



Pakistan's Industrialization Strategy

Pakistan Development Forum 2007



The Story line

The demographic transition has several elements

Overall population growth is declining, but the cohort entering the labor force each year is large and needs to be provided gainful employment

The manufacturing sector is best equipped to creating sustainable and well-paying jobs

This requires competitive workers i.e. workers who are highly productive relative to the wages they get, in other words unit cost of labor is low

The industrialization strategy proposed here is anchored in competitive workers made so not only via investment in human capital (education and skills) but also complementary capital (high technology embodying FDI and world class infrastructure).



Outline of the presentation

The presentation first assesses the performance of manufacturing

Next, it identifies the binding constraints to further growth using industry specific evidence

It then discusses interventions to address binding constraints that are (i) common across manufacturing and (ii) specific to small enterprises

The annex provides industry specific challenges that are best addressed via a new industrial policy developed in close consultation with industry associations to overcome coordination difficulties and information asymmetries



The Evolving Structure of Industry

Industrial Performance 1949-2006 (period averages)

Year	Total	Large Scale	Small Scale	Total	Large Scale	Small Scale
	Manufacturing Share in GDP (%)			Growth Rates of Manufacturing (%)		
1950s	8.78	4.38	4.41	7.73	15.75	2.3
1960s	12.41	8.85	3.56	9.91	13.39	2.91
1970s	13.99	10.42	3.57	5.5	4.84	7.63
1980s	16.65	12.26	4.38	8.21	8.16	8.4
1990s	17.68	12.32	5.36	3.88	3.54	5.06
2000-02	16.00	10.45	5.50	8.10	9.10	6.26
2003-05	17.60	12.10	5.55	13.30	16.85	6.22
2005-06	18.20	12.70	5.50	8.60	9.00	7.63

Source: 50 Years of Pakistan Volume 1 Summary, Statistical Supplement of Economic Survey 2002-03 and Economic Survey 2005-06.

