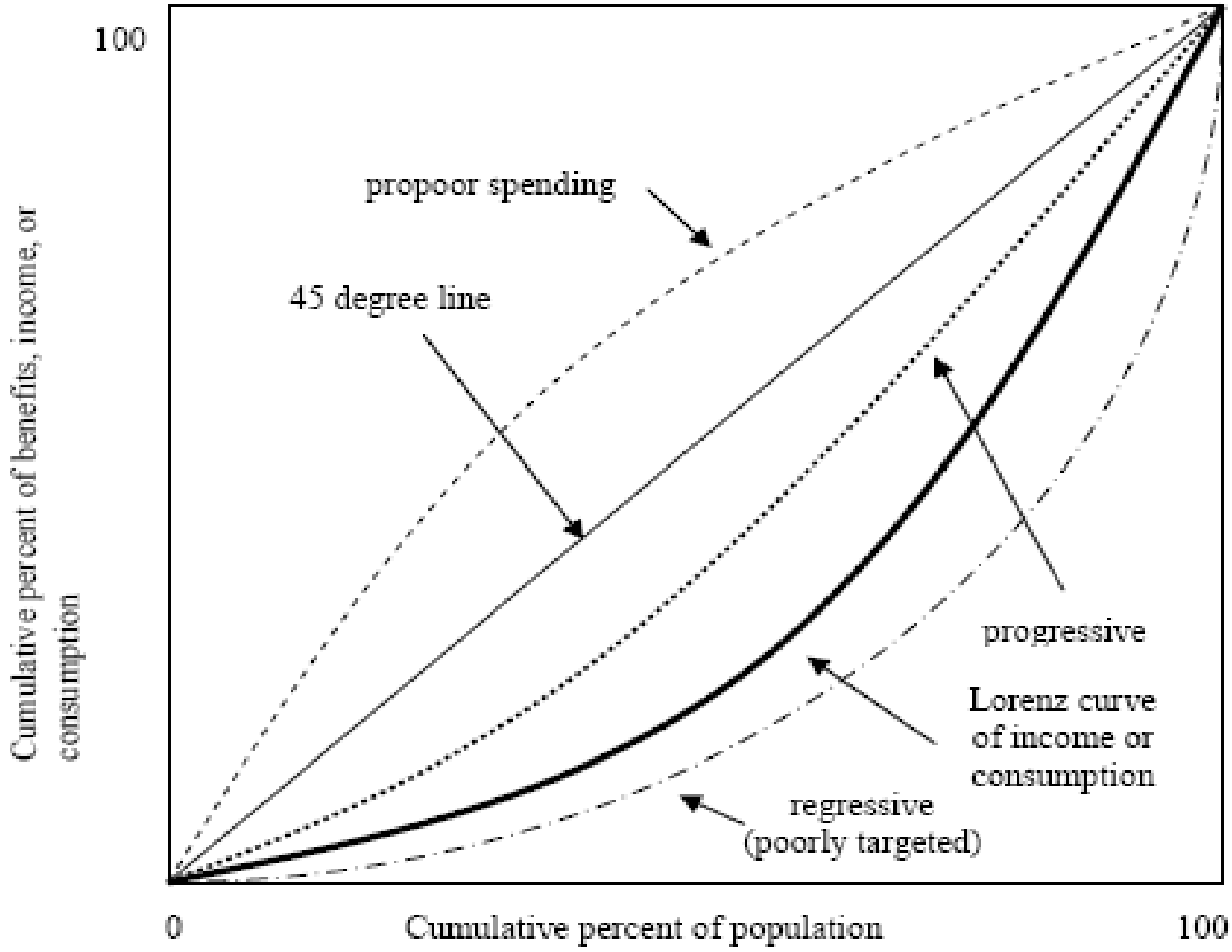
Three step procedure of BIA

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



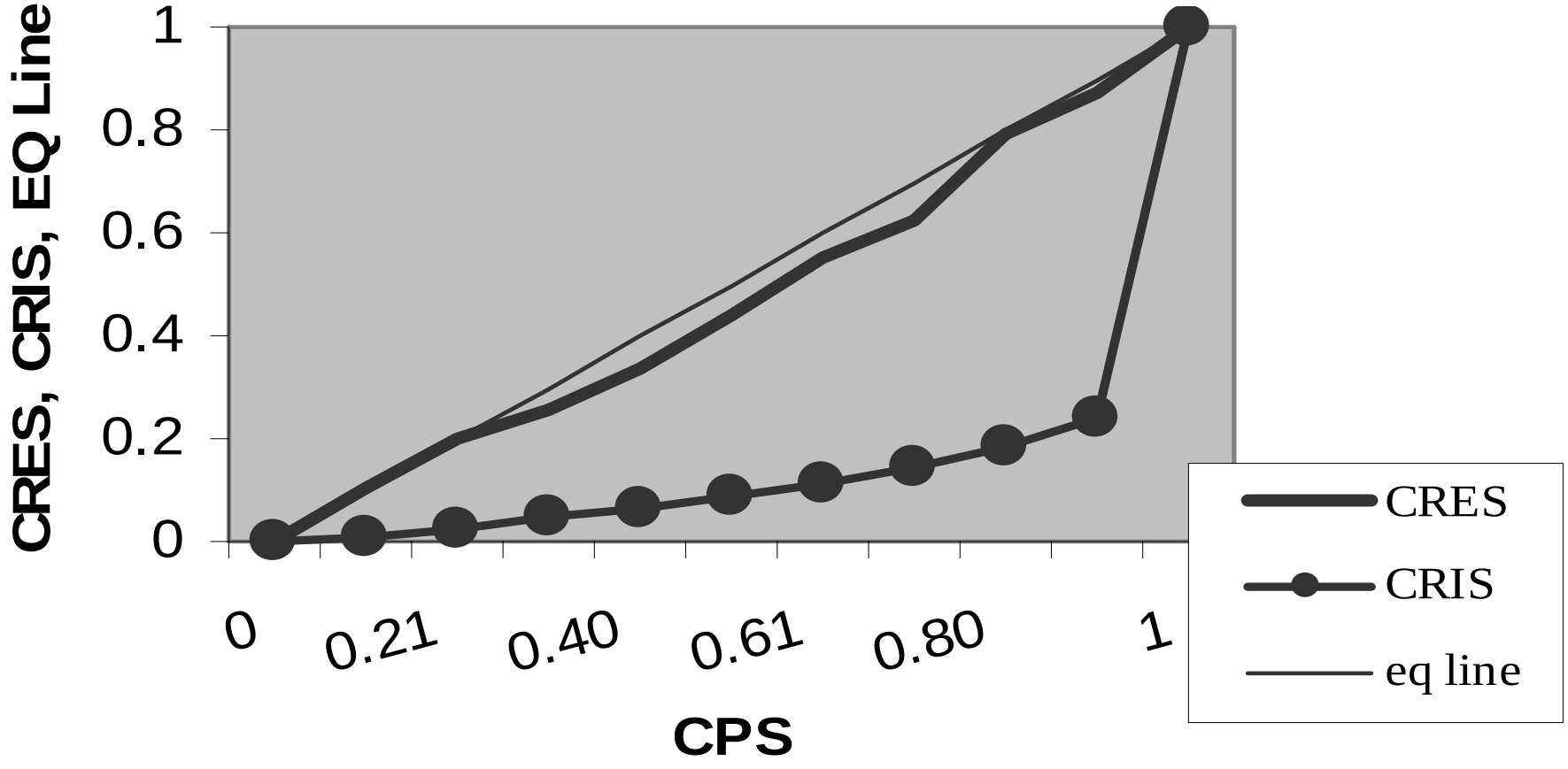
Data Sources

1. Income of the household and the individual expenditures on the health have been obtained from **Pakistan Social and Living Standards Measurement Survey** (PSLM) 2004-05, Federal Bureau of Statistics, Government of Pakistan
2. Data on population has been obtained from the **National Institute of Population Study** (NIPS)
3. National, Provincial and Sector-wise expenditures on health has been taken from the **PRSP** Annual Report 2000-01 to 2005-06.

