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Pakistan
Growth and Export Competitiveness

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CURRENCY AND EQUIVALENTS

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GOVERNMENT'S FISCAL YEAR

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ABBREVIATIONS

ABC	Activity Based Costing
AML	Anti-money Laundering
ATC	Agreement on Textiles and Clothing
CARE	Customs Administrative Reform
CAC	Codex Alimentarius Commission
CONCOR	Indian container transport company
CBR	Central Board of Revenue
CBU	Completely Built Unit
CKD	Completely Knocked Down
CTF	Counter-Terrorism Financing
DALPMG	Department of Agriculture, Livestock Products Marketing and Grading
DDB	Duty Drawback
DPP	Department of Plant Protection
DTI	Direct Trade Input
DTRE	Duty and Tax Remission for Exports
DPHE	Department of Public Health and Extension
DTI	Direct Trader Input
EDI	Electronic Data Interchange
EERm	Effective Exchange Rate for imports
EFA	European Food Agency
EOBI	Employees Old-age Benefits Institution
EPZ	Export Processing Zone
ERP	Effective Rates of Protection
EUREGAP	Euro Retailer Produce Working Group: Good Agricultural Practice
FAO	Food and Agriculture Organization
FATF	Financial Action Task Force
FCL	Full Container Load
FDI	Foreign Direct Investment
FEU	Forty-foot Equivalent Unit
FIATA	International Federation of Freight Forwarders Association
FCS	Fishermen's Cooperative Society
FTA	Free Trade Agreement
FVO	Food and Veterinary Office
GAP	Good Agricultural Practice
GD	Goods Declaration
GDP	Gross Domestic Product
GMO	Genetically Modified Organisms
GMP	Good Manufacturing Practice
HACCP	Hazard Analysis and Critical Control Point
ICD	Inland Container Depot
ICDC	Inward Cargo Declaration
ICM	Integrated Crop Management
ICT	Information and Communications Technology
IPPC	International Plant Protection Convention
IPM	Integrated Pest Management
IVCA	Integrated Value Chain Analysis
IWHT	Income Witholding Tax
KFHA	Karachi Fish Harbor Authority
KICT	Karachi International Container Terminal
KPT	Karachi Port Trust
LCL	Less than Container Load
LTL	Less than Truck Load
MCA	Monopoly Control Authority
MFD	Marine Fisheries Department
MFN	Most Favored Nation
MSA	Navy and Marine Security Agency
NAMA	Non-Agricultural Market Access
NDA	Net Domestic Assets
NEPRA	National Electricity Power Regulatory Authority
NLC	National Logistics Cell
NTTFC	National Trade and Transport Facilitation Committee
OEM	Original Equipment Manufacturers
OIE	Office International des Epizooties
ORGRA	Oil and Gas Regulatory Authority
PACCS	Pakistan Automated Customs Clearance System
PCSIR	Pakistan Council for Scientific and Industrial Research
PHDEB	Pakistan Horticultural Development and Export Board
PICT	Pakistan International Container Terminal
PIFFA	Pakistan International Freight Forwarders Association
PPP	Private Public Partnerships
PPRA	Public Procurement Regulatory Authority
PR	Pakistan Railways
PRAL	Pakistan Revenue Automation Limited
PSC	Punjab Seed Corporation
PTA	Preferential Trade Agreement
PTCL	Pakistan Telecommunications Company Limited
PRSP	Poverty Reduction Strategy Paper
QICT	Qasim International Container Terminal
QPA	Qasim Port Authority
RCP	Refunds Claims Processing
RMG	Ready Made Garments
SAD	Single Administrative Document
SAFTA	South Asian Free Trade Area
SAPTA	South Asian Preferential Trade Area
SBP	State Bank of Pakistan
SECP	Security and Exchange Commission of Pakistan
SITA	Societe International de Telecommunications Aeronautiques
SLIC	State Life Insurance Company
SMEDA	Small and Medium Enterprise Development Authority
SPS	Sanitary and Phytosanitary Standards
SRO	Statutory Regulatory Order
SSC	Sindh Seed Corporation
SSI	Social Security Institution
TARP	Tax Administration Reform Project
T&C	Textiles and Clothing
TEU	Twenty-foot Equivalent Unit
THC	Terminal Handling Charge
TIFA	Trade and Investment Framework Agreement
TRIMS	Trade Related Investment Measures
TTFSE	Trade and Transport Facilitation
UHT	Ultra Heat Treated

Vice President:	Praful Patel, SARVP
Country Director:	John W. Wall, SACPK
Sector Director:	Sadiq Ahmed, SASPR
Sector Manager:	Ijaz Nabi, SASPR
Task Manager:	Tercan Baysan, SASPR

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ACKNOWLEDGEMENTS

This report was prepared by a team led by Tercan Baysan (Task Leader; SASPR). Other members of the core team included: Norman Loayza (DECRG); Manuela Ferro, Zareen Naqvi, S. Sayem Ali, Shaheen Malik (SASPR); Eric Manes (SASFP); Paul Dorosh (SASAR); Steven Jaffee (PRMTR); John Arnold (Consultant; transport logistics and trade facilitation); David B. Parsons, Saeed Akhtar, Mike Dillon, Peter Davison, Syed Wajid Pirzada (Consultants; background report on the food quality and safety standards). The Task team interacted and consulted with the Government Counterpart Team, comprising members from: Ministry of Finance; Ministry of Industries, Production and Special Initiatives; Ministry of Food, Agriculture and Livestock; Ministry of Commerce; Ministry of Labor and Manpower; Planning Commission; and State Bank of Pakistan. The report was prepared under the general guidance of Sadiq Ahmed, Sector Director, John Wall, Country Director, and Ijaz Nabi, Sector Manager. It benefited from comments of the peer reviewers Bernard Hoekman (DECRG), Shahrokh Fardoust (DECVP), and Mushtaq Khan (Citigroup, Karachi), and also from the information, suggestions, and support provided by Amer Durrani and Simon Thomas (SASEI) on transport logistics and trade facilitation. Shahnaz Rana and Arlene Reyes processed the report and provided secretarial support, and Muhammad Shafiq provided logistical support. The team acknowledges the excellent cooperation and support received from the Central Board of Revenue and Federal Bureau of Statistics. We are also grateful to Drs A. R. Kemal and Rehana Siddiqui of Pakistan Institute of Development Economics for the opportunity to discuss various growth and competitiveness related topics and for sharing information.

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PAKISTAN
GROWTH AND EXPORT COMPETITIVENESS
EXECUTIVE SUMMARY

I. INTRODUCTION

1. Pakistan is better placed for an economic takeoff today than at any time in the past 15 years. Ambitious programs of economic reform, recently launched and complemented by important outside help in debt restructuring and concessional financing, have not only spurred recovery but set the stage for accelerated, sustained and sustainable growth. Pursuing policies to stimulate private investment and higher productivity, Pakistan could see per capita real GDP increase over the next decade by over 5 percent on average. That forecast for 2006-2015 is optimistic, but not inconceivable. The stabilization measures and structural reforms already in place have created the foundation for per capita GDP growth at double what has been the annual average rate --2.6 percent-- over the past 45 years.

2. Such progress, however, is far from automatic. To realize it, Pakistan will need to do more than reinforce the fiscal and monetary discipline that has enabled it to regain lost ground and forward momentum. It must also build strongly on initial, far-from-complete progress in designing and promoting an investment-friendly business environment that will nurture new competitive strength. Widely shared in Pakistan, this understanding builds on the broad consensus that the country's economic performance remained well below its potential in the 1990s and that broader and deeper investment climate reforms and a strengthened macroeconomic framework could propel the recent economic revival to produce a higher and sustained growth.

3. This report focuses on the *goal of accelerating Pakistan's economic growth and on the related challenge of strengthening export competitiveness*. It emphasizes that macroeconomic stability is and must remain the strategic foundation for Pakistan's enhanced growth and competitive prospects. While highlighting the critical macroeconomic dimensions of economic growth, the report avoids details that are treated in the World Bank's other recent studies[1], but focuses instead on the microeconomic fundamentals of competitiveness. The report:

(i) Analyzes total factor productivity to bring out its importance for Pakistan's future growth;

(ii) stresses the critical role of the quality of the investment environment (comprising policy, regulatory, and institutional dimensions) in affecting total factor productivity; and

(iii) demonstrates how improvements in the investment environment could affect efficiency and competitiveness at the firm-level.

It also emphasizes that a business friendly investment environment would foster domestic and foreign private investment, which will further contribute to Pakistan's *export competitiveness and diversification.*

4. Recent external developments have added urgency to Pakistan's need to address structural constraints on export competitiveness. First, competition among textile and apparel exporters has intensified dramatically since January 2005 with the removal of the textile and clothing export quotas under the Agreement on Textiles & Clothing (ATC). The contest will heighten further with the end of permissible safeguards against China's exports in 2006-07. Pakistan's past and still continuing impressive export performance in this sector --accounting for about 65 percent of merchandise exports-- does not guarantee continuing success. Second, notwithstanding the slow progress in the WTO Doha

[1] Including: World Bank (2002), *Pakistan: Development Policy Review- A new Down*? South Asia Region, Report no. 23916-PAK; World Bank (2004), *Pakistan: Public Expenditure Management-Strategic Issues and Reform Agenda*, South Asia Region, Report no. 25665-PK (in two volumes).

(Development) Round of multilateral trade negotiations, global economic integration will continue, and competitive pressures will mount.

II. ECONOMIC GROWTH, PRODUCTIVITY, AND COMPETITIVENESS ARE RELATED

Pakistan's Growth Performance, Its Sources, and Future Potential Growth

5. ***Pakistan's long-term growth performance***. Taking a long-run perspective, Pakistan's average annual real GDP growth rate of 5.3 since the 1960s has not been disappointing. Not only much higher growth rates have been achieved in certain sub-periods, however, but many East Asian countries, with economic conditions similar to Pakistan's in the 1960s and 1970s, have since then achieved much stronger growth and economic development. These comparisons indicate that Pakistan has been performing below potential.

6. Pakistan's above-average growth in the 1960s and 1980s coincided with episodes of reform efforts and economic and political stability. In contrast, the 1970s and the 90s were decades of weak economic growth. In the 1970s, the first oil crisis, the upheaval associated with the establishment of Bangladesh, and the populist and restrictive economic policies of a new political regime during 1971-77 affected the economy. While the first half of the 1990s witnessed some, incomplete structural reform efforts, the second half of the decade was marked by economic uncertainty associated with heightened domestic and regional political tensions, the 1998 nuclear explosion and consequent sanctions, unsustainable debt dynamics, and the ensuing macroeconomic instability.

7. ***Factor productivity growth has played an important role in explaining Pakistan's economic growth***. Since the early 1960s, *total factor productivity* (TFP), i.e., the efficiency with which resources are used in production, has been an important contributing factor in Pakistan's overall economic growth. The macro-level quantitative analysis carried out for this report on sources of economic growth in Pakistan indicates that TFP growth[2] explains over 20 percent of the long-term GDP growth rate, with the rest attributable to capital accumulation and labor force expansion. The results also indicate that TFP growth itself has been particularly strong in sub-periods when both microeconomic and macroeconomic dimensions of business environment have improved (including improvements in macroeconomic management, the regulatory environment, infrastructure, trade policy, the financial sector, and the maintenance of law and order), and political instability diminished. For example, TFP growth was particularly strong in the 1980s, explaining 38 percent of the GDP growth rate; after a fall in the 1990s it has rebounded in the current decade, accounting for nearly 23 percent of GDP growth since 2001. These observations highlight the critical importance of improving the quality of the investment environment as a critical stimulus to factor productivity and of overall economic growth.

8. ***Quality of investment environment affects factor productivity***. Micro-level investigations also show that improvements in the investment environment matter for firm-level productivity growth and investment activity. For example, firm-level performance analyses carried out in a recent study[3] (which includes Pakistan) provide results showing that the quality of the investment environment has a significant effect on productivity. The findings based on survey data collected from a large number of firms operating in the same sector in Bangladesh, China, India, and Pakistan indicate that improvements in various aspects of the investment climate[4] would lead to significantly high TFP growth:

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[2] Such factor productivity growth would result from more efficient use of resources, technological progress and technology diffusion, learning-by-doing, and improved management of production activities. Improvements in investment environment brought about by structural reforms and sustained macroeconomic stability could induce such positive developments.

[3] Dollar, D. , M. Hallward-Driemeier, and T. Mengistae (2005), "Investment Climate and Firm Performance in Developing Economies", in *Economic Development and Cultural Change*, Vol. 54, No.1, pp. 1-31 (October), University of Chicago Press.

[4] Represented by a number of indicators, including: power outages, days required to get a phone line, days required to clear imports and exports through customs, access to financing, unofficial payments, and management time dealing with regulations.

Thus, if the quality of the investment environment in Pakistan were to match China's (Shanghai's to be specific), then the productivity of Pakistan's textile firms (operating in Karachi) on average would improve by 81 percent; the rate of return to capital, by 36 percent; and wages would rise by 23 percent. Increased profitability in turn would encourage more investment, leading to faster capital accumulation.

9. ***Importance of structural reforms in explaining Pakistan's recent growth performance.*** More evidence on the importance of investment-climate conditions in affecting Pakistan's growth outcomes comes from a cross-country quantitative framework (including 78 countries) used in this report to analyze the impacts of a subset of microeconomic factors and of stabilization policies on Pakistan's recent growth performance.

The results indicate that the investment environment improvements --in public infrastructure, government burden, governance, trade openness, and financial depth-- effected through the structural reforms since the late 1990s have contributed to about 80 percent of the 0.70 percentage-point increase in the real per capita GDP growth rate observed during 2001-05 compared to the 1991-2000 period. The 'recovery' growth from the stagnation of the late 1990s and the stabilization policies are the other factors explaining the growth rate increase.

In this context, it is important to draw attention to the complementary and reinforcing effects of improvements in various behind-the-border elements of the investment environment and trade liberalization. The positive impact of trade liberalization might have been stronger had the improvements in the regulatory environment and factor markets started earlier.

10. ***Pakistan's growth potential.*** What does it take to realize the 7-8 percent GDP growth rate targeted for the next decade in Pakistan's PRS? From a growth strategy perspective, this is a relevant policy question to answer in order to gauge the extent of the improvements needed in the investment environment and in the underpinnings of sustained macroeconomic stability. The approach taken in the study is to assess Pakistan's growth potential assuming a strong reform effort. This "strong progress" scenario posits that in the course of the next decade Pakistan will reach the top 25 percent of the developing-country distribution in each of the structural and stabilization policy areas where it is deficient. Forecasts are obtained using the same cross-country framework. (By necessity, the indicators of investment environment chosen are those that are easily comparable and measurable across countries by way of proxy variables).[5]

11. Unlike the areas of *trade openness* and *government burden* where significant improvements in recent years have moved Pakistan fairly close to the top 25 percent of the developing country distribution, the country lags substantially in the areas of *education*, *public infrastructure*, and *financial depth.* Bringing Pakistan to the same level of achievement as this group of countries would require 228 percent improvement in education, 375 percent in infrastructure, and over 100 percent in financial depth. Only a 12-percent improvement in trade openness would be necessary.

12. The findings show that improving the quality of investment environment in this subset of growth engines through strong reform efforts could lead to an *average per capita real GDP growth rate of 5.43 percent during 2006-2015*. This would represent a gain of 3.35 percentage points relative to the per capita GDP growth rate in 2001-2005. Not surprisingly, significant contributions to this outcome would come from improvements in education, public infrastructure, and financial depth, since the magnitude of the implied catching up is so large. And despite the fairly small improvements assumed in the calculations with respect to trade openness and government burden, such progress would also make a considerable contribution.

13. In order to realize such growth potential, Pakistan would also need to raise the investment rate well above the current 16.5-17 percent of GDP.[6] Even with the fairly strong expected productivity gains

[5] Explicit indicators of regulatory environment/economic governance are not included in this exercise.
[6] There is a widely-held view in Pakistan that the actual investment levels are being under-estimated in the national accounts.

from additional structural reforms, investment rates need to run considerably higher -- at around 21-23 percent of GDP. Moreover, assuming that the relative contributions of capital and factor productivity growth continue only at their 2001-05 levels (i.e., 60 percent and 40 percent), the implied investment requirement would be much higher, reaching an *investment rate of 27-29 percent of GDP*.