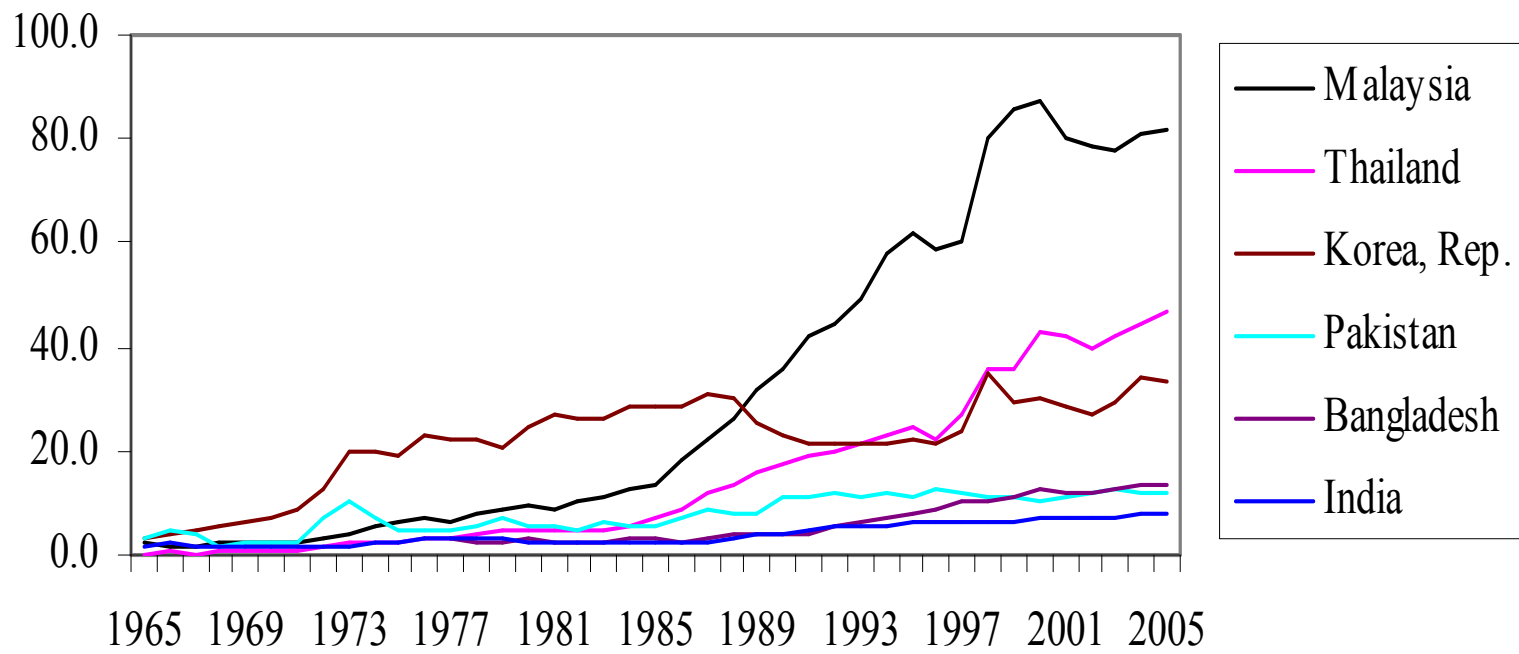


The Transformation Story

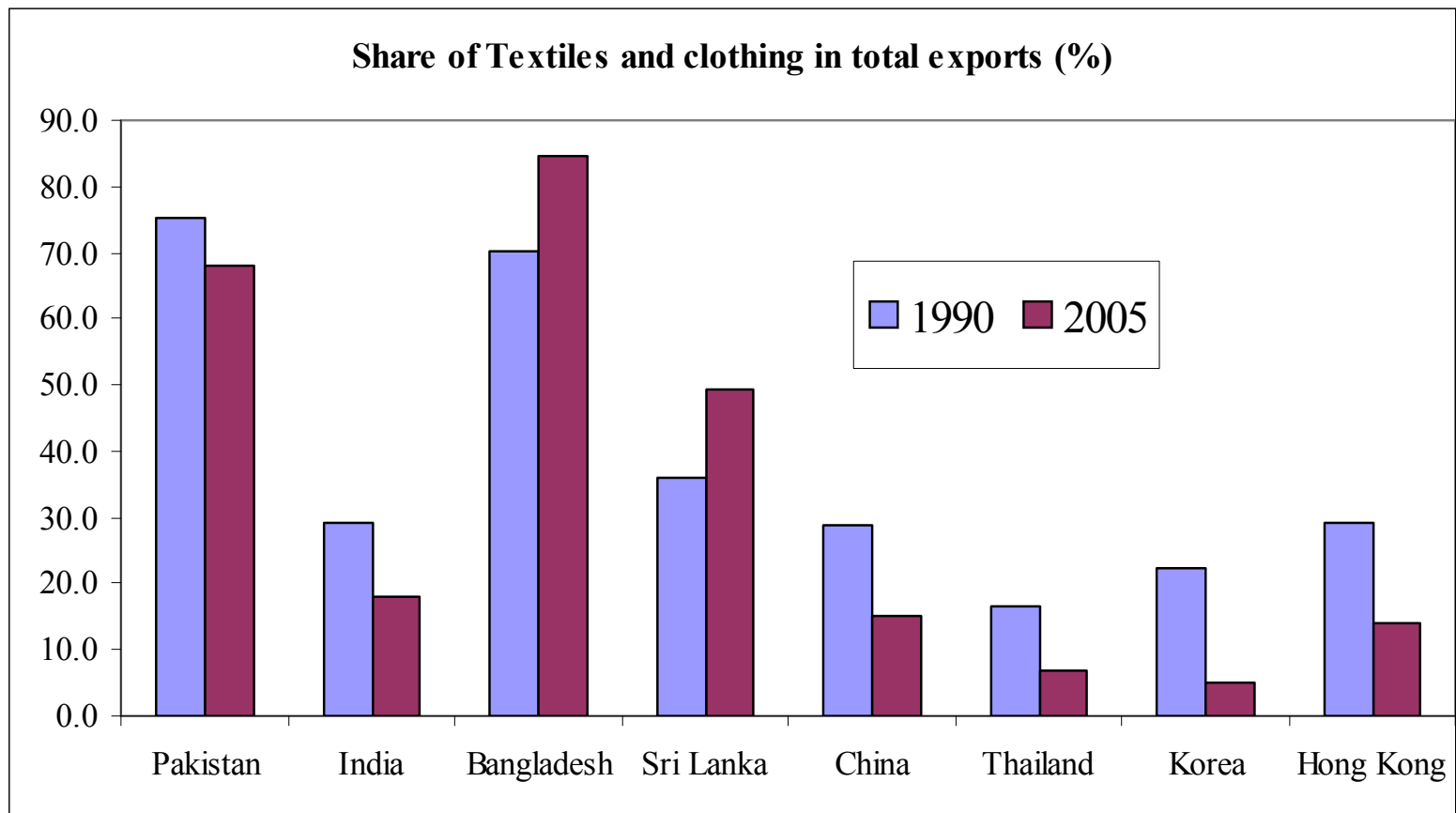
- Industrial transformation not complete
- Industrial activity not diversified
- Manufacturing value added still relatively low
- Manufacturers exports low
- Pakistan's share of world exports low and going down
- Share of textiles in exports still very high
- Manufactured exports of low technology intensity