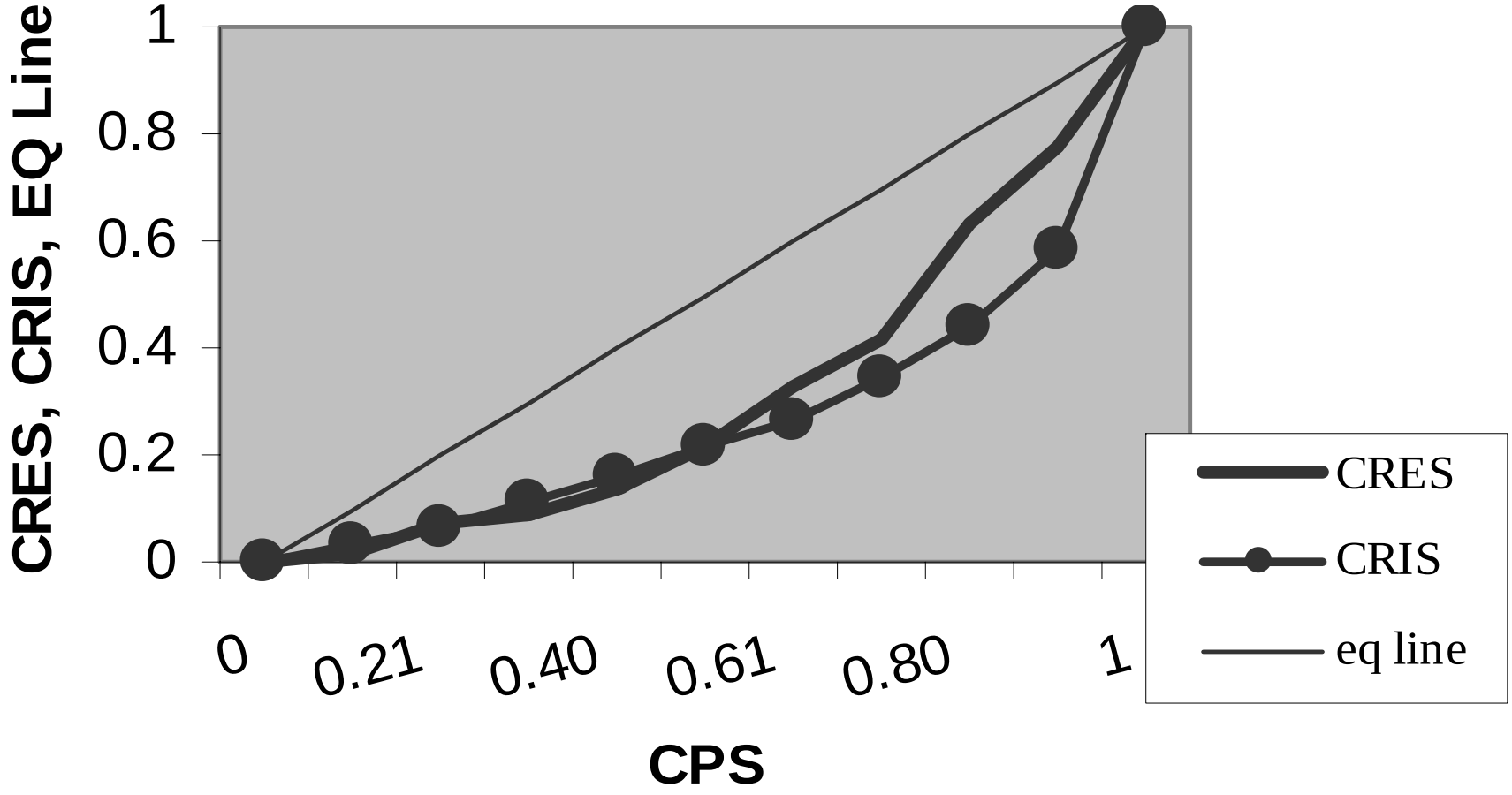
Distribution of Government Health Expenditure by Sector and Quintile (2005-06)