14. ***Agriculture has a special role in future growth.*** The growth analysis summarized above covers the whole economy and includes findings that highlight the critical role *agriculture* plays in Pakistan's economy. It employs almost half of the labor force, supports (directly and indirectly) nearly two-thirds of merchandise exports, and serves as an important source of employment and income in rural areas where 80 percent of the poor live.

15. Agricultural production has increased substantially, though with considerable volatility, over four decades. Punjab, the source of about two-thirds of all output, has been hit hard by the severe droughts of recent years, and heavy dependence on irrigation in Sindh has brought environmental damage in its wake. Operations in the sector are marked by numerous shortcomings, some of them in the areas of economic policy, governance, and irrigation. One result is impaired performance of Pakistan's major crops: wheat, rice, cotton and sugarcane. Although better farm technology and more efficient use of water --e.g., drip irrigation and better drainage-- could bring some production increases in these mainstay crops, the key to future increases in agricultural productivity and rural incomes is greater diversification into such areas as horticulture and livestock --the latter sub-sector accounts for almost 50 percent of the agricultural value-added.

- To promote diversification in agriculture, the Government needs to consider removing all (price and non-price related) policy bias in favor of major crops, particularly relatively low-value, water-intensive crops with heavy water use requirements such as non-basmati rice and sugarcane. Research and extension services also need to be restructured to meet the needs of a more diverse agriculture, including provision of region-specific information packages.
- In the medium- and longer-term, investments in irrigation and drainage, together with reforms in irrigation management, are also crucial to arresting environmental degradation, especially in some major irrigated areas of Punjab and Sindh. Expanded use of water-conserving technology, such as drip irrigation, can increase the efficiency of use of scarce available water.
- Finally, more resources are needed for the provision of research, extension and veterinary services for livestock, particularly for larger animals. The poultry sector is already expanding rapidly, including both substantial growth in maize production (a major feed) and in poultry and egg production. Productivity gains in the livestock sector are especially important for pro-poor rural income growth since the distribution of livestock in rural Pakistan is more equitable than the distribution of land.

Sources of Low Productivity and Competitive Disadvantage: Product/Firm-Level Evidence

16. ***Findings of the value-chain analysis.*** To provide specific and concrete micro-level evidence on the cost raising (and productivity lowering) impacts of the existing deficiencies in Pakistan's investment environment and to identify the more critical of these binding constraints, the study uses the findings of value-chain analyses (VCA) carried out on five specific products. A highly useful tool in assessing export competitiveness, the exercise also helps in prioritizing the needed reforms. Specifically, it identifies the particular areas where policy/institutional actions may have the greatest positive impact on the productivity of local firms, export competitiveness and diversification, and on the overall economic growth. Some priority measures may involve stroke-of-the-pen-type decisions. Others may require longer-term actions, as in the case of physical infrastructure and human capital development.

17. The five products, identified after consultations with the Government and the private sector, include: *blue jeans, shrimp, marble tiles, powdered milk*, and *auto radiators*. The first two are major export items, and the last three are new/potential exports. As proxies for similar products and activities,

the five cover a spectrum of the key economic activities that offer potential for export diversification and economic growth, including, respectively: *textiles and apparels*; *fisheries*; *mining*; *agribusiness/dairy products*; and *light engineering/auto parts*.[7] Because a VCA follows the product flow from initial point of input to final consumption and/or export, it enables tracking of the specific cost components and allows cross-country comparisons and benchmarking against the key competitors/comparators. It also allows linking relatively higher cost components to the sources of bottlenecks --whether a specific policy distortion, poor public service delivery, infrastructure problem, a certain law/regulation, red tape and unofficial (speed money) payments. *As such, the findings of VCA make it possible to decide which impediments do the greatest harm to cost competitiveness and what remedial policy actions, institutional changes, and other corrective measures deserve priority.*

18. For the five products selected, the VCA exercise revealed the following findings:

Blue Denim Jeans/Textiles:

- In exporting denim jeans (and other textiles and apparels) to the US market, Pakistan is at a competitive disadvantage because of the longer shipping time and higher freight costs as a percentage of export values. Relative to China this disadvantage amounts to 6.5 percent of the export value. (*Source of the problem*: Pakistan's location vis-à-vis major textile and apparel markets in the US and EU. This highlights the importance of compensating the latter disadvantage with competitive cost advantages through relatively more efficient Customs administration, port operations, and inland transport and logistics, and lower factory-gate costs).
- In cotton *spinning* where power charges account for about a fifth of total costs and 42 percent of conversion costs, competitiveness and profitability is adversely affected not only by the high electricity tariffs for industrial users, but also by frequent outages --commonly an average of 3 per day-- that heighten inefficiency and expense. With funds they could otherwise use to automate some processes, many textile mills install back-up generators, further raising their costs of production. (*Source of the problem*: power-sector bottlenecks and electricity-tariff setting issues).
- In *ginning* and *weaving*, the scarcity of trained workers, technicians/engineers (such as ginning engineers) is hampering maintenance and productivity improvements. And due to the rigidities of the labor market, contractual hiring is preferred, encouraging under-investment in training by employers and workers. (*Sources of the problem*: underinvestment in education and skills development and the rigidities of the labor market).
- For non-integrated mills which are mostly SMEs (e.g., in weaving), access to financing is limited by high collateral requirements. (*Some sources of the problem*: inadequacy of the private credit information system and restricted range of assets acceptable as collateral).
- In *dyeing*, material inputs account for over 55 percent costs. Chemicals, mostly imported, account for 95 percent of these inputs. Collecting rebates on customs duties and other levies paid on these imports can take 3-5 months, delays that create cash flow problems for the firms and raise their costs, thus undermining their competitiveness. Similar problems are faced in the production of other intermediary inputs, notably yarn. (*Sources of the problem*: the remaining inefficiencies of the duty drawback and the sales tax rebate systems, particularly with respect to SMEs; and the failure of some firms in submitting properly completed forms).
- Excessive use of (subsidized) water through flood irrigation is reducing *cotton* yields and quality and also raising costs of water extraction and tube-well investments. (*Source of the problem*: uneconomic management of water resources).

[7] No service is included in the VCA work due to the difficulties faced in disaggregating cost components and in making cross-country comparisons.

- Many cotton growers cannot obtain enough quality seeds for their crop because of lack of private-sector involvement in the production and distribution of seeds, while inefficient state-owned enterprises are unable to supply sufficient quantities of quality seeds at prices that are set below-cost. Responding to inadequate supply of quality seeds, growers use retained hybrid seeds, which are susceptible to pests and viruses, thus reducing cotton yields and quality. (*Source of the problem*: limited private-sector involvement in the seed sub-sector, discouraged by below-cost sales of seeds by the state seed companies.)

Shrimp/Fisheries:

- Shrimp fishery yields are low and costs high. As a result, shrimp processing is marked by low returns and low capacity utilization, factors that constrain upgrading of technology by vessel owners and processors. For an average 45-foot keel-length trawler and about 20 trips/year, shrimp may represent approximately 5 percent of the total catch, the rest being by-catch (around 8 percent of the total catch is marketable non-shrimp catch, and 87-90 percent trash fish). Compared to 85-90 percent by-catch seen in Asia and Latin America, 95 percent by-catch rate observed in Pakistan is distinctly high. (*Sources of the problem*: the underlying key problem is the 'open access' fisheries policy, which in turn encourages excessive number of fishing vessels and substandard fishing techniques).
- The costs of over-crowding in the Karachi Fish Harbor --2,000 trawlers instead of the recommended 600-700-- include wasted fuel, boat damage and over-fishing. At the same time, poor management and unsanitary conditions in the hall where the trawlers' catch is auctioned result in losses due to poor icing (about 10 percent) and poor storage (8 percent). The inability to guarantee that seafood meets hygiene safety standards keeps Pakistani shrimp, for instance, off EU shopping lists. (*Sources of the problem for the poor sanitary conditions*: (i) inadequate knowledge of good management practices pertaining to food quality and health standards; and (ii) the lack of enforcement mechanism through the value-chain to comply with the EU's quality and health standards).
- Due to low yields and processing losses, the share of raw material costs in average unit value of shrimp is much higher than in Bangladesh, China, and Indonesia.
- Difficulties in accessing financing due to the lack of loss insurance on collateral (boats).
- Freight forwarding accounts for 7.6 percent of export costs --almost twice as high as for Cambodia, for example. (*Source of the problem*: trade logistics services, such as freight forwarding, are still fragmented, and integrated door-to-door services are not yet well developed).
- Fees and taxes collected by the Government represent a quarter of export costs. Three sources are responsible: the petrol tax (1 percent of export invoice), Export Development Fund (0.25 percent of export invoice), and the bribes paid (approximately Rs 1,250 per export consignment). (*Sources of the problem*: remaining inefficiencies in the duty drawback/tax rebate system and governance problems at Customs and ports).

Marble Tiles/Mining:

- Industrial waste in marble extraction (mining) and in processing (cutting and polishing) is much higher in Pakistan than in other major competing countries. Mining losses due to uncontrolled blasting used in extracting marble regularly exceed 70 percent, far in excess of international benchmarks (25-55 percent). Such mining methods crack the marble blocks and produce less desirable, irregular-shaped blocks. As a result, the processors usually discard as much as 60 percent of the material. Marble-mining operators consider their leases on surface land so uncertain and security risks so high that they limit their investment in modern mining and cutting techniques. (*Sources of the problems*: lack of coordinated regulation and intervention at different federal and provincial government levels; inadequate technical knowledge of mining resources;

failure to implement 'no blasting' regulation effectively; opaque and cumbersome leasing procedures; poor definition and enforcement of property rights with respect to the surface land).

- Quality of cutting is also low due to a lack of sufficient number of gang saws. High duties and other taxes on imported gang saws and blades, tips for blades, and polishing crèmes raise costs. Import costs sometimes mount further due to revaluation and classification problems (examples include artificial diamonds used for blade tips being classified as real diamonds to increase tariffs and taxes). Difficulties of access to financing also constrain the use of modern techniques in cutting marble blocks and polishing the cut slabs. (*Sources of the problem*: the remaining inefficiencies of the duty drawback/tax rebate system, particularly with respect to SMEs operating in new export activities; implementation and other governance issues faced at the customs when importing inputs; difficulties faced in accessing financing by SMEs).
- Transport costs throughout the value-chain are high, amounting to about half of total extraction and distribution costs, and almost a quarter of the total cost of the product delivered from factories in the North West Frontier Province (NWFP) to the point of distribution in Karachi. Transport is much more costly than in India, Italy, and Lesotho. (*Source of the problem*: due to the long distance between mines, processors, and the port; the poor condition of roads and trucks; difficulties of transporting irregular-shaped blocks; and various undocumented/unofficial payments collected --e.g., for security protection, to political agents, and for tribal taxes).

Powdered Milk/Agribusiness/Dairy Product:

- Low and volatile supply of milk for processing due to: scattered and fragmented production points and marketing; informal system of collection leading to 10-15 percent losses due to adulteration and poor quality; inadequate cold chain; and high seasonality of milk production. These conditions raise the cost of milk collection and lead to low capacity utilization in processing.
- Low capacity utilization raises processing costs. Pakistan's 25-percent capacity utilization compares unfavorably with Ireland's 58-61, Denmark's 92 percent, and Netherlands' 93 percent. In addition, high protection against imports of cold/sanitary packaging inflates processing costs further.
- Despite the cited difficulties, Pakistan's production cost of whole milk powder at $20.12 /100kg is competitive with the U.S., Canada, and the U.K because of lower farm-gate prices. Pakistan's milk-production cost of $9-12/100kg is comparable to those of Argentina, Brazil, Australia, New Zealand, and India. However, depressed international prices for milk powder due to developed countries' export-support programs constrain the ability of Pakistan's processors to compete on a sustained basis.
- An additional issue that appears as an important impediment to international competitiveness and export penetration in major markets for milk powder (and for other dairy products) is:
    - Inadequate system of quality assurance and health safety standards due to: lack of coordination between the provincial and local governments and low skills of the inspectors; insufficient testing facilities; and the scattered small farms. Moreover, the practice of combining milk from the formal sector with milk from the informal sector makes control and traceability difficult.

Automobile Radiators/Light Engineering:

- Low production scales, old technologies geared to supplying the domestic automotive assembly industry, and low quality characterize Pakistan's auto radiator industry. While international markets have already shifted to all-aluminum radiators, in Pakistan local firms continue to produce copper tube/brass fin radiators for the domestic auto industry.

- A company that started exporting to a U.S auto parts firm (perhaps supplying old models) is now winding down its export activity, having lost contracts to India and China. Pakistan's direct labor cost of about $0.75 /hour wage rate -- higher than China's $0.66 and India's $0.40-- is an important cost disadvantage, even without considering the higher labor productivity advantages of the other two countries.
- A move towards export orientation in auto radiators (and other auto parts) would require upgrading technologies and increasing the supply of appropriate skills that can handle more mechanized, precision-based, and even robotic production technologies.

  Some sources of current competitive disadvantage:

  - The existing, very low production scales and old technology used in the radiator sub-sector (and most likely in other similar auto parts activities) are a result of: (i) very high tariff protection afforded to the domestic assembly industry (and the auto-parts sub-sector) which restricts foreign competition; and (ii) the continuing deletion programs which require domestic content targets to be met (even though they are no longer WTO compliant) both for the auto assembly industry and the auto parts sub-sector. These two policies create a ready domestic market for the vendors while also serving as entry barriers, limiting competition. (The recent increase in consumer credit for car purchases is keeping the domestic demand for cars strong and pushing up domestic demand for auto parts).

19. The findings of the study show that remaining weaknesses in the level and quality of *economic governance,*[8] of *education*, of *electricity* services, *factor markets*, *trade policy*, *transport logistics* and *trade facilitation*, and of food quality and safety *standards* handicap Pakistan in the global trading arena and in realizing her full growth potential. The evidence also underscores the need to further strengthen the macroeconomic framework to assure sustained stabilization.

III. IMPROVING KEY DRIVERS OF COMPETITIVENESS AND ECONOMIC GROWTH

A. Macroeconomic Policy Mix for Growth and Competitiveness

20. Pakistan has made notable progress toward macroeconomic stability in recent years. It will need to do even more to hold fiscal deficits in check and continue reducing the debt burden to avoid the recurrence of macroeconomic instability. Macroeconomic management also needs to contribute toward increasing Pakistan's fairly low national savings rate of around 17 percent of GDP, by lowering fiscal deficits and avoiding negative interest rates.

21. While the Government is doing well by devoting a larger (although still small) share of public expenditure to human capital accumulation and --with the 2005-06 Budget-- to the needed physical infrastructure, the current macroeconomic policy mix appears to be geared towards generating growth in the short-term. There is considerable monetary overhang, and credit expansion has been rapid, notwithstanding some monetary tightening in 2005. In an attempt to support growth, interest rates remained negative throughout 2004-05. More recently fiscal policy switched into a clearly expansionary stance as well. There are signs of overheating in the economy, with the rate of inflation rising to around 10 percent at a time when a number of industries are reaching 100-percent capacity utilization.

22. Another weakening sign relates to the exchange rate management. Since the last quarter of 2004, the nominal exchange rate has remained fixed at around Rs59.5/$, causing over 6-percent appreciation in the real effective exchange rate (REER) since late 2004. In view of significant trade liberalization in

[8] Encompassing such factors as the efficiency of public institutions involved in public-private sector interactions, quality and implementation of business-related regulatory environment, corruption, crime, the rule of law and contract enforcement.

recent years, it is expected that merchandise trade, ceteris paribus, would stimulate a rise in the underlying equilibrium exchange rate. Not allowing the exchange rate to adjust upward may keep imports cheaper and contain inflationary pressures in the short term, but such a policy could very quickly worsen external balances. And an appreciating REER will undermine Pakistan's export competitiveness, hurting export performance and discouraging export diversification.