Manufacturers Exports (% of GDP)



Characteristic of manufacture exports: High Dependence on Textiles





Identifying the binding constraints: Garments (Jeans) I

- High concentration in yarn/fabric, not enough presence in made ups
- Comparatively low export unit values
- Value chain analysis showed low labour productivity as a major constraint
- Higher costs of imported chemicals/products
- Higher time and money costs of shipping

Identifying the binding constraints: Garments (Jeans) II

Benchmarking Labor Costs and Productivity for Sewing (Standard Pair of 10/12 ounce Jeans)

	Pakistan (SME)	China	India	Kenya	Pakistan (Large)/*
Wage Cost, (US\$/month)	82	135	83	90	82 /*
Productivity (No/day/person)	10-12	24	21	18	20 – 24 /*
Assembly Costs (\$US/ Jeans)	0.95 - 1.10	0.96	0.86	1.11	1.41 /*
Price Range (US\$/pair)		4.50 – 5.00			8 – 10 /*

/*: Large-scale firms are integrated and use modern technology. The use of capital intensive technology --i.e., higher K/L ratios-- contributes to higher labor productivity.

Identifying the binding constraints: Garments (Jeans) III

Relative Shipping Time and Cost for US Market

	Days to Ship	Time and Freight Costs / a			Relative to China
		Time cost*	Freight Cost	Total	
Mexico	2	1.0	0.6	1.6	10.2
Canada	2	1.0	0.9	1.9	9.9
Colombia	10	5.0	1.7	6.7	5.1
China	12	6.0	5.8	11.8	-
Hong Kong	12	6.0	6.2	12.2	-0.4
S. Africa	25	12.5	5.0	17.5	-5.7
Kenya	61	30.5	4.9	35.4	-23.6
Pakistan	25	12.5	5.8	18.3	-6.5

Source: GDS; USAID based on ShipGuide.com 2003 data; OECD; US Department of Commerce, APL Shipping Schedules. * Time Factor cost based on econometric model of David Hummel, "Time as Trade Barrier", Purdue University, 2001. / a: % of f.o.b. price.



Special Problems of the SME's I

- We are really dealing with the micro sector
- Average educational/vocational levels of entrepreneurs are fairly low
- Technology used is dated & local machinery based
- Most have no or poor quality control systems
- Fairly low levels of sub-contracting
- Severely credit constrained

Special Problems of the SME's II:

We are dealing with micro-enterprise

Firm-size distribution in SME dominated sectors								
Sectors	% of Units in a Sector				% of Employment in a Sector			
	<i>Micro</i>	<i>Small</i>	<i>Medium</i>		<i>Micro</i>	<i>Small</i>	<i>Medium</i>	
	<i>0-9</i>	<i>10-19</i>	<i>20-49</i>	<i>50-99</i>	<i>0-9</i>	<i>10-19</i>	<i>20-49</i>	<i>50-99</i>
Food	94.9	3.6	1.0	0.2	44.9	11.1	7.0	3.2
Textile	92.7	5.1	1.5	0.3	41.6	10.8	7.2	3.4
Apparel	86.9	8.5	3.0	0.8	30.9	16.6	12.8	8.9
Footwear	96.9	2.4	0.3	0.1	79.8	12.7	3.2	1.5
Metal Products	93.3	5.5	0.8	0.1	60.6	17.0	5.7	2.5
Sports Goods	92.7	5.9	0.9	0.3	61.5	20.3	7.1	4.7



Special Problems of the SME's III:

The financing aspect of subcontracting

Important Sources of Finance for Fixed Investment in SME suppliers					
	Lahore	Shiekhupura	Gujranwala	Faisalabad	Total
Parent firms	9.1%	0.0%	0.0%	5.3%	5.0%
Friends or relatives	36.4%	37.5%	0.0%	36.8%	35.0%
Self-generated funds	27.3%	37.5%	50.0%	21.1%	27.5%
Commercial banks	18.2%	0.0%	0.0%	10.5%	10.0%
Government Credit Banks	0.0%	0.0%	0.0%	5.3%	2.5%
Informal Street Markets	9.1%	25.0%	50.0%	21.1%	20.0%

Source: Nabi (1988)



Identifying the binding constraints to manufacturing growth I

Value chain analysis

- Labor productivity & skills
- Freight & transportaion
- Trade policy
- Macro-economic concerns



Identifying the binding constraints to manufacturing growth II

SME Analysis

- Poor education and skills
- Insufficient links with dynamic firms
- Poor access to finance



The Upshot Is:

- Low and stagnant share of manufacturing in GDP historically
- No Pakistani industrial flagships in the world market
- Absence of productivity-enhancing linkages between with large and small manufacturing firms
- Low technology intensity of manufacturing, particularly in manufactured exports
- Manufactured exports are concentrated in textiles, with little diversification
- Joint ventures with foreign investors in manufactured exports are negligible



And there are economy-wide challenges:

- Industrial activity has not been the growth engine it has been in fast-growing competitor economies
- Industry needs to provide productive, well paid jobs to our rapidly growing labor force
- The linkage between domestic industry, skills development and science base in universities and research organizations is weak
- Industry has not penetrated into the less developed regions of the country



Much needs to be done but let us focus on eight priorities

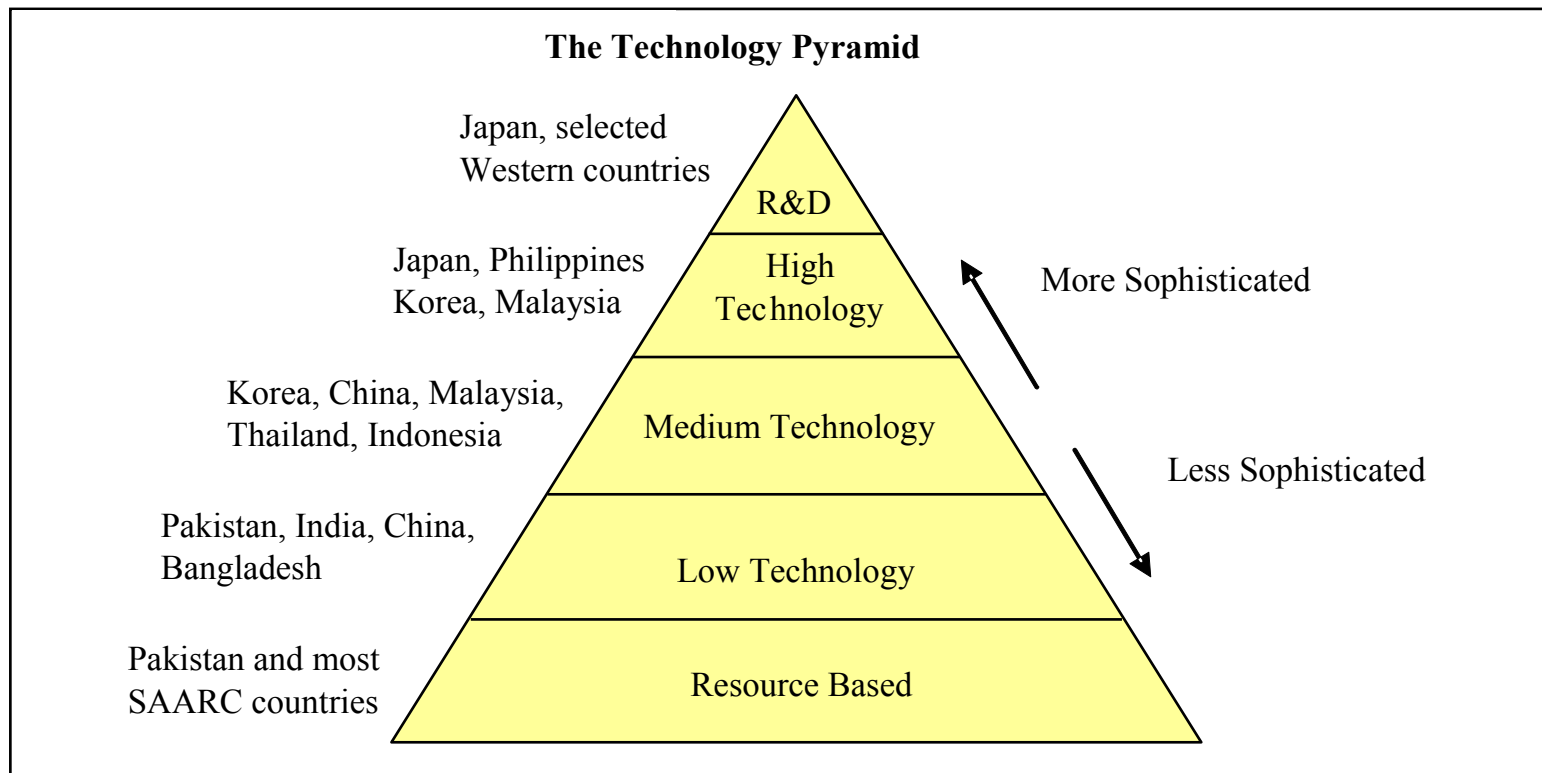
- Skills
- Infrastructure
- SME access to finance, technology
- Investment climate (sub-national strategies)
- New vents for growth
- Relative prices
- Policy coordination



Skills: Trainability of workers

- Demographic dividend will be realized only if unit costs of workers are low; the basic facts are:
- 70% Pakistani firms complain of skills shortages (60% in India) (Wilson and Otsuki, 2004)
- More trainable workers are paid higher: Each additional year of schooling brings 7% additional wage income (PIHS)

Skills & technology: the demand side



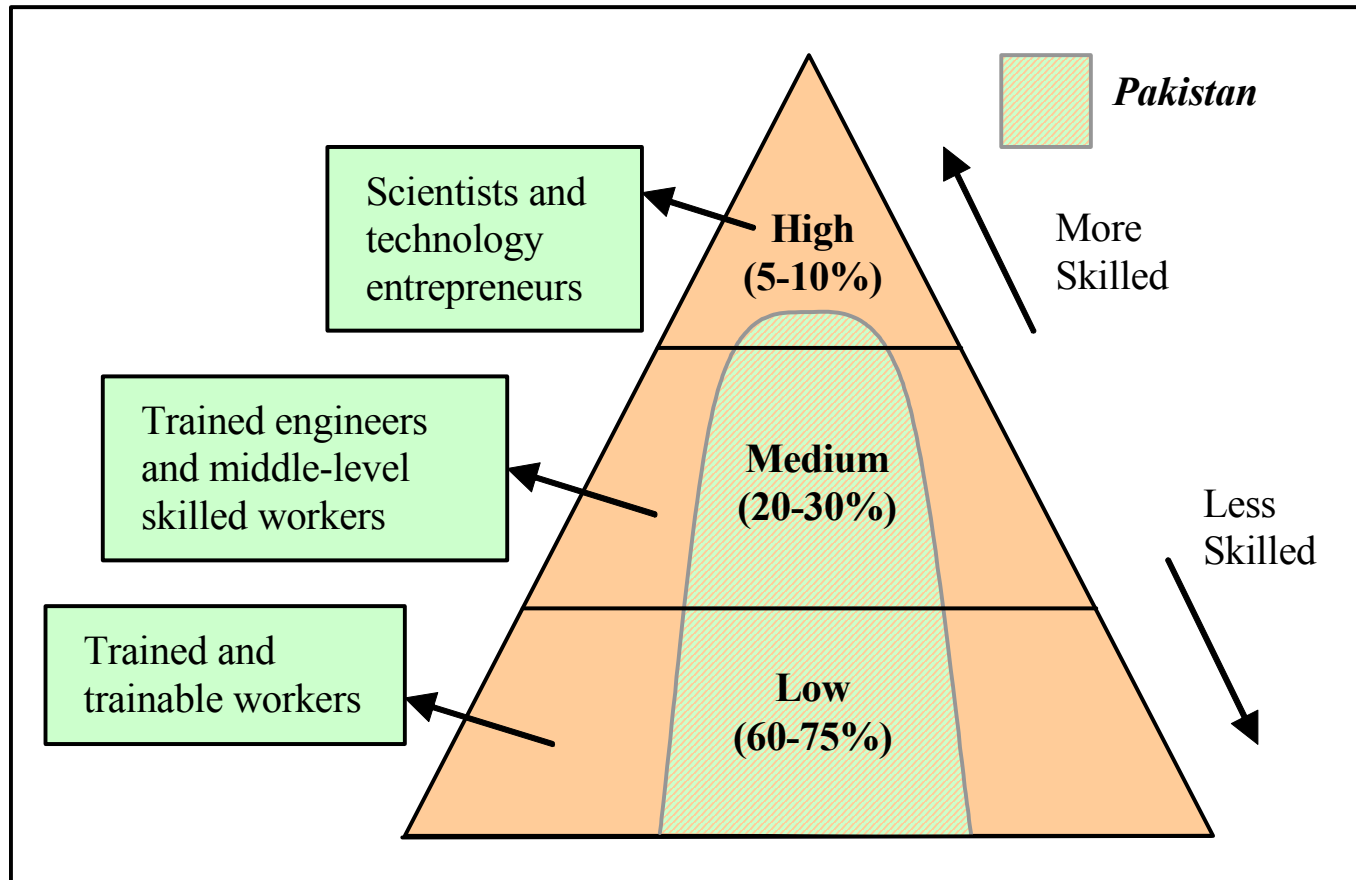


Skills and technology: the supply side

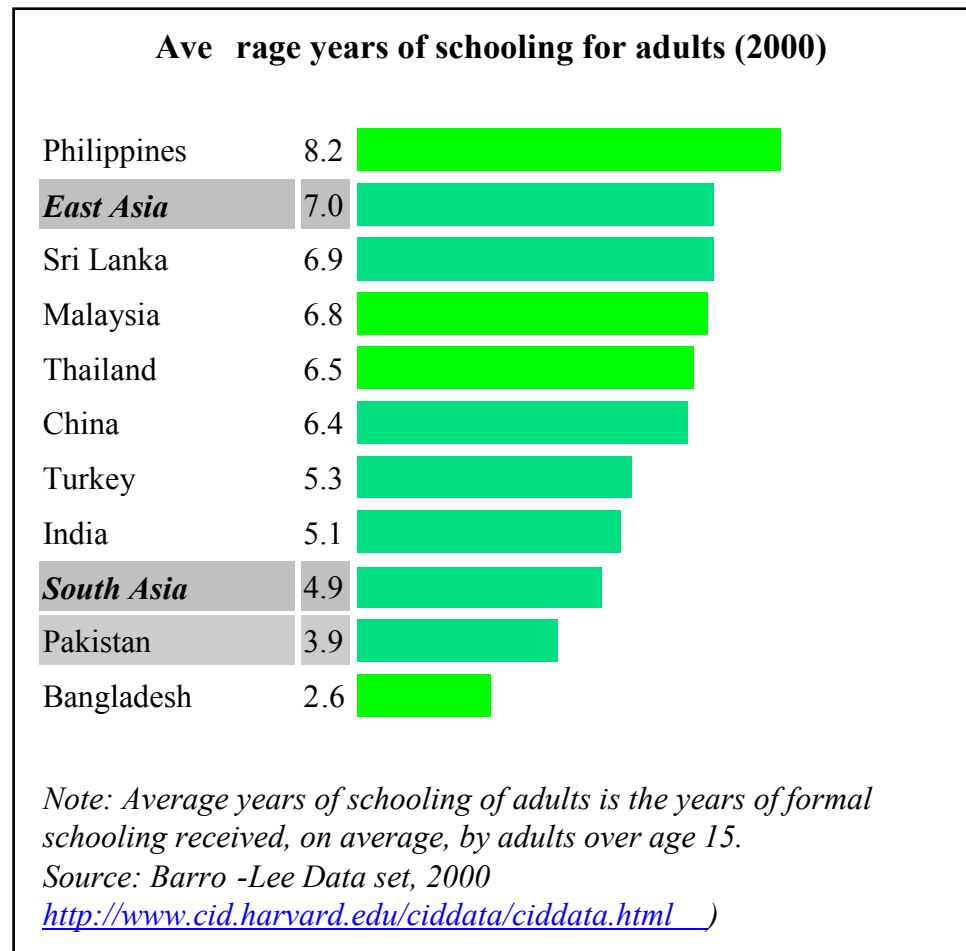
Harbison-Myer index of skills		
Country	1985 (country ranking)	1998 (country ranking)
South Korea	26.8 (6)	36.1 (10)
Taiwan	22.5 (21)	27.8 (23)
Singapore	14.8 (37)	23.1 (29)
Thailand	10.8 (48)	15.6 (45)
Malaysia	9.2 (51)	11.1 (55)
Sri Lanka	10.1 (58)	9.1 (53)
China	9.8 (59)	5.2 (67)
India	7.1 (60)	8.1 (69)
Nepal	6.4 (71)	5.4 (66)
Bangladesh	4.0 (72)	4.3 (76)
Pakistan	4.4 (69)	4.1 (77)

Note: The Harbison -Myer index is the average of the percentage of the relevant age groups enrolled in secondary and tertiary education, with tertiary enrolments given a weight of five
Source: Constructed from Lall and Weiss (2004), who use UNIDO (2002) table A.2.18

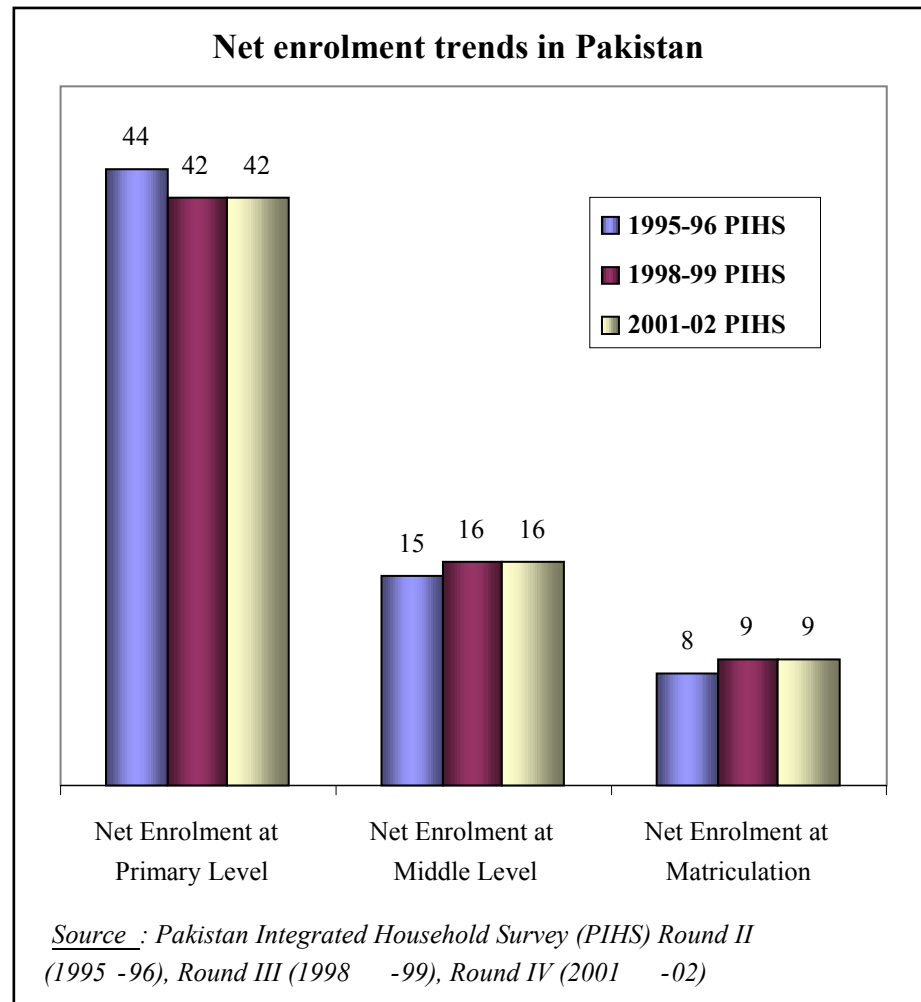
Skills & technology: the mismatch



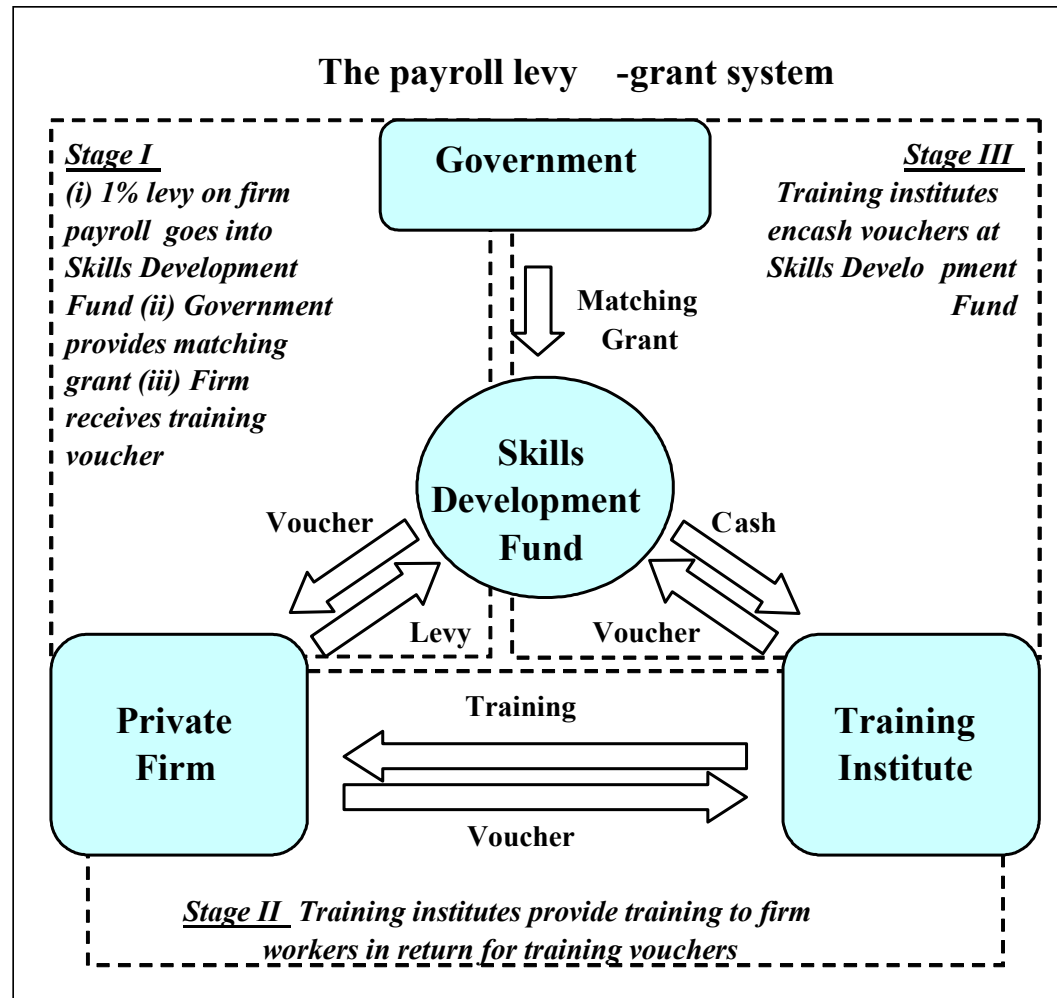
Skills & technology: Poor trainability



Skills & technology: Increase enrolments at all levels



Skills & technology: Public-private partnerships





Policy role I: Coordination to alleviate industry-wide binding constraints

- The key here is to ensure that resource allocation and pricing decisions concerning education, skills, energy, transport, finance, exchange rate management by various line ministries keep in view the industry perspective (Table 15.1 of the main report)



Policy role II: New Industrial policy

- The annex of the main report discussed the strengths and weaknesses of principal manufacturing activities
- The role of policy is to support each activity as it strives for the next level of excellence
- This is essentially a coordination role to address information failures, and sometimes creating a regulatory framework, setting up new institutions (standards office) or carrying out lumpy investments (airport, EPZ's, logistic corridor) to allow markets to function
- It requires working closely with industry stakeholders
- It also requires monitoring and evaluations and having exit strategies for public sector

Bottom line: Bridge the investment gap