	Preventive Measures and Health Facilities				General Hospitals and Clinics				Mother and Child			
Region	**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	**19.1**	**21.26**	**0.42**	**0.02**	**7.18**	**41.66**	**0.43**	**0.26**	**2.95**	**21.27**	**0.38**	**0.44**
Rural	20.17	20.82	0.36	0.02	1.92	41.69	0.34	0.43	---	---	----	---
Urban	18.85	21.37	0.43	0.03	12.18	30.41	0.43	0.19	---	---	----	---
Sindh	**20.11**	**20.68**	**0.35**	**0.01**	**7.03**	**95.87**	**0.31**	**0.68**	**10.47**	**28.91**	**0.31**	**0.29**
Rural	19.07	22.14	0.28	0.02	-8.23	7.45	0.24	0.77	---	---	----	---
Urban	19.58	21.88	0.35	0.02	6.1	12.93	0.31	0.42	---	---	----	---
NWFP	**17.97**	**25.56**	**0.38**	**0.07**	**4.64**	**29.06**	**0.36**	**0.37**	**24.49**	**5.04**	**0.21**	**-0.28**
Rural	17.93	25.53	0.34	0.07	2.76	43.55	0.34	0.5	---	---	----	---
Urban	18.52	24.53	0.41	0.07	25.91	32.76	0.35	0.1	---	---	----	---
Balochistan	**19.04**	**22.17**	**0.3**	**0.03**	**10.31**	**35.97**	**0.27**	**0.2**	**---**	**---**	**----**	**---**
Rural	19.58	22.15	0.27	0.04	25.59	17.2	0.24	0.02	---	---	----	---
Urban	18.94	20.57	0.29	0.02	-8.5	126.88	0.32	1.09	---	---	----	---
Pakistan	**6.17**	**31.54**	**0.31**	**0.29**	**7.04**	**36.4**	**0.36**	**0.35**	**8.08**	**23.69**	**0.3**	**0.19**
Rural	4.95	25.25	0.3	0.38	4.68	46.14	0.31	0.48	---	---	----	---
Urban	6.18	35.77	0.29	0.09	6.83	30	0.37	0.23	---	---	----	---

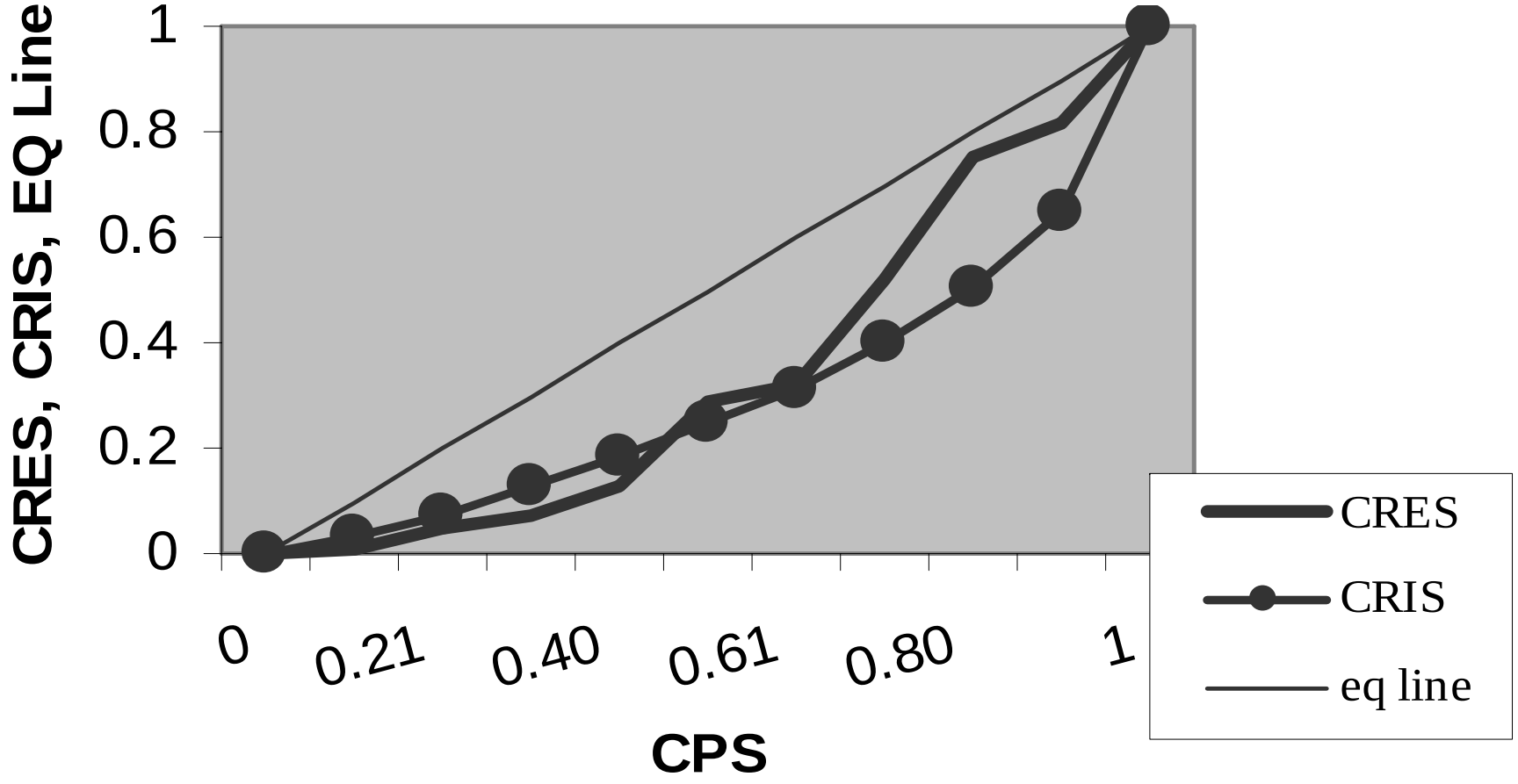
Distribution of Subsidy on Preventive Measures and Health Facilities