23. ***Strengthening macroeconomic framework --the way forward.*** A stable macroeconomic policy environment features measures aimed at insuring fiscal solvency, a low and stable rate of inflation, and a robust exchange rate regime that avoids both systematic currency misalignment and excessive volatility in the exchange rate. Such a sound macroeconomic mix will support long-term growth by sustaining stability and fostering higher savings. Taking these principles into account, strengthening Pakistan's macroeconomic framework will require actions on several fronts, including:

- Maintaining a low fiscal deficit (around 3.3-3.5 percent of GDP), consistent with the continued reduction in the still high debt-to-GDP ratio and increased public expenditure in the priority areas of physical infrastructure and social sectors. This goal would require more concerted effort to raise the tax-GDP ratio;
- the Central Bank's making price stability its primary goal and pursuing it consistently, and maintaining positive real interest rates, so that saving is encouraged and low quality/risky lending is discouraged; and
- pursuing an appropriate exchange rate policy that will avoid overvaluation of the currency.

B. Investing in Education and Addressing the Skills Gap Constraint

24. Earlier studies document the extent to which Pakistan underperforms other countries at similar stages of development in almost all social indicators -- education, health and nutrition, and population growth. Impacts of this social gap, further reinforced by an even sharper gender gap, on the lives of those groups who remain particularly affected are also well documented. Because of its focus on productivity, competitiveness, and the growth potential, with respect to the needs in education, the key objective of this report is simply to emphasize how important it is for Pakistan's growth prospects to invest more in education and skills development. The findings of the value chain analyses and firm-level surveys/interviews show that the lack of skilled manpower is a major constraint to business activity in Pakistan. Faster progress in educational achievements and in expanding an educated workforce will be critical to raising the productivity and competitiveness of Pakistan's firms and to accelerating economic growth. To be competitive in today's integrated global economy will require an increasing supply of skilled manpower to complement rapidly changing technologies.

25. Based on the successes and disappointments of the Social Action Program developed in the 1990s, the Government --as reflected in the PRS-- has given a higher priority to the spending levels and quality of programs in the social sectors, including in all levels of education. The national-level education sector reform program led by the Federal Ministry of Education is being implemented. Its key objectives include: (i) improving access to and equity for 'quality universal primary education' through improvements in infrastructure and teaching material; (ii) increasing access through public-private partnerships; (iii) improving the quality of secondary education; (iv) enhancing quality through strengthening teacher training, revising national curriculum and textbooks, and establishing a National Education Assessment System; (v) increasing literacy through adult literacy; (vi) supporting technical education in secondary schools; and (vii) mainstreaming madrassah education through the introduction of general education subjects.

- *The way forward.* For sustained improvements, there is a need to continue: (i) improving *governance in the education* sector by further strengthening the existing mechanisms aimed at more effective management and performance of teachers, and monitoring teachers' competencies and absenteeism; (ii) implementing transparent procedures for teacher training and recruitment;

and (iii) instituting effective mechanisms for monitoring outcomes/impacts (e.g., drop-outs, completion rates).

- It is also expected that the effectiveness of service delivery will rise with the completion of the devolution program, which, if successful, may improve delivery of social services in general and education in particular. In the meantime, expanding the coverage of successful public-private partnership initiatives could also improve access to and quality of service delivery in education.
- There is a need to focus a considerable portion of the limited education resources on upgrading the quality of and access to primary and intermediate general education to better prepare students for the subsequent levels of education, to reduce drop-outs, and to meet the 'trainability' of new entrants to the labor force so as to meet the requirement of various industries. This level of education forms the base for all future levels of education, including for *vocational and technical training* (VTT), and provides the necessary skills for labor market entry in an economy that is adapting to new industrial and information technologies.
- Also, steps need to be taken to: (i) make intermediate and secondary education more purposeful and linked to the economy and changing needs in the labor market and careers; and (ii) to upgrade and expand Pakistan's overall vocational and technical education capacity to train individuals who are completing matriculation, dropouts, and the unemployed.
    - *Time frame*: sustained, continuous effort. *Key responsible entities* include: Ministry of Education; Government Vocational Institutes administered by Provincial Education Departments; Technical Training Centers; Vocational Training Centers; Apprenticeship Training Centers administered by Provincial Labor Departments; and the private sector through the chambers of industries and commerce.

C. Improving Investment Environment

Economic Governance

26. Pakistan is already moving to transform the state's role from owner-operator to facilitator-regulator across most economic activities. Privatization of state-owned finance, utilities, and industrial enterprises is being accompanied by the opening of previously controlled markets in telecommunications, media and ICT. Accordingly, the Government is revising legal and regulatory frameworks; establishing independent regulatory oversight for utilities, financial markets, procurement and competition; strengthening the judiciary; and building capacity in the public sector to carry out the responsibilities it retains in labor, tax, and customs.

27. However, the process is proving long and difficult. Consistency, certainty and predictability of laws and regulations and of adjudication mechanisms and their enforcement agencies still fall short of minimal standards and in some instances appear to have deteriorated. As a guarantor of fair competition, Pakistan's judiciary has been ineffective in enforcing contracts and protecting property rights. Against a background of many antiquated laws enforced by autonomous and government institutions at federal, provincial and local levels, arbitrary discretion exercised by civil servants imposes high official and unofficial compliance costs. Various cross-country comparative assessments and the findings of the value-chain analysis highlight the impacts of such costs and institutional weaknesses.

28. According to the World Bank's *Doing Business* indicators, the cost of starting business is significantly above those observed in South East and East Asian countries and also above the global average. With respect to the cost of contract enforcement, Pakistan shows a similarly weak standing. And the World Bank's recently completed *Investment Climate Assessment* reveals that red tape in general is such burden on efficiency that Pakistani managers spend 10 percent of their time dealing with government regulations --more than twice as much as in Sri Lanka and Turkey. Ranked against 156 other

countries in 2004 on the quality of regulation, for instance, Pakistan lost some ground from its 1998 standing.[9] Corruption, moreover, is perceived to be on the rise.

29. The remaining deficiencies in Pakistan's investment environment and the resulting gaps in its international competitiveness cited earlier are also reflected in the international competitiveness rankings reported annually by the World Economic Forum's (WEF) *Global Competitiveness Report*. According to WEF's 2005 rankings, Pakistan's standing in growth competitiveness (comprised of macroeconomic environment, public institutions, and technology indicators) is very low, ranking 83 out of 117 countries, surpassing only Bangladesh and Sri Lanka in South and East Asia. With respect to business competitiveness (based on the quality of microeconomic dimensions of business environment and company operations and strategy), Pakistan ranks 66 out of 116 countries, somewhat better, but still in the bottom two-fifths.

30. *The way forward*. Some of the recommended, high-priority actions and steps in the next round of business deregulation include:

- *The duty drawback and sales tax rebate schemes*. Keeping exporters on a duty and tax-free basis is critical for export competitiveness and export diversification. To this end, there is a need to continue simplifying the duty-drawback rules and documentation and provide importers/exporters with easy-to-use information about procedures; and intensifying efforts to shorten the processing of duty drawback submissions by new export firms and SMEs, which face particularly long delays.

  Do the same for the sales tax rebates.

  a. Recent efforts to further improve the duty drawback and the sales tax rebate schemes for the major export sectors (textiles, leather products, sports goods, surgical goods, and carpets) are understandable. However, targeting *new* export activities and SMEs for such attention is even more important for export diversification. But *this emphasis should not generate economically inappropriate measures, such as zero-rating domestic sales*, as done with the FY06 Budget changes in the case of the major export sectors. Instead, efforts should focus on faster processing of duty drawbacks and rebates of the sales tax paid only on inputs incorporated into exports.

     - *Time frame*: short to medium-term. *Key responsible entities* include: Ministry of Finance, Central Board of Revenue (CBR), the Customs Collectorate (Exports), and the Sales Tax Collectorate.

- *The regulatory environment*. In all aspects of commercial law and regulation, there is a need for operational rules, procedures, and monitoring systems which can be universally implemented. To meet this challenge, a central part of capacity-building efforts should be an expansion of existing, pilot, e-government initiatives to improve the business-government interface. Additionally, federal policy and active consultation should encourage a unified and competitive approach to the implementation of provincial regulations so that provincial governments implement reforms in a unified and active manner.

  b. As a first step, risk-based labor inspection regimes with strict limits on abuse and rent-seeking should be instituted at the provincial level.

- Beyond pending legal reform legislation that will help limit procedural delays (stays, continuances, etc.) and introduce formalized, alternative, dispute resolution, the system of commercial adjudication needs broader attention --not just new courts but expedited and summary procedures backed by swift and effective enforcement.

[9] The 2004 Kaufman-Kraay governance index of *regulatory quality* ranked Pakistan better than only 16 percent of the 156 countries analyzed, as compared with 40 percent in 1998.

- *Time frame*: short to medium-term. *Key responsible entities* include: Ministry of Industries, Production, and Special Initiatives; Ministry of Law, Justice, and Human Rights; Ministry of Labor, Manpower, and Overseas Pakistanis; relevant Provincial Government Departments; the private sector through the chambers of industries and commerce.

Infrastructure

31. ***Power***. In the field of energy the principal issues facing the business community, particularly the larger established firms, are the difficulty in getting electricity connections and --even more-- the unreliability of supply. Frequent outages have traditionally placed an enormous burden on business. In addition, the sector's inadequate pricing and subsidy structure causes the burden to fall particularly hard on manufacturers, further harming price competitiveness.

32. *The way forward*. Addressing the well-known and well-studied problems of Pakistan's power sector problems poses an enormous challenge for the Government, requiring considerable political and financial resources to resolve. However, slow progress in implementing power-sector reform is increasing the losses of the power system, further complicating the challenge. Furthermore, as noted above, adverse impacts on the productivity and competitiveness of the sector are also considerable. Recommended actions include accelerating reform by:

- Setting an appropriate pricing structure for distribution companies to support sector restructuring, to facilitate better targeting of subsidies, and to strengthen operational performance by reducing theft and losses; and
- completing the unbundling of Water and Power Development Authority (WAPDA) into separate transmission and distribution companies, and continuing with privatization of generation companies.

  - *Time frame*: short- to long-term. *Key responsible entities* include: The Federal Government; WAPDA; Ministry of Privatization.

Factor Markets

33. Pakistan's drive for modernization has made the improved functioning of factor markets a central concern, but the attention given to financial markets has yet to be matched by reforms in the labor market --only recently set in motion-- and land markets, where limited efforts are just beginning at the provincial level. Initial ***labor market*** reforms to codify antiquated legislation and start the process of liberalizing the market represent a good start.

34. *The way forward*. The agenda for the next round of labor-market actions includes:

- Preparing regulations for the new Employment Services Act, which will increase labor market flexibility particularly through the use of temporary labor contracts.
- Completing the legislative reform agenda, focusing first on reforming the 14 laws governing labor welfare and rationalizing the labor levies system.

  - *Time frame*: short- to medium-term. *Key responsible entities* include: Ministry of Labor, Manpower, and Overseas Pakistanis; labor unions; and the private sector through the chambers of industries and commerce.

35. Due to the numerous agencies, multiple levels of government, and entrenched traditions involved, developing a comprehensive program of ***land-market*** development has proven difficult. The challenge is to establish one system to ensure clear title for new transactions while conducting a delicate and complex parallel activity using a range of options for conveying and transferring ownership in order to settle property rights disputes. The way forward would involve:

- Establishing a consistent legal framework, registry, and property-tax system to define land-use rights of owners and lease-holders with state-backed guarantees that ensure both development rights and, for renters, sufficient length of tenancy.
- Facilitating the timely transferability of land with full confidence and minimum costs. Such measures would eliminate transfers using dubious or traditional techniques, such as oral gifts under Sharia inheritance law, power of attorney, and rights conveyed under the *patwani* system for land in rural areas.
    - ➢ *Time frame*: short- to medium-term. *Key responsible entities* include: Federal and provincial governments; Ministry of Law, Justice, and Human Rights.

36. The challenge in the ***financial sector*** is to consolidate and expand the significant gains in soundness and governance to improve access to finance and the availability of services, including:

- Improving the legal framework and judicial processes for enforcing financial contracts (such as with a modern, secured transactions regime for movable collateral) and expanding credit-registry coverage, particularly for private credit registries; and
- increasing the private sector's role in insurance, for example, by removing regulatory constraints on investments by insurance and pension/ provident funds.
    - ➢ *Time frame*: short- to medium-term. *Key responsible entities* include: Ministry of Finance and Revenue; Ministry of Privatization.

Trade Policy

37. Since 1998, in a major departure from previous strongly protectionist, inward-oriented import substitution policies, the Government has significantly liberalized the trade regime through tariff cuts and rationalization, as well as by removing import quotas, import surcharges and regulatory duties. State enterprises that used to have control over imports and exports of certain products were mostly eliminated. The unweighted (i.e., simple) average statutory tariff has fallen from 47.1 percent in 1997/98 to 14.4 percent in 2005/06 with the most recent changes announced under the FY06 Budget. Considerable progress has been achieved in simplifying the tariff structure as well as in compressing tariffs. These actions have reduced the anti-export bias of the trade regime significantly.

38. On the negative side, however, tariff dispersion has increased, rising from about 45 percent of the simple average tariff in 1997/98 to over 76 percent following the 2005/06 changes. Despite the recent cuts in tariffs on cars, their duty rates are still two-to-three times higher than the normal maximum customs duty rate, and the rates on motorbikes are almost four-times higher at 90 percent. Generally, imports of final consumer goods are subject to the normal maximum tariff rate of 25 percent. Some face even higher rates (tariff peaks). The resulting tariff escalation means that higher rates apply generally to final consumer products and that effective protection rates (ERPs) are probably even more skewed in favor of domestic production of final consumer goods than before 2005. Other trade barriers that adversely affect resource allocation include the domestic content requirements in the highly protected automobile industry and the income withholding taxes that are higher when applied on imports than on domestic sales. Finally, with the FY06 Budget, five new tariff slabs have been introduced (3.0, 6.5, 7, 14, and 15 percent) applying mostly to inputs for the textile/apparel sector. The new measure constitutes a backward step away from the much simpler system of the previous four tariff slabs --5, 10, 20, and 25 percent.

39. ***The role of free trade area (FTA) agreements***. Aside from being a member of the South Asian Free Trade Area (SAFTA), which became effective in January 2006, Pakistan has also intensified discussions with other trading partners on the possibilities of bilateral FTAs. An FTA was signed with Sri Lanka in March 2005. Recently, a limited trade ('Early Harvest') pact has been signed with China to go into effect from January 2006. The objective is to move to a full FTA in three years. Another 'Early

Harvest' agreement has been signed with Malaysia. A trade and investment framework agreement (TIFA) has been signed with the United States to explore ways of expanding trade between the two countries, with the expectation of an eventual FTA. There are also ongoing FTA discussions with Indonesia, Laos, Singapore, and Thailand, and these FTAs are expected to be negotiated in 2006.

40. Given that South Asia is one of the least integrated and highly protected regions of the world and Pakistan still has considerable tariff peaks, regional and bilateral FTA agreements carry considerable risks of adverse, trade diversion effects. Such preferential trading arrangements may lead to shifting the source of imports away from least cost/most efficient third countries to higher cost, member countries. And economic justification for FTA agreements with too many small countries is also questionable. It is therefore critical that Pakistan continue to reduce the high protection levels with unilateral trade policy reforms that reduce the average level and dispersion of import tariffs. The effort should emphasize reducing tariff peaks and avoid getting involved in costly FTAs. The strategy of continuing with unilateral trade liberalization will allow Pakistan to better manage her regional integration objectives by helping to minimize the likely adverse trade diversion effects of the existing FTAs.

41. *The way forward*. Having come so far in such a short time toward an open trading regime, Pakistan can earn even greater competitive strength by taking additional steps to reduce the still high anti-export bias of 18 percent. Some of the specific actions include:

- Continuing to reduce the general maximum tariff rate, the high tariffs on edible oils, and the extremely high tariffs on imports of motorcycles;
- gradually reducing the existing differentiated duty rates on cars of different sizes while also unifying the rates, with a phased program of annual reductions bringing the unified rate toward the general maximum rate (A suggested schedule of phasing is detailed in the main report and in Table 1 below);
- eliminating existing tariff exemptions and concessions *over a period of 2-3 years*;
- eliminating the domestic-content requirements in the auto industry *within a year*;
- given that Pakistan has some ground to cover in further reducing the dispersion of her tariff structure and in eliminating tariff peaks, pursuing unilateral trade liberalization within the multilateral framework should continue to be the priority track;
- with respect to the South Asia Free Trade Area (SAFTA) Agreement, Pakistan should give serious consideration to moving to MFN-based trade with India; minimizing sectoral and/or product exemptions; seeking clear rules against tariff-rate quotas; and opting for simple, transparent 'rules of origin' applicable to all products;
- Pakistan needs to weigh thoroughly the economic costs and benefits of pursuing too many bilateral Free Trade Area (FTA) negotiations, particularly with small countries. While a potential FTA with a very large trading partner, such as the US, may have an economic rationale, FTAs with small economies may end up in costly complications in the tariff system without much gain to show.

    - *Time frame*: short- to medium-term. *Responsible entities*: Ministry of Finance; Ministry of Commerce; Ministry of Industry, Production, and Special Initiatives; Central Board of Revenue; should also involve the relevant private sector groups/chambers through consultations.

Transport Logistics and Trade Facilitation

42. ***Transport Logistics***. The ability to move goods and people efficiently affects almost every aspect of growth and export competitiveness. Improvements to roads and port facilities, in particular the Peshawar-Lahore-Karachi corridor, have upgraded the transport network, and with the exception of rail, services have benefited from reduced public-sector participation and increased competition. These improvements have supported a rapid growth in exports in recent years. Most of these gains, including diversification into non-traditional exports, were achieved by reducing constraints and allowing market forces to guide growth in trade.

43. Significant challenges, however, remain to be addressed in the transport sector. Long-standing problems include the age (20 years on average for trucks that carry 95 percent of all freight) and condition of the transport fleet, serious overloading of trucks, restrictions on the provision of bonded transport and the high cost for less-than-container-load (LCL) shipments. Pakistan Railways is not allowed to operate on a commercial basis and --because of the priority it gives to passengers-- has difficulty in organizing a competitive freight service. For the ports, the principal problem is congestion at the terminals. Facilities have not expanded to match the traffic resulting from trade liberalization, and although ships' turnaround time has dropped and new berths are being built, import containers' dwell time averages about 10 days, five times as long as for export containers.

44. *The way forward*. Improving transport logistics will have an important role in enhancing Pakistan's export competitiveness:

- Strengthening transport logistics on the ***roads*** means, first of all, getting newer, safer, less-polluting trucks --an upgrade that could be hastened by both reduced duties on imported trucks and parts and tougher safety and axle-limit enforcement. Making medium-term credit more available by increasing flexibility in defining acceptable collateral and by requiring full insurance coverage for truck operators could not only be a stimulus to modernizing fleets but also to a needed measure of consolidation in the industry. (Longer term actions: as trucks modernize and shipping volume grows, Pakistan's trunk road itself will need upgrading, not only widening but also the construction of a limited-access, Karachi-Lahore highway; exclusive port-access roads; and truck terminals on the periphery of major cities).
- ***Rail*** transport, especially for containers moving between Karachi and Lahore, should be encouraged, not least to lighten the burden on highways. Creating an efficient rail-freight service requires granting a concession to a private operator through competitive bidding. Such a concessionaire should carry the responsibility of managing goods terminals so that future shippers can count on efficient door-to-door service, a benefit the system now lacks.
- Establishing efficient terminal operations would also address the congestion that is the largest problem affecting Pakistan's ***ports***. Their excessive overhead costs, associated with the overstaffing problem under the continuing Port Labor Board, need to be reduced. Also, congestion at parking yards can be eliminated through a combination of higher storage fees, reduced free time, and simplified procedures for movement of containers in bond to inland container depots. A final step to reduce dwell time is the development of a port-community information system to track the status of cargo, integrating information from the port, terminal operators, customs, banks, and other participants in the movement of goods.

  ➢ *Time frame*: Short- and longer-term. *Responsible entities*: Ministry of Commerce; Ministry of Railways; Ministry of Communications; Ministry of Finance; Ministry of Ports and Shipping; Karachi Port Trust and Qasim Port Authority; and Port Labor Board; Central Board of Revenue (CBR); State Bank of Pakistan; the private sector.

45. ***Trade facilitation***. Pakistan has done much over the last decade to improve its trade-logistics, particularly forwarding and customs clearance. Now efficiency gains in these areas need to be augmented

by efforts to add value in order to increase the competitiveness of exports. Domestic forwarders and clearance agents, for instance, operate in a flexible, highly competitive environment where improved management and integrated enterprises linking clearance, storage, forwarding, and transport would do much to build effective supply chains. Such coherence is a prerequisite for export growth where refrigeration is a concern (frozen seafood and fresh foods and vegetables) and where bonded storage and transport facilities can cut costs and delays (e.g., garments, sports equipment and surgical goods). The next stage of progress will require better cargo consolidation, cross-docking and inventory-monitoring services, and more efficient data interchange between shippers and logistics providers.

46. Over the last 12 years, Pakistan has introduced three major initiatives for reforming customs clearance. A single administrative document replaced what had been ten; a Direct Trader Input (DTI) system was introduced in 1995 under the management of the Pakistan Revenue Automation Limited (PRAL). The latter has brought computerization to the assignment of inspection officers, the selection of packages to be examined, and requests for duty drawback; and preferred traders have recently gained a *green channel* to have goods cleared based on documents. Although results have been good --95 percent of imports by value now clear within 4 days; exports are processed in 1-2 days-- a new, state of the art Pakistan Automated Customs Clearance System (PACCS) is due to replace the DTI system. The pilot phase is soon to be completed. Bringing additional risk-assessment capability and improved support for channelization, it promises substantially to shorten the period from the time when documents are lodged to when cargo is cleared. With additional measures, the change will limit the contact between cargo owners and customs officials in order to reduce informal payments.

47. *The way forward*. Another initiative offers short-term benefits in improved trade facilitation, leading to reduced costs:

- *Further simplification of customs procedures for establishing consolidation activities, bonded storage, and transport in bond.* This initiative would reduce the constraints on setting up bonded-storage and inland, container depots and on the competition for transport of goods in bond. It would also allow the designation of certified factories engaged in the production of exports as bonded facilities. This would require a change in customs regulation, which may require at least a year and a half to be implemented.

  - *Time frame*: Medium-term. *Responsible entity*: Ministry of Finance and CBR; Ministry of Commerce.

Food Quality and Safety Standards

48. In March, 2005, based on the findings of an EU inspection visit, the Government of Pakistan imposed a ban on exports of seafood to the EU to give the industry time to enhance quality and safety standards and prevent an EU-imposed ban, which could have had catastrophic results for the industry. Estimated losses range from US$10 - 40 million during the first months of the ban. Since then, EU inspectors noted improvements, but have raised serious concerns regarding the inspection and sanction system on the part of the Government coupled with such deficiencies as inadequate processing, unhygienic fishing vessels, and poor conditions in the harbor and auction house. This episode has underscored the critical importance of having a strong sanitary and phytosanitary (SPS) regime to meet international standards. International competitiveness in exports of perishable foods requires such a capacity and its strict implementation.

49. Pakistan presently lacks a coherent strategy (or set of strategies) for quality and SPS management in relation to its trade. Whatever strategy exists is pursued independently at company or business-to-business levels. In the absence of a coherent approach, Pakistani stakeholders are largely reacting to events and adopting defensive postures, seeking to limit the apparent impact of standards or potential damage from non-compliance with those standards.

50. *The way forward*. The first step toward improving food quality and safety in fisheries, horticulture, and meat/livestock is to recognize the concern as a priority for Pakistan's export

competitiveness. Organizationally, the next set of measures should work to remedy the fragmented, isolated, and non-coordinated capacity of SPS management institutions and regulations so as to build a regulatory framework that can support Pakistan's international trade objectives and obligations. There is an evident need to:

- Better define and demarcate the roles and responsibilities of the different federal and provincial ministries and agencies involved in SPS management matters;
- strengthen existing technical capacities for administering science-based SPS measures including risk assessment; and
- (re-)institutionalize early warning or surveillance systems for pests and diseases, contaminants, which can affect Pakistan's trade as well as domestic consumers and producers.
- In general, Pakistani stakeholders need to adopt a more proactive and coordinated approach to SPS management issues, cutting across the various agribusiness sub-sectors. The so-called Consultative Group (CG) on WTO matters and its SPS Committee have to be fully activated with some of its members forming a Task Force comprising a balanced cross-section of stakeholders.

51. Among the necessary institutional changes and capacity-building measures, specific, high-priority, recommended actions (together with their timeframe) include:

- *Strategy and priority setting*. Highlight SPS management constraints and issues, prioritize them and elaborate action plan (short-term; very high priority); and
- awareness campaign on SPS management capacity issues including the conduct of dialogue with the private sector. Develop SPS information systems in the public domain (short-term; high priority).
- *Food safety controls in food and agriculture*. Awareness-raising and training in fish products, horticulture, meat and livestock sectors regarding Hazard Analysis and Critical Control Point (HACCP), Good Agricultural Practice (GAP), and Good Manufacturing Practice (GMP) (short-term; high priority);
- promote and support the implementation of HACCP, GAP, GMP etc. throughout the supply chain utilizing loans and funding matching grants (medium-term; high priority);
- implement and enhance food safety controls in slaughterhouses, fish-processing plants, and pack-houses via awareness-raising, certification, surveillance, and auditing (short to medium-term; high priority); and
- continue to invest in upgrading hygiene facilities at Karachi Harbor (short to medium-term; high priority).
- *Phytosanitary control measures*. Raise awareness and training in practices for animal and plant health control including GAP, Integrated Crop Management (ICM) and Integrated Pest Management (IPM) (medium-term; high priority).

    ➢ *Time frame*: Short to medium-term. *Responsible entity*: Federal Ministry of Food, Agriculture and Livestock; Ministry of Commerce; Ministry of Science and Technology; Ministry of Health; the relevant provincial and local government departments; the private sector through Chambers of Industries and Commerce.

IV. CONCLUSION

52. Accelerating economic growth to the 7-8 percent range during the next decade, a key pillar of Pakistan's poverty reduction strategy (PRS), requires sustained macroeconomic stability and the creation

of an investment-friendly business environment. At the same time, recognizing that a major source of sustained higher growth is a dynamic economy functioning in an export-oriented policy environment, the Government's growth strategy emphasizes globally competitive industrialization to open the way for stronger competitiveness and greater export diversification. Further, the PRS gives priority to human capital development, substantial increases in the existing capacity and quality of infrastructure services, and continued trade policy reform.

53. The report focuses on the goal of accelerating Pakistan's economic growth and on the related challenge of strengthening export competitiveness. With respect to macroeconomic drivers of growth and competitiveness, it emphasizes that *macroeconomic stability is and must remain the strategic foundation for Pakistan's enhanced growth and competitive prospects*. It highlights the importance of raising the savings rate and fostering higher investment activity and stresses avoiding overvalued exchange rates that undermine export competitiveness and the sustainability of external balances.

54. The principal focus of the report is on the microeconomic dimensions of the investment environment, specifically on its weaknesses and ways to overcome them. The remedial measures it identifies aim at: reducing the cost of doing business and increasing market competition; stepping up factor productivity through efficiency gains; and, through lowering production costs throughout supply chains, strengthening export competitiveness and the economy's base for export diversification. Success in these efforts, which will help accelerate growth and employment generation, will depend on the consistency of government action. Steady improvements in the quality of the business environment would encourage domestic and foreign private investment --the latter also bringing with it positive spillover effects in information, technology and technology diffusion, competition, and linkages to marketing networks.

55. All of these developments will strengthen Pakistan's export performance, which in turn will support stronger, job-creating, poverty-reducing economic growth. But action must be rapid. Since global economic integration is certain to continue and competitive pressures to intensify, Pakistan must aim high to strengthen and diversify export production and to ensure the safety of the food it sells abroad. The challenge is great and multi-faceted, but the dynamism of Pakistan's public and private-sector leadership has proved equal to many daunting tasks in recent years.

56. ***High priority areas for early action***. The findings of the report also point to a number of high priority areas where early actions might have high payoffs. These include:

- Strengthening the macroeconomic framework (and avoiding overvaluation of the rupee);
- addressing electricity pricing and structural issues in the power sector;
- improving SMEs' access to financing;
- serious commitment to human capital development and to increased supply of skilled manpower;
- further improvements in the efficiency of the duty-drawback and sales tax rebate system for new and/or small exporters and for new export activities; and
- improving transport/trade logistics, and enhancing food quality and safety standards capacity.

57. *Measures with high and quick pay-offs*. Also included in the above set, some of the needed actions would lead to high and quick pay-offs. The following are specific examples:

  - *Power rates*. Addressing electricity pricing issues by setting an appropriate pricing structure for distribution (for specifics, see: Chapter 3, pages 38-39, 41, 85; and Chapter 6, pages 111-112).
  - *Access to financing*. Increasing access to financing by SMEs through changes in the legal framework and judicial processes for enforcement of financial contracts (such as with a modern, secured, transactions regime for *movable collateral*) and an expansion of credit registry coverage, particularly for private credit registries (see: Chapter 3, page 57; and Chapter 6, pages 108-110).

- *Duty drawback schemes*. Shortening the processing time for duty drawback and sales tax rebate submissions by SMEs and new exporters through further simplification of the documentation requirements and procedures (see: Chapter 3, pages 36, 39; Chapter 7, pages 127-129, and Annex to Chapter 7, pages 169-174).
- *Port congestion*. Reducing free parking period and introducing fees that increase with the duration of parking at port terminals in order to reduce congestion and delays, which are the key problems (see: Chapter 8, pages 133-134).
- *Freight transport by train*. Allocate slots to container trains (see: Chapter 8, pages 132-133).
- *Rationalizing customs duties*. Eliminate the existing tariff exemptions and concessions (see; Chapter 7, pages 121-127).
- In the auto industry, eliminate the existing (assembler and subcomponent) deletion programs (see: Chapter 7, pages 125).
- Continue reducing tariff peaks in the auto industry and in edible oils --after converting the latter's specific tariffs to ad valorem rates (see: Chapter 7, pages 125-126).
- *Fisheries*. Continue upgrading hygiene facilities at Karachi Port (see: Chapter 3, page 60; Chapter 8, pages 138-139, and 142; Chapter 9, page 149).
- Enforce the netting bans (see: Chapter 3, page 59; Chapter 9, page 149).

58. The policy matrix presented in Table I below summarizes the key cross-cutting issues inhibiting Pakistan's economic growth and competitiveness and lists the recommended actions with their timeframe. (**High-priority actions are in bold**). Chapter 9 in the main text has an additional policy matrix which presents the major product/activity-specific constraints identified and lists a set of recommended priority actions, together with their timeframe and the entities/agencies responsible for taking action.

Table 1: Summary of Recommended Actions
Strengthening Pakistan's Export Competitiveness and Growth Performance: Microeconomic Dimensions

		Panel A: Cross-Cutting Issues/Challenges		
Areas of Intervention	**Challenges/Issues/Impacts**	**Recommended Actions**	**Objectives/Benefits**	**Time frame**
1. Economic Governance	• Notwithstanding the recent improvements, the business regulatory environment still includes some antiquated laws enforced by autonomous and government institutions at federal, provincial and local levels. These in turn constrain firm-level efficiency: o Progress has been made in making business registry easier, but the actual start-up of operation, including land acquisition, site development, construction licensing, utility hook up carries a high degree of administrative burden o Court processes, judicial capacity, and supporting institutions (advocates, registries, accountancy and related professions) have been rather ineffective in enforcing contracts and protecting property rights in Pakistan. • There is need for further improvement in the efficiency of the duty-drawback and sales tax rebate systems. Small and/or new exporters appear to be facing longer delays in receiving their rebates. Action in this area is critical towards to foster export diversification and support SMEs' competitiveness.	• In all aspects of commercial law and regulation, establish uniformity in the implementation of operational rules, procedures and monitoring systems. o To meet this challenge, a central part of capacity-building efforts should be an expansion of existing, pilot, e-government initiatives to improve business-government interface. o **Additionally, federal policy and active consultation should encourage a unified and competitive approach to implementation of provincial regulations so that provincial governments implement reforms in a unified and active manner.** o **As a first step, risk-based labor inspection regimes with strict limits on abuse and rent-seeking should be instituted at the provincial level.** • Beyond pending legal reform legislation that will help limit procedural delays (stays, continuances, etc.) and introduce formalized, alternative, dispute resolution, the system of commercial adjudication needs broader attention --not just new courts but expedited and summary procedures backed by swift and effective enforcement. • **Continue simplifying the duty-drawback rules and documentation, and provide importers/exporters with easy-to-use information about procedures; intensify efforts to shorten the processing of duty drawback submissions by new export firms and SMEs, which are facing particularly longer delays.** o Do the same for the sales tax rebates.	Reduce the cost of doing business; encourage growth of SMEs; increase market competition; induce firm-level efficiency; and strengthen cost competitiveness	Short to medium-term
2. Skills Gap, and actor Markets ***Improving education and addressing Pakistan's skills gap***	*Education/ skilled labor force*: • Pakistan's human development, basic education and workers skills indicators show Pakistan consistently at the lower end of the cross-country rankings. • With such poor level of basic schooling, it becomes difficult to train the new entrants to the labor force to meet the needs of manufacturing industries. The resulting lower labor productivity relative to the comparator countries with stronger educational base adversely affects Pakistan's competitiveness and will inhibit Pakistan's growth prospects.	• **Sustain commitment to high priority to the spending levels and quality of programs in the social sectors, including in all levels of education, as reflected in Pakistan's PRS and included in the national-level education sector reform program, which is led by the Federal Ministry of Education.** • **Continue: (i) improving *governance in the education* sector by further strengthening the existing mechanisms aimed at more effective management and performance of teachers, and monitoring of teachers' competencies and absenteeism; (ii) implementing transparent procedures for teacher training, recruitment, and instituting effective mechanisms for monitoring outcomes/impacts (drop-outs, completion rates etc.).** • **Expand the coverage of successful public-private partnership initiatives could also improve access to and quality of service**	Enhance competitiveness, flexibility, and efficiency of factor markets to strengthen factor productivity, competitiveness	Short to long-term

		delivery in education. • **Focus a considerable portion of the limited education resources to upgrade quality of and access to primary and intermediate general education to better prepare students for the subsequent levels of education, to reduce drop-outs, and to meet the 'trainability' requirement of various industries.** • **Take steps to make intermediate and secondary education more purposeful and linked to the economy and changing needs in the labor market, and careers.**	and economic growth.	
Labor Market	*Labor market and skills*: • Restrictive labor regulations governing maximum hours, overtime conditions, length of temporary contracts, remuneration rates, and welfare contributions. • The discretionary approach of provincial inspectors, labor tribunals, and wage authorities in enforcing requirements and adjudicating disputes adds considerable uncertainty to labor market outcomes. • The informal nature of the labor market stifles incentives and retards investment in workers' skills, both by the employer and the worker himself.	The first round of labor market reforms represents a good start by codifying antiquated legislation and starting the process of liberalizing the market. The agenda for the next round includes: • **Preparation of regulations for the new Employment Services Act**, which implements increased labor flexibility particularly in the use of temporary labor contracts. • **Completion of the legislative reform agenda focusing first on reforming the 14 laws governing labor welfare and rationalizing the labor levies system.**		
Land Market	*Land market*: • Weak land registration system prevents certainty of property rights: o Issues include the multiple agencies involved in land registration, complex and opaque records keeping, and sale transactions taking place without valid conveyance documents. These legal inadequacies and procedural deficiencies prevent indisputable land title and is one of the primary causes of the case backlog in the courts.	• **Establish a consistent legal framework, registry, and property tax system to define land use rights of owners and lease-holders**. • Facilitate the transferability of land with full confidence, minimum costs, and in an adequate time. (Such measures would eliminate transfers using dubious or traditional techniques, such as oral gifts under Sharia inheritance law, power of attorney, and rights conveyed under the patwani system for land in rural areas).		
Financial Markets	*Financial markets*: • Despite the significant reforms in the banking system and the excess liquidity position in the country, access to finance continues to be an important constraint. • The legal system for enforcement of financial contracts is partly untested and is faced with problems at the execution level, and credit bureaus are at a nascent stage of development.	• **Improving the legal framework and judicial processes for enforcement of financial contracts (such as with a modern secured transactions regime for movable collateral) and an expansion of credit registry coverage, particularly for private credit registries.** • Increase the private sector's role in insurance, for example, by removing regulatory constraints on investments by insurance and pension/ provident funds.		
3. Infrastructure Utilities Power	*Power*: • The difficulty in getting electricity connections and unreliable supply with frequent outages have traditionally been an enormous burden on business, causing over 40 percent of firms to back up operations with their own	• **Setting an appropriate pricing structure for distribution companies** to support the sector restructuring, facilitate better targeting of subsidies, and to strengthen operational performance by reducing theft and losses. • Completing the unbundling of Water and Power Development		Medium to long-term

	generation. • In addition, the sector's inadequate pricing and subsidy structure causes the burden to fall particularly hard on the manufacturing industry, further harming price competitiveness	Authority (WAPDA) into separate transmission and distribution companies, and continuing with privatization of generation companies.		
4. Transport Logistics Trucking Rail Port and Shipping	*Some of the key challenges faced in Pakistan's transport sector*: • Age and condition of the transport fleet • Serious overloading of trucks • Restrictions on the provision of bonded transport • High cost of 'less than container load' movements • Limitation on the range of logistics services available The Pakistan Railways is not permitted to operate as a commercial entity. And much of the difficulty in organizing a competitive freight service is because the railroad gives priority to passenger train operations provided as public service • The high levels of occupancy in the port storage yards, which causes congestion, is the principal problem in the ports' terminals	*Trucking*: • Enforce safety and axle limit regulations • **Improve availability of medium-term credits through increased flexibility in acceptable collateral and full insurance coverage requirement for truck operators** • **Reduce duties on imports of trucks, parts** • Consolidate marketing • Improve fleet management • Improve urban access *Rail*: • **Joint concession of unit train operation and ICD operations** • **Allocate slots to container trains** *Port and shipping*: • Coordinate planning of new port capacity • **Reduce port overhead costs** • Evaluate dredging options • **Rationalize terminal tariffs to reduce congestion**	Improve quality and utilization of the truck fleet Increase frequency and quality of container train services; reduce truck traffic on roads Improve quality of service for container vessels calling at Pakistan ports; reduce shipping costs	3-5 years 1-3 years 3-5 years
5. Trade Logistics Customs	• In recent years, substantial reforms have been undertaken at Customs. However, the customs procedures for re-exports, e.g., duty-drawback, temporary admissions and handling cargo in bond, remain cumbersome.	• Simplification of customs procedures for establishing consolidation activities, bonded storage, and transport in bond	Reduce order cycle and cost of clearing cargo and provide incentives for compliance	1-2 years
6. Trade Policy	a. The remaining trade policy agenda to be addressed in the comings years: • Considerable tariff escalation, which has been further aggravated by increased dispersion; • Significant 'tariff peaks' which help provide very high protection to specific manufacturing industries such as the *motor vehicles* and *edible oils*; and, as a result, • the remaining anti-export bias of the trade regime is still considerable.	• Continue reducing the general maximum customs duty (CD) rate • **Eliminate the existing tariff exemptions and concessions, say, over a period of 2-3 years** • In the ***auto industry***: o **eliminate the existing (assembler and subcomponent) deletion programs;** o **gradually reduce the existing differentiated CD rates to a lower uniform single rate that would be the same for all models (say, to, 50% in a couple of years); then**	Further reduce the anti-export bias of the trade regime to promote export diversification and boost export competitiveness	Short to medium-term

		o **introduce a phased tariff reduction program of, say 5 percentage points each year, to bring down the CD on cars to the general maximum rate;** o unification of tariffs on CKD kits, original equipment components, and replacement parts at a single rate (say, at the current maximum rate); o imposition of excise taxes on imports and domestic production of expensive and luxury cars could be considered to offset possible revenue losses (with economic rationale based on having users pay for negative externalities). • **Gradually reduce the extremely high tariffs on imports of *motorcycles* towards the general maximum – to 50%, say, in two years, then reduce the rate by 5 percentage points every year.** • Convert specific tariffs on ***edible oils*** to ad valorem rates immediately, then reduce the latter gradually towards the general maximum rate.		
	b. Economic case for forming bilateral FTA agreements with small countries is questionable.	• A potential FTA with a very large trading partner, such the US, may have an economic rationale, but FTAs with small economies will simply end up in costly complications in the tariff system without much gain to show.		
7. Food Safety and Quality Standards	• Pakistan presently lacks a coherent strategy (or set of strategies) for quality and SPS management in relation to its trade. Whatever strategy that exists is pursued independently at the company or business-to-business levels. • In the absence of a coherent strategy, Pakistani stakeholders are largely reacting to events and adopting defensive postures in which they seek to limit the apparent impact of standards or potential damage from non-compliance with those standards.	1. With respect to the needed actions in the areas of institutional changes and capacity building, some of the specific, high priority recommended actions (together with their timeframe) include: • ***Strategy and priority setting*. Highlight SPS management constraints and issues, prioritize them and elaborate action plan (short-term; very high priority);** • **Awareness campaign on SPS management capacity issues and to conduct dialogue with the private sector. Develop SPS information systems in the public domain (short-term; very high priority);** • *Food safety controls in food and agriculture*. Awareness-raising and training in fish products, horticulture, meat and livestock sectors regarding HACCP, GAP, and GMP (short-term; high priority); • promote and support the implementation of HACCP, GAP, GMP etc. throughout the supply chain utilizing loans, funding matching grants etc. (medium-term; high priority); • implement and enhance food safety controls in slaughterhouses, fish processing plants, and pack-houses via awareness-raising, certification, surveillance, auditing, etc. (short to medium-term; high priority); • **continue to invest in upgrading hygiene facilities at Karachi Harbor (short to medium-term; very high priority)**; and • *Phytosanitary control measures*. Raise awareness and training in practices for animal and plant health control including GAP, ICM and IPM (medium-term; high priority).	Enhance trade-related SPS management capacity; improve compliance with the importing country food quality and SPS requirements to increase exports of horticulture, fishery and other agricultural food products.	
*/: Bold indicates high priority actions.				

CHAPTER 1: ECONOMIC GROWTH AND EXPORT COMPETITIVENESS

INTRODUCTION

1. For the Government of Pakistan reducing the proportion of the population living below the poverty line by half between 2000/01 and 2015 is a key development objective. Its strategy, as articulated in the December 2003 Poverty Reduction Strategy Paper (PRSP), identifies the acceleration of broad-based economic growth as a critical force in achieving this target. The other core pillars of the strategy include: improving governance; investing in human capital; and targeting the poor and vulnerable.

2. With respect to ***accelerating economic growth***, Government's PRS aims at sustaining a medium-term GDP growth rate of about 6 percent, raising it subsequently to the 7-8 percent range. Among the significant challenges involved in achieving and sustaining these growth targets, improving the quality of the business environment stands out. Pakistan's private enterprises daily face a plethora of well-recognized policy, regulatory, and infrastructure constraints. As discussed in detail in the PRSP, appropriate strategies are being developed to address these development challenges.[10] Aside from maintaining a sound macroeconomic framework, the other key elements of Government's growth strategy include :

- promoting *private sector-led growth* by creating an *investment-friendly business environment*, and to achieve this: reducing the state's role in commercial activities; strengthening economic governance and improving the regulatory environment to reduce cost of doing business; continuing to improve the efficiency and functioning of the financial sector; addressing critical infrastructure bottlenecks (including power, transport, and communications); and lowering other major barriers to international competitiveness, including the lack of skilled manpower, and, thereby, also stimulating the growth of the highly labor-intensive SME sector; and
- supporting the development of rural areas where most of the poor live and where there is still scope for productivity gains both in agriculture and in the non-farm sector through improvements in the policy environment and in critical rural infrastructure services.

3. Further, recognizing that a major source of sustained higher growth is a *dynamic manufacturing sector, functioning in an export-oriented policy environment,* the Government's growth strategy emphasizes globally competitive industrialization based on the country's dynamic comparative advantage. Relying on industrialization to pave the way for stronger *competitiveness* and greater *export diversification*, the strategy stresses

- continuing with the trade policy reform agenda, building on the strong record of trade reforms since the late 1990s, which helped reduce a strong anti-export bias; and, also
- substantially increasing the existing capacity and quality of infrastructure services.

4. ***Below-potential economic performance of the last decade.*** Pakistan's economic and social development remained weak in the 1990s. Annual per capita growth declined, from 3 percent in the 1980s to 1.2 percent in the 1990s, with the annual real GDP growth rate averaging below 4 percent. Poverty increased. By 2001-02,[11] over one third of Pakistani households lived below the poverty line.

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[10] Broad outlines of macroeconomic and sectoral strategies and for dealing with the cross-cutting issues are presented in a recently completed Government document: Government of Pakistan (2005), *Medium Term Development Framework*--2005-2010, Planning Commission. Another draft strategy document, which is under consideration by the Government, is *Towards A Prosperous Pakistan: A Strategy for Rapid Industrial Growth* (2005).

[11] When the last household survey from which reliable poverty estimates can be derived was carried out.

Improvements in other indicators were either limited or absent. After having outpaced its South Asian neighbors in economic growth and many indicators of social welfare, Pakistan's development lagged.

5. The first half of 1990s witnessed some incomplete structural reform efforts. The second half of the decade was marked by economic uncertainty associated with heightened domestic and regional political tensions, the 1998 nuclear explosion, the sanctions and droughts, and the unsustainable debt dynamics. Political and economic uncertainty and the security concerns all impacted private investment and economic performance adversely. Interest payments and military spending by the Government exceeded 50 percent of the consolidated government spending, causing the relative size of total public-sector development spending to shrink, leaving limited resources for education, health, and physical infrastructure. External balances deteriorated significantly and, as a result, foreign reserves fell to dangerously low levels.[12] Total gross fixed investment averaged around 17 percent of GDP per annum, well below what is needed to support even 4-5 percent GDP growth for a sustained period.[13] (For more details on the macroeconomic picture of the 1990s and of the more recent years, see Table 1 in Statistical Appendix.) However, since the late 1990s, the Government has committed itself to reversing Pakistan's poor economic performance through major macroeconomic stabilization efforts and structural reforms aimed at strengthening microeconomic fundamentals.

6. ***Building on the structural reforms and recent economic turnaround.*** Over the last 4-5 years, the economy has made a significant and encouraging turnaround, thanks to a strong and sustained program of fiscal adjustment and wide-ranging, market-oriented structural reforms. Aside from fiscal measures (tax administration, expenditure management) and debt rescheduling, reforms in the financial sector (including the privatization of state-owned banks and strengthening of the role of the SBP), telecoms, and substantial trade-policy reforms, plus the expansion in the US and EU textile quotas have helped stabilize and revive the economy.

7. Pakistan's economy is better placed for an economic take off today than it has been at any time over the past 15 years. Supported by stronger export performance and, more recently, by a pick up in domestic demand, economic growth has been steadily rising --crossing the 5-percent mark in FY03 for the first time since the mid-1990s, continuing to rise to 6 percent in FY04, and possibly reaching a remarkable 8.4 percent in FY05. The macroeconomic environment has improved, with falling budget deficits, improving public debt sustainability, a sharp fall in interest rates, relatively low inflation, and an expanded cushion of foreign exchange reserves. The structural reform efforts aimed at improving economic governance (in tax administration, customs) and deregulation, and the privatization of SOEs in manufacturing, energy, telecommunications, and banking are having positive impacts on competition and efficiency.

8. ***Achieving and sustaining higher economic growth and a stronger economic base for poverty reduction will require much more progress in strengthening the microeconomic fundamentals of Pakistan's business environment.*** There is broad consensus in Pakistan and among outside observers that Pakistan's economic performance remained well below its potential in the 1990s and that the recent economic revival could be sustained and the economy's performance and overall robustness could be strengthened further if the remaining deficiencies of Pakistan's macroeconomic framework and business environment are tackled effectively. Clearly, remaining vigilant on the macroeconomic front and in maintaining macroeconomic discipline will continue to be critical, but it is also clear that in the future, macroeconomic stability cannot by itself support higher economic growth.

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[12] For more details, see: World Bank, *Development Policy Review: A New Dawn,* April 2002.

[13] The (re-based) new national accounts (NA) series indicate that the old GDP series might have underestimated the level of GDP by more than 25 percent due to incomplete coverage of economic activities. This would mean that the actual investment/GDP ratios must have averaged lower than 17 percent of GDP in the 1990s, even after adjustment for possible underestimation of actual investment. However, investment data recorded by the Federal Bureau of Statistics are also believed to underreport the actual level of investment.

9. Many so-called *behind-the-border constraints* to private activity --policy distortions, economic governance (regulatory/administrative and institutional) hurdles, and infrastructure bottlenecks-- have been widely assessed.[14] (They are discussed in Chapter 6 below.) The shared view is that Pakistan could indeed achieve higher economic growth and better poverty outcomes through broader and deeper reforms to improve its investment climate, together with improvements in public-expenditure management, further reform of the SOE sector, and stronger effort to expand the capacity/quality of physical infrastructure and social services. One of the key lessons of the past decade and the recent 4-5 years is that the economy responds to macroeconomic stability and improvements in the investment climate.

10. Improvements in the investment environment would create positive impacts on economic growth and employment generation in a variety of ways, including:

- by reducing the cost of doing business and increasing market competition;
- by leading to increases in factor productivity as firms are induced to use production factors more efficiently; thereby also
- directly reducing production costs and thus strengthening export competitiveness and the economy's base for export diversification; and by
- encouraging domestic and foreign private investment --the latter also bringing with it positive spillover effects in information, technology and technology diffusion, competition, and linkages to marketing networks; and
- through all of these developments, strengthening export performance and thus supporting stronger economic growth and employment generation.

11. The key thrusts of the Government's poverty-reduction strategy and its focus on improving the business environment and promoting private sector-led growth are consistent with these observations. The PRSP's emphasis on continued trade liberalization and export-led growth (PRSP, pages 38-39) is a reflection of the positive impacts of earlier trade liberalization efforts.

Factor Productivity, Export Competitiveness and Economic Growth are Linked

12. ***Increasing productivity of local firms/industries is critically important.*** To raise the economy's growth rate, productivity of local firms and industries must rise. A conducive business environment -- with flexible and well-functioning factor markets, adequate and efficiently-run infrastructure services, an enabling regulatory environment and easy market entry/exit, and competitive markets-- would stimulate firms to become more competitive, dynamic, innovative, and productive. With more efficient and competitive firms it becomes easier to compete in foreign markets and to improve export performance. *In today's highly dynamic global markets under much reduced protection levels, competition is increasingly shaped by cost-competitiveness advantages. Pakistan needs to improve its microeconomic fundamentals to boost export competitiveness and promote export diversification. Given the relatively small size of its domestic economy, strong export performance will continue to be critical to sustaining higher growth.*

[14] Government of Pakistan, *Accelerating Economic Growth and Reducing Poverty: The Road Ahead* (Poverty Reduction Strategy Paper), December 2003; State Bank Of Pakistan, *Annual Reports* (various years); World Bank, *Development Policy Review*, 2002; World Bank, *Doing Business* (various years); World Economic Forum, *Global Competitiveness Report: 2004-2005.*

13. The pace of globalization, moreover, makes it urgent to act rapidly on the priority economic policy, institutional, and structural constraints to improving Pakistan's export competitiveness. Notwithstanding the slow progress in the WTO Doha (Development) Round of multilateral trade negotiations, global economic integration will continue to intensify competitive pressures. Countries will have to become increasingly more competitive to diversify and strengthen their export performance and enjoy faster growth. Moreover, with the elimination of the textile and clothing export quotas under the Agreement on Textiles & Clothing (ATC) at end-December 2004, Pakistan's textile and garment exports-- which currently account for about 65 percent of merchandise exports[15]-- face stiffer competition in the USA and EU markets. More competitive and dynamic exporters, led by China, will start increasing their market shares. Productivity gains derived from improvements in the investment climate, however, could enable Pakistan to improve the export competitiveness of the textile/apparel sector.[16]

Objectives and the Approach of the Study

14. ***Objectives and the unifying themes***. The principal objective of this study is to examine the key macro and particularly microeconomic factors affecting productivity and competitiveness in order to identify specific areas where policy/institutional actions may do the most to boost the productivity of local firms/industries, to strengthen Pakistan's export competitiveness and diversification, and thereby also to contribute to overall growth performance. The study focuses on the business environment constraints to efficient private activity as well as remaining constraints associated with the trade policy and trade facilitation. The micro-level investigation centers around establishing the extent to which various policy distortions, regulations, inefficient bureaucracy, weaknesses in factor markets, and key infrastructure constraints push up unit costs in Pakistan above those of competing countries for similar products. Specific recommendations on priority policy and institutional actions are intended to help the Government implement its broad-based, accelerated growth strategy. *Cost-of-doing business, factor productivity, cost competitiveness, and export diversification are the unifying themes of the study.*

15. ***Scope and approach***. Part I provides background on growth dynamics and competitiveness in Pakistan, focusing on aggregate assessments of the key sources of economic growth and micro-level evidence on sources of competitive disadvantage. Specifically, Chapter 2 looks at Pakistan's recent economic growth performance with a view to examining the relative importance to that record of factor productivity[17] growth and of capital and labor-force accumulation.

16. Chapter 3 presents the findings of ***value-chain analyses*** carried out on five specific products, including some major, some new, and some potential export items. Specifically, these are: ***blue jeans***, ***shrimp***, ***marble tiles, powdered milk***, and ***auto radiators***. As proxies for similar products and/or activities, these items cover a spectrum of the key economic activities that offer potential for export diversification and growth. Value-chain analyses (VCA) bring specificity, depth, and concreteness to the productivity and export competitiveness assessments and help identify important sources of competitive disadvantage.

17. Chapter 4 draws attention to the findings of various levels of analyses of factor productivity, competitiveness, and growth linkages and to similar evidence provided by other studies to emphasize that they all point to the same set of policy issues, institutional weaknesses, and infrastructure bottlenecks that must be addressed if Pakistan is to better its growth prospects and competitiveness. In this context, this chapter also presents evidence on Pakistan's international competitiveness rankings.

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[15] These figures refer to merchandise exports valued on 'customs' basis.

[16] A recent World Bank study concluded that the impact of the removal of T&C export quotas will be positive on Pakistan's textile sector. The latter report also stresses that raising productivity is the key for Pakistan to realize the likely potential benefits that the abolishment of the T&C quotas may offer. The World Bank, '*Implications for Pakistan of Abolishing Textile and Clothing Export Quotas*', April, 2004.

[17] Factor productivity refers to the level of efficiency with which labor, capital, and other inputs are being used in an economy.

18. Part II shifts the focus to the key drivers of growth and competitiveness. Chapter 5 covers the weaknesses of the macroeconomic framework and suggests decisive changes to secure sustained macroeconomic stability. Chapter 6 is devoted to the challenge of improving the key microeconomic dimensions of Pakistan's investment environment, while Chapter 7 emphasizes the need for further trade liberalization. Two specific topics -- ***transport logistics and trade facilitation*** and ***food safety and product quality standards*** -- have become increasingly more critical for Pakistan's export competitiveness. Key constraints in these areas and recommended actions are the focus of Chapter 8.

19. Chapter 9 summarizes the main findings and presents cross-cutting and product/activity-specific policy packages that highlight the recommended high priority actions.

PART I

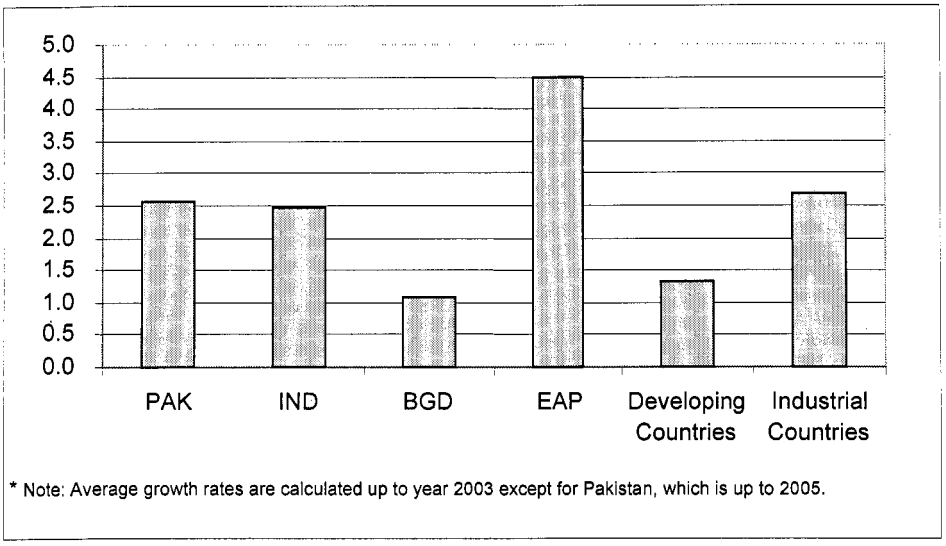
GROWTH DYNAMICS AND COMPETITIVENESS

CHAPTER 2: ECONOMIC GROWTH IN PAKISTAN: SOURCES AND INTERNATIONAL CONTEXT

A. DETERMINANTS OF GROWTH

1. Taking a long-run and cross-country perspective, economic growth in Pakistan has not been disappointing. Although its growth rate could not match the superb take-off experienced by the East – Asian "miracle" countries, Pakistan's per capita GDP has grown since 1960 at an annual average rate of 2.6 percent, surpassing the typical (median) developing country (1.3 percent) as well as its neighbors India and Bangladesh (see Figure 2.1 and Table 2.1). Pakistan's growth has also undergone cycles and trend fluctuations, but volatility[1] has been relatively mild, standing well below those of the typical developing country and Pakistan's neighbors (Figure 2.2 and Table 2.1).

Figure 2.1: Average Per Capita GDP Growth in Pakistan and Comparator Countries 1960-2003/05



2. This reasonably good growth performance has allowed the country to improve its regional and world status in terms of GDP per capita and close the gap a little with respect to advanced countries such as the United States (see Figure 2.2). Relative to the South Asia region, Pakistan started as one of the poorest countries in the 1960s. Its remarkable growth in that decade helped the country close its gap with India by the early 1970s. Pakistan then held its own with respect to India for two decades, that is, until the beginning of the 1990s when India opened its economy and achieved impressive growth rates. Marked by political and social instability, the 1990s was a 'low-performance' decade for economic growth in Pakistan. Only recently, has this trend appeared to reverse and Pakistan is once again closing its development gap (see Figure 2.3).

[1] Measured by the standard deviation of the annual per capita GDP growth rate.

Figure 2. 2: Volatility of Per Capita GDP Growth in Pakistan and Comparator Countries 1960-2003/05

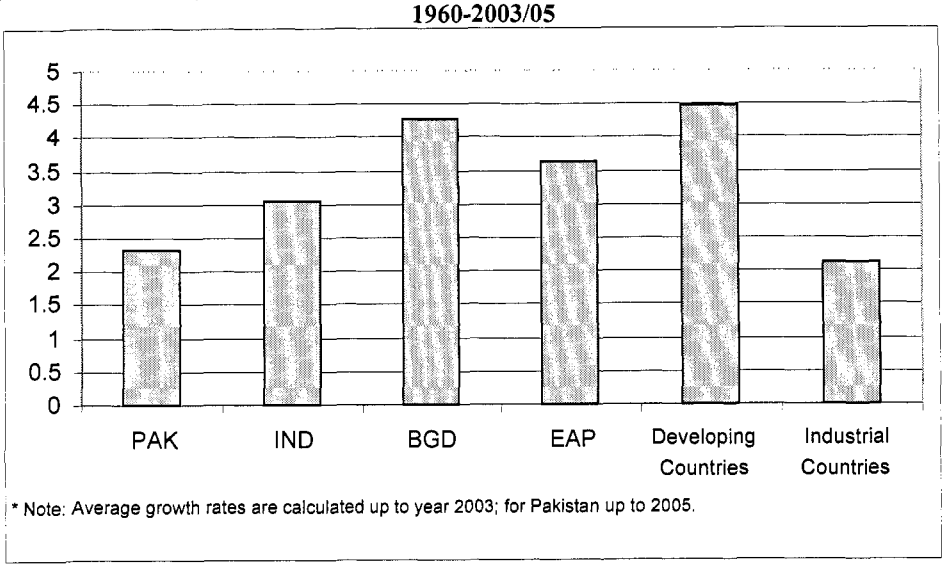


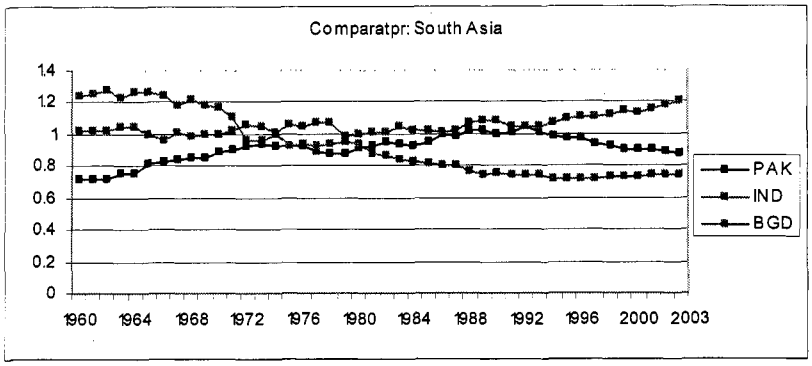
Table 2. 1: Statistics on Long-Run Growth Rates, 1960-2003/05

	Av. Growth Rate	Std. dev. Of Growth Rate
Pakistan	2.56	2.31
India	2.47	3.06
Bangladesh	1.09	4.26
East Asia and Pacific	4.48	3.62
Developing Countries	1.33	4.47
Industrial Countries	2.68	2.13

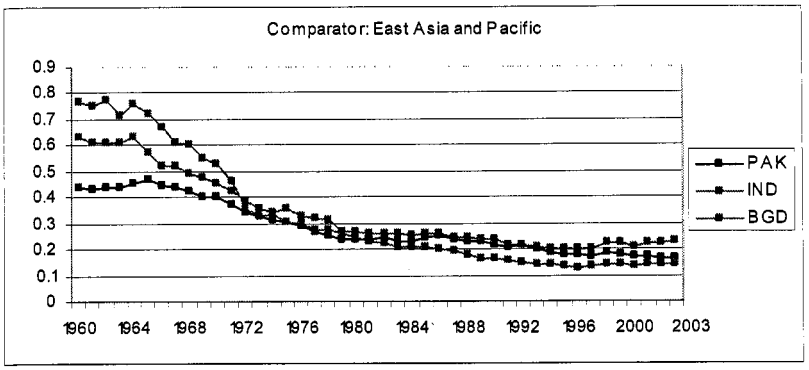
Note: Growth rates are calculated up to year 2003 except for Pakistan up to 2005.

Figure 2. 3: Per Capita GDP Growth in Pakistan as Ratio to Comparator Countries 1960-2003

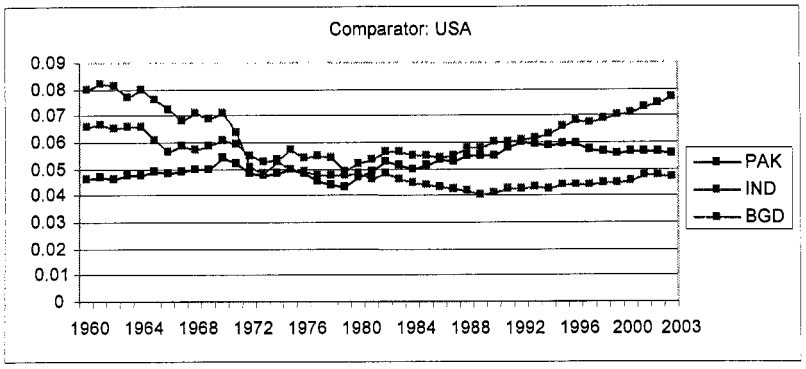
Relative to South Asia (Bangladesh, India, Nepal, Pakistan, Sri Lanka)



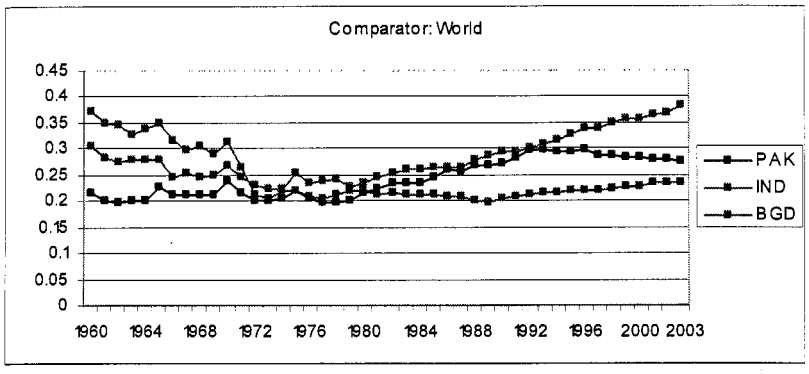
Relative to East Asia and Pacific (Indonesia, Malaysia, Thailand, Korea, Rep., Singapore)



Relative to U.S.A

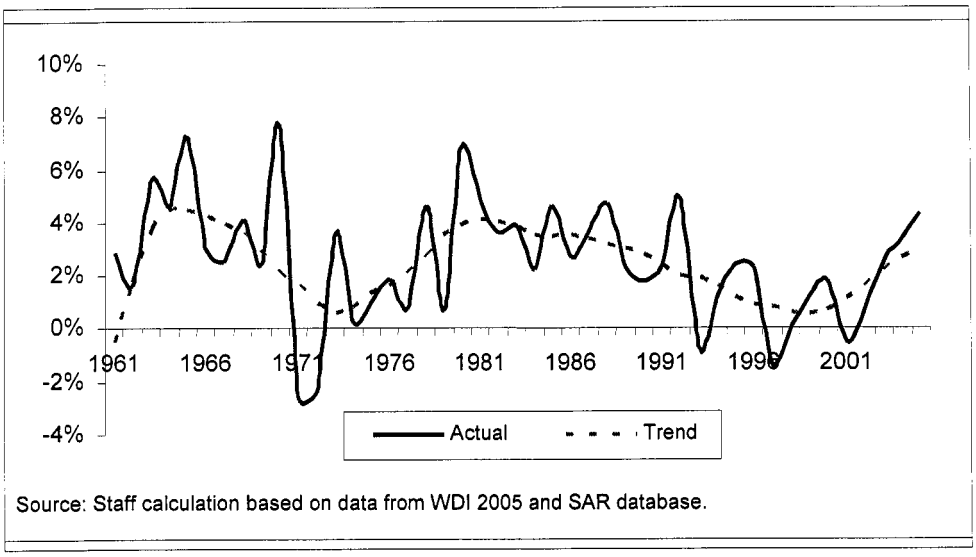


Relative to World



Source: Staff calculation based on data from World Develop Indicators 2005.

Figure 2. 4: Actual and Trend Annual Per Capita GDP Growth in Pakistan: 1961-2005



Source: Staff calculation based on data from WDI 2005 and SAR database.

3. *The positive assessment of Pakistan's economic growth in the long run should not be taken to mean that the country has achieved its desired or potential growth.* A simple comparison with the countries in East Asia and Pacific shows that considerable obstacles to growth continue to limit Pakistan's development potential (see Figure 2.3). An important goal for this and the next two chapters is to identify both the sources of and the obstacles to growth.

A.1 Trend and Cycle Growth

4. In order to fully understand Pakistan's growth experience, it is necessary to go beyond the comparison of long-run averages and, to start by decomposing the country's annual per capita GDP growth into its trend and cyclical components.[2]

5. Figure 2.4 shows Pakistan's per capita GDP growth rate annually for the period 1960-2005. The figure presents both total growth and its trend component. The first thing to notice is the lack of a clear upward or downward pattern in ***trend growth*** -- it seems to move around a stationary mean. *Broadly speaking, the 1970s and 90s were decades of poor trend growth, while the 1960s, '80s, and, apparently the current decade are periods of robust growth.*[3] Trend growth in Pakistan did not vary widely over the last 4 decades. At worst, the rate was above zero, and in the best cases it was around 4 percent. Based on this statistical evidence and unless the economy's structure is modified drastically, it seems that for the next decade we should expect an average growth rate of per capita GDP of about 3 percent. (The subject of growth projections is revisited later in this chapter.)

6. ***Cyclical fluctuations*** have been relatively mild except at the beginning of the 70s, around the first oil crisis, and in the 1990s, a period of marked political and social turmoil. Whether the increased volatility of the 1990s is only temporary or will initiate a period of higher instability remains to be seen.

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[2] This involves the use of a statistical filter with desirable properties. This study employs the Baxter-King band-pass filter, which has become the most popular in recent years. The merit of the band-pass filter is that it eliminates high-frequency fluctuations (periods less than 6 quarters) that are usually associated with measurement errors, while it allows to separate low-frequency fluctuations (periods exceeding 8 years) usually linked to *trend growth* from middle-frequency fluctuations (between 1.5 to 8 years) that correspond to the *business cycle*.

[3] For more details, see: Guisinger, S. and G. Scully (1991), "Liberalizing Foreign Trade: The Experience of Pakistan", in World Bank (1991), *Liberalizing Foreign Trade: The Experience of Indonesia, Pakistan, and Sri Lanka*, eds. Papageorgiou, D., Michaely, M., and Choksi, A., Volume 5 (Basil Blackwell).

A.2 Growth Accounting

7. A second analytical approach to Pakistan's economic growth uses the so-called Solow growth-accounting methodology to decompose the sources of output growth into the accumulation of factors of production and the growth rate of total factor productivity[4] (see Annex 2.1 for details). The growth accounting exercise covering the period from 1960 to 2005 is conducted for the full period (see Figure 2.5 and Table 2.2) and for decades except for the last period covering 2001-05 (see Figure 2.6 and Table 2.3). For comparison purposes, growth accounting is also conducted for India, Bangladesh, and the median East Asian country for the years 1960-2003 (see Figure 2.5 and Table 2.2).

Table 2. 2: Growth Accounting in Pakistan and Comparator Countries 1960-2003/05 (%)

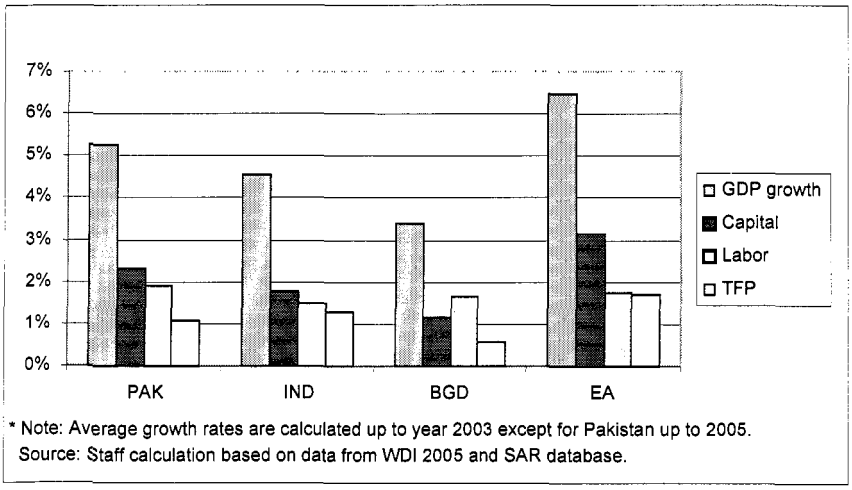
	GDP Growth	Capital	Labor	TFP
Pakistan	5.28	2.31	1.89	1.08
India	4.57	1.77	1.50	1.30
Bangladesh	3.38	1.16	1.64	0.57
East Asia and Pacific	6.46	3.15	1.74	1.71

Table 2. 3: Growth Accounting in Pakistan by decades: 1961-2005 (%)

	GDP Growth	Capital	Labor	TFP
1961-1970	6.97	4.48	1.63	0.86
1971-1980	4.58	1.80	2.30	0.48
1981-1990	6.09	1.90	1.90	2.30
1991-2000	3.86	1.45	1.71	0.71
2001-2005	4.55	1.58	1.92	1.04

Note: Growth rates are calculated up to year 2003 except for Pakistan up to 2005.
Source: Staff calculation based on data from WDI 2005 and SAR database.

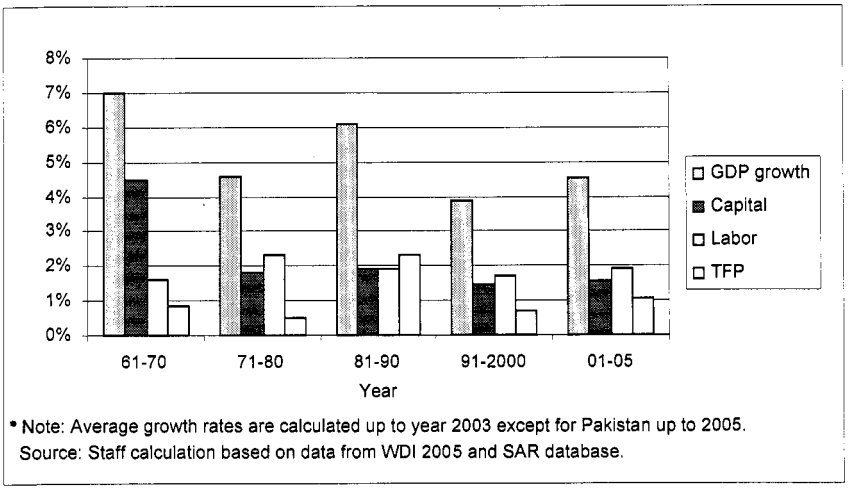
Figure 2.5: Growth Accounting in Pakistan and Comparator Countries 1960-2003/5



* Note: Average growth rates are calculated up to year 2003 except for Pakistan up to 2005.
Source: Staff calculation based on data from WDI 2005 and SAR database.

[4] Factor productivity growth would result from more efficient use of resources, technological progress and technology diffusion, learning- by- doing, and improved management of production activities. Improvements in the investment environment through structural reforms and in macroeconomic policy environment could induce such positive developments.

Figure 2.6: Growth Accounting in Pakistan by Decades 1961-2005



* Note: Average growth rates are calculated up to year 2003 except for Pakistan up to 2005.
Source: Staff calculation based on data from WDI 2005 and SAR database.

8. Over the span of more than 40 years, Pakistan and India perform alike not only in total GDP growth rate, but also in the relative contribution of production factors. In both countries, capital accumulation is the most important growth source, followed by labor expansion and then productivity growth. East Asia is similar regarding the preeminence of capital accumulation over other factors but outpaces Pakistan and India in the strength of both capital accumulation and productivity growth. Although labor expansion is important as a growth source, it does not explain the growth variation across countries; it is almost as strong in Pakistan, India, Bangladesh, and East Asia. *Driving the difference across countries are capital accumulation and productivity improvements.*

9. The growth decomposition by decades in Pakistan also shows interesting patterns (Table 2.3 and Figure 2.6). In the 1960s, growth was clearly driven by capital accumulation. In the following decades, it became a less important but still significant growth source, explaining at least one-third of GDP growth. Productivity growth was quite low in the 1960s and 1970s and then again in the 1990s. (See Annex 2.2 about the new GDP series and on using old and new GDP series in the growth analysis.) More than capital and labor, productivity expansions were behind the recoveries of the 1980s and 2000s with respect to their respective previous decades. *In conclusion, while capital accumulation and labor expansion are steady sources of growth in Pakistan, productivity changes accompany the fluctuations in GDP growth occurring over time in the country.*

10. The results also indicate that TFP growth itself has been particularly strong in sub-periods when both microeconomic and macroeconomic dimensions of the business environment have improved (including improvements in macroeconomic management, regulatory environment, infrastructure, trade policy, financial sector, and law and order), and when political instability diminished. For example, TFP growth was particularly strong in the 1980s, explaining 38 percent of GDP growth rate; and after a fall in the 1990s, it has rebounded to account for nearly 23 percent of GDP growth since 2001. *These observations highlight the critical importance of improvements in the quality of the investment environment as a critical determinant of factor productivity and of overall economic growth.*

11. ***Quality of investment environment affects factor productivity and growth.*** Findings from firm-level investigations also show that improvements in investment environment matter for firm-level productivity growth and investment activity. Improvements in the firm-level productivity in turn would enhance overall factor productivity growth. For example, firm-level performance analyses carried out in

a recent study (which includes Pakistan)[5] provide results showing that the quality of investment environment has a significant affect on productivity. The findings based on survey data collected from a large number of firms operating in the same sector in Bangladesh, China, India, and Pakistan indicate that improvements in various investment climate aspects[6] would lead to significantly higher TFP growth. *Thus, if the quality of investment environment in Pakistan were to match China's (Shanghai's to be specific), then the productivity of Pakistan's textile firms (operating in Karachi) on average would improve by 81 percent, the rate of return to capital by 36 percent, and wages would increase by 23 percent. Increased profitability in turn would encourage more investment, leading to faster capital accumulation.* The findings of other studies also provide evidence on the likely positive effects on factor productivity and overall growth of reforms in the regulatory environment and improvements in other key dimensions of the investment climate (see paragraph 21 below).

A.3 Explaining Economic Growth through Regression Analysis

12. This section attempts to understand Pakistan's economic growth performance using cross-country growth regression analysis. In addition to helping explain the recent changes in economic growth experienced in Pakistan, this exercise is the basis for the growth forecasts presented in the next section. The method follows the approach in Barro and Lee (1994) and Easterly, Loayza, and Montiel (1997), which consists of linking aggregate economic, political, and social variables to growth rates in GDP per capita for a large sample of countries. The estimated model is then used to project the growth rates in Pakistan and examine whether its performance has been close to expected values.

13. ***Growth Determinants.*** A large variety of economic and social variables can be proposed as determinants of economic growth. This study concentrates on the five major categories that have received most attention in academic literature and policy circles. First, *transitional convergence variables,* which account for the tendency of a country to grow less rapidly due to diminishing returns as it becomes more capital intensive. Second, *cyclical reversion variables,* which control for the fact that economies tend to recover from temporary recessions and slowdown after a temporary boom. Third, *structural policies and changes* aimed at increasing long-run productivity, such as those pertaining to education, financial depth, trade openness, government flexibility, and public infrastructure. Fourth, *stabilization policies*, directed at obtaining macroeconomic stability and raising productivity, such as policies to control inflation, cyclical volatility, real exchange rate overvaluation, and banking crises. And, fifth, *external conditions*, which account for developments in the international economy that affect the national economy in the short and long runs, such as terms of trade shocks and prevailing growth conditions in the world; (Annex 2.3 elaborates on the growth determinants included in this study).

14. ***Sample and methodology.*** The sample contains 78 countries and, for each of them, a minimum of 3 and a maximum of 8 non-overlapping 5-year observations spanning the years 1961-99.[7] Figure 2.7 illustrates how per capita GDP growth in Pakistan in each period from 1961 through 2005 fares against the median countries in South Asia and the world. Similarly, Figure 2.8 compares the values of the growth determinants (discussed above) in Pakistan vis-à-vis the world median for the same time periods. Later in the study, the comparison between Pakistan's current values and those of the top developing country performers will be used to compute growth rates under a scenario of rapid reform and progress.

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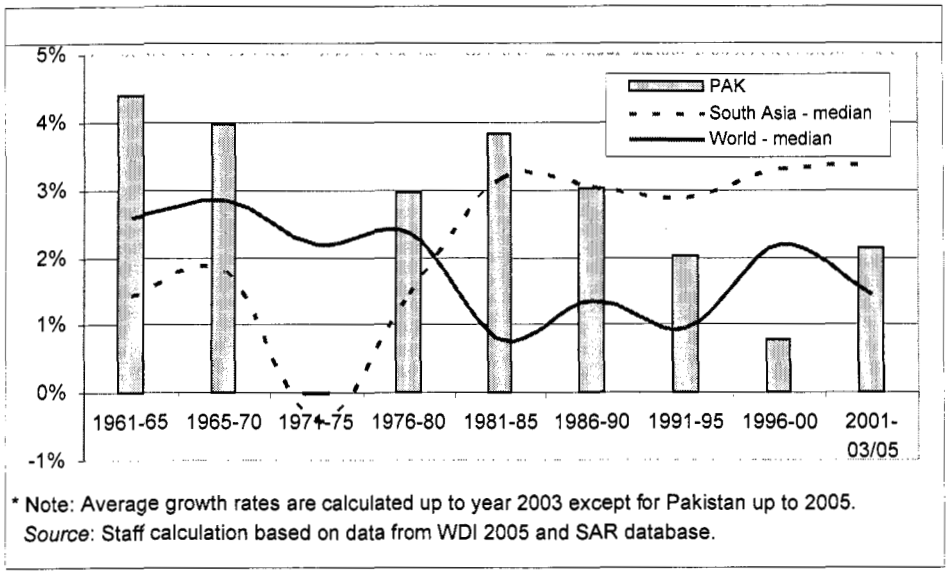
[5] Dollar, David, M. Hallward-Driemeier, and T. Mengistae (2005), "Investment Climate and Firm Performance in Developing Economies", in *Economic Development and Cultural Change*, Vol. 54, No.1, pp. 1-31 (October), University of Chicago Press.

[6] Represented by a number of indicators, including: power outages, days required to get a phone line, days required to clear imports and exports from the customs, access to financing, unofficial payments, and management time dealing with regulations.

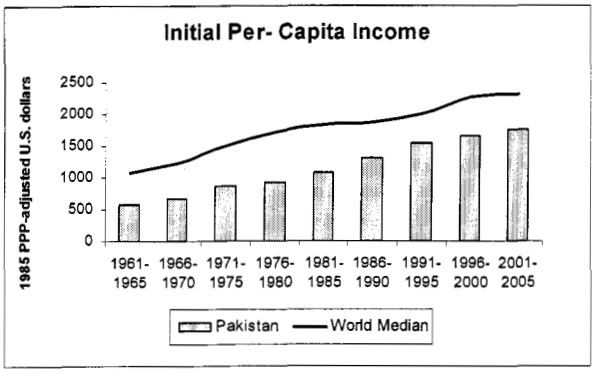
[7] A minimum of 3 observations per country is required to run the instrumental-variable methodology outlined in Appendix 2.4. The total number of observations in this 5-year sample is 350. The econometric methodology is the generalized method of moments applied to dynamic models using panel data (see Annex 2.4 for details).

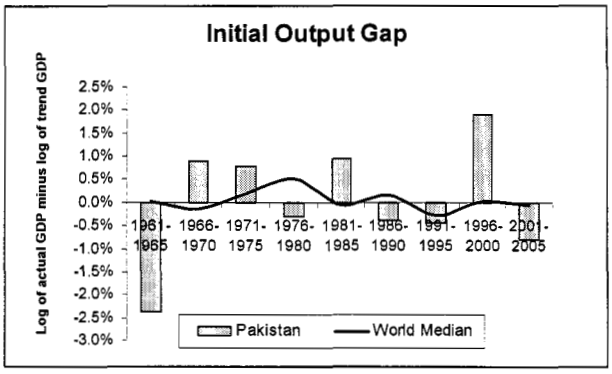
Figure 2. 7: Per Capita GDP Growth in Pakistan by 5 Year Periods 1961-2005

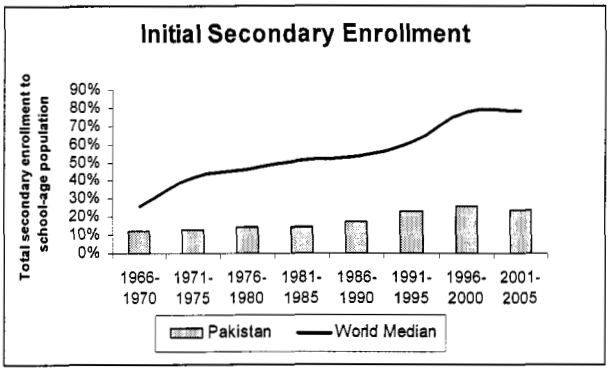


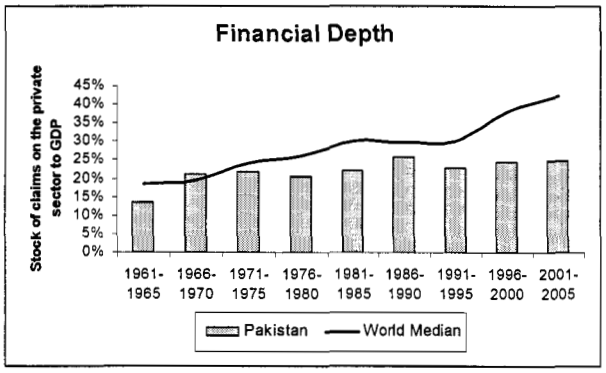
* Note: Average growth rates are calculated up to year 2003 except for Pakistan up to 2005.
Source: Staff calculation based on data from WDI 2005 and SAR database.

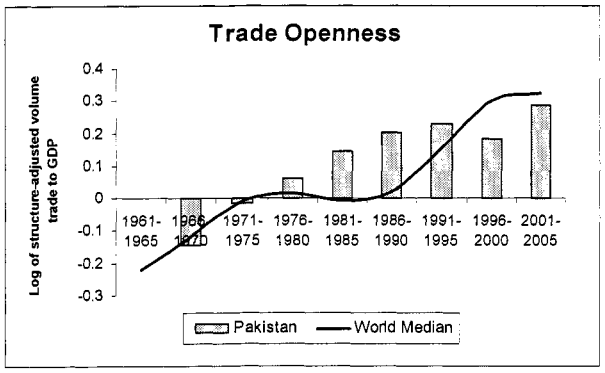
Figure 2. 8: Behavior of Growth Determinants: Pakistan and World Median

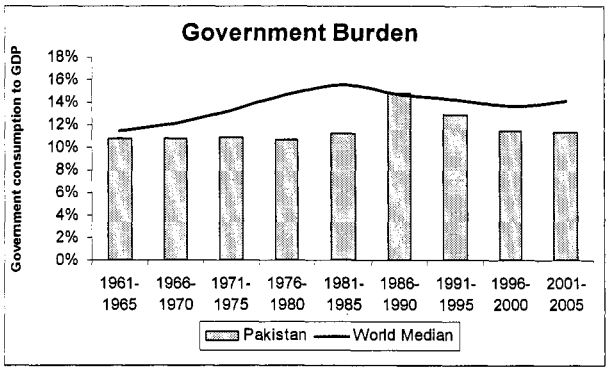


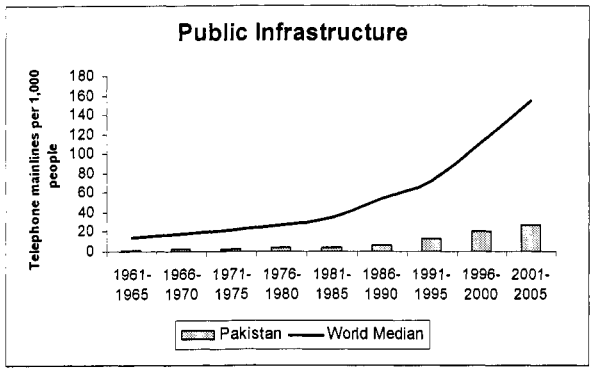


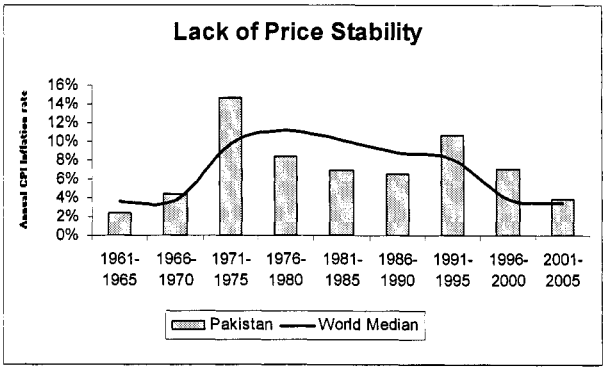


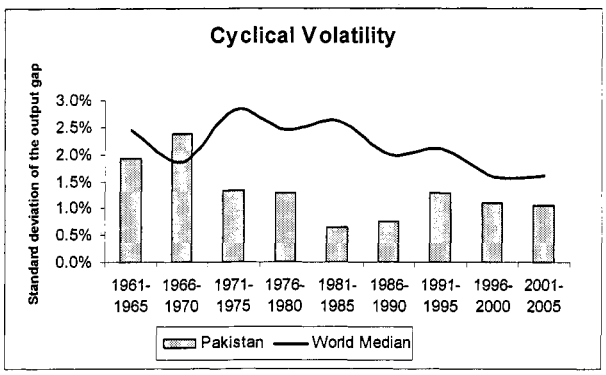


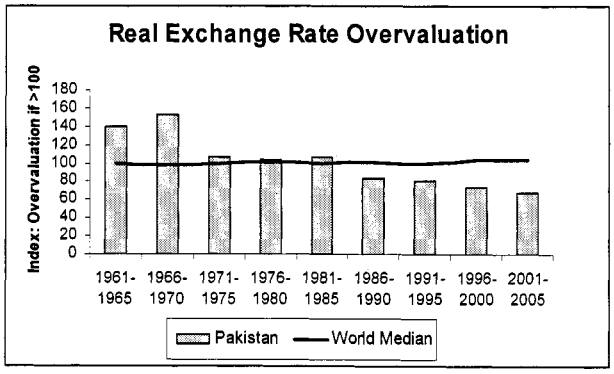


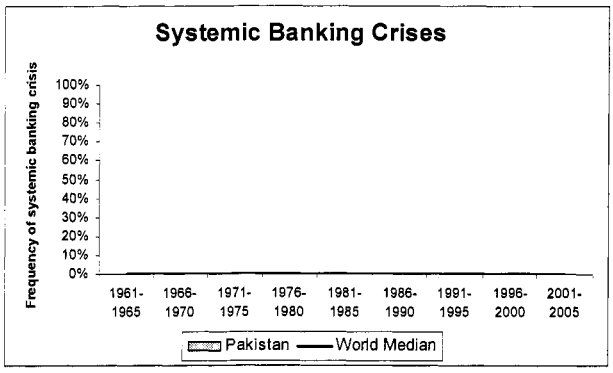


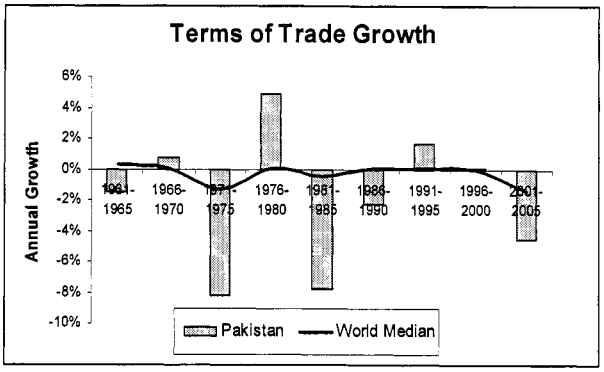












Source: Staff calculation based on data from WDI 2005, SAR database, and State Bank of Pakistan.

15. **Estimation Results**: Annex 2.5 reports the basic estimation results that are discussed next:[8]

- ***Transitional convergence.*** The coefficient on the initial level of GDP per capita is negative and statistically significant. This conditional convergence result indicates that, holding constant other growth determinants, poorer countries grow faster than richer ones. Given the estimated coefficient, the implied speed of convergence is 1.84 percent per year, with a corresponding half-life of about 38 years --this is the time it takes for half the income difference between two growing countries to disappear solely due to convergence.
- ***Cyclical reversion.*** The estimated coefficient on the initial output gap is negative and significant. This indicates that the economies in the sample follow a trend-reverting process. That is, if an economy is undergoing a recession at the start of the period, it is expected that its growth rate will be higher than otherwise in the following years so as to close the output gap. Likewise, a cyclical boom is expected to be followed by lower growth rates. The cyclical reversion effect is sizable -- according to the point estimate, if initial output is, say, 5 percent below potential output, the economy is expected to grow about 1.2 percentage points higher in the following years.
- ***Structural policies and institutions.*** All variables related to structural policies present coefficients with expected signs and statistical significance. *Economic growth increases with improvements in education, financial depth, trade openness, and public infrastructure. It decreases when governments impose excessive burdens on the private sector.* These results are broadly supported by a vast empirical literature on endogenous growth. Perhaps surprisingly, this study finds that governance does not have a statistically significant impact on economic growth. This does not mean that institutions are irrelevant; rather, it indicates that the governance effect on economic growth works through the actual economic policies that governments implement.
- ***Stabilization policies.*** For the variables in these categories, all estimated coefficients carry the expected signs and statistical significance. In general, economic growth decreases when governments do not carry out policies conducive to macroeconomic stability. An increase in the inflation rate, the volatility of the output gap, real-exchange-rate overvaluation, or probability of financial crises all lead to a significant reduction in economic growth.
- ***External conditions.*** Not surprisingly, negative terms-of-trade shocks have the effect of slowing growth rates significantly. Regarding the time effects summarizing world growth conditions, the study finds a gradual change for the worse from the 1960s, with the biggest downward break occurring at the beginning of the 1980s. Broadly speaking, the deterioration of world growth conditions between the 1970s and 80s leads to a decrease in a country's growth rate of about 1.5 percentage points. Considering only world growth conditions, the results indicate that any country in the sample is expected to grow almost 3 percentage points more slowly in the 1990s than in the 1960s. This is quite a considerable effect.

[8] Before analyzing the regression coefficients, it should be noted that the assumptions underlying the model are supported by the specification tests. That is, the Sargan and serial correlation tests cannot reject the null hypothesis of correct specification of the study's model.

Figure 2.9: Explaining Changes in Per Capita GDP Growth in Pakistan 2001-2005 vs. 1991-2000

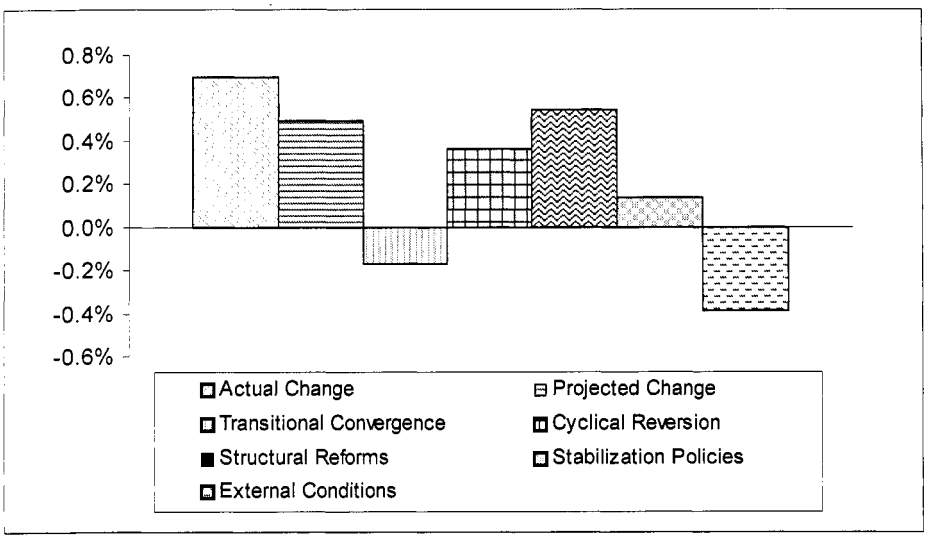


Table 2.4: Explaining Changes in Per Capita GDP Growth in Pakistan 2001-2005 vs. 1991-2000 (%)

Growth determinants		
Transitional Convergence