Distribution of Subsidy on General Hospitals and Clinic



Distribution of Subsidy on Mother Child



Findings of the Study

- The hypothesis that spending on health is progressive is rejected.
- The hypothesis that there exist large inequalities in the shares of the different quintiles in health expenditures cannot be rejected.
- The expenditures in health sectors are overall progressive in Pakistan while it is regressive in some subhead expenditures of health at provincial and regional levels.
- Mother and Child sub-head is regressive in Punjab, General Hospitals and Clinics are regressive in Punjab ,Sindh, NWFP and in Balochistan. This is because in public hospitals the quality of health care services are of low standard and in rural areas these services are almost non-existent.

Findings of the Study (Contd.)

- In health sector more inequalities prevails in the share of the lower and upper quintiles in government expenditures in health sectors. So expenditure in Preventive Measures sub-sector is progressive. While the expenditures on Mother and Child, and on General Hospitals and Clinics are regressive at-least at provincial level.
- The rural urban inequalities are more profound. The rural areas are more disadvantaged regions underlining the health care facilities.
- Overall, the public sector spending on health sector is partially progressive in Pakistan. However, the share of the lower quintile is lower than higher quintile in total public expenditures on health.

Policy Implications

1. Inequalities in the shares of different quintiles, the benefits of public spending on health in Pakistan are widely accepted.
2. Inequality exists at provincial and regional level. Horizontal and vertical equity in allocation of the resources to health both at provincial and regional level can make the expenditure programs in health sector more effective and result oriented.
3. Health is the neglected sector in Pakistan. Reallocation of resources and reformulation of the health strategy that target to benefit the disadvantaged groups more and improve the low income people access to medical services is the desired need of the time.
4. Through better health policy with emphasis on the implication side can make a huge difference in the living standard of the poor.

Policy Implications (Contd.)

5. Health policies measures as fee waiver, 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.
6. The hypothesis that public expenditures in health are progressive in Pakistan is rejected.
7. The current indicators of health in Pakistan demonstrate the poor picture of expenditures on health. Pakistan is among those countries that have lowest Human Development Index (HDI) and other health parameter.
8. The increase in the expenditures as percentage of GDP on health besides other social sector expenditures is strongly emphasized.


Thank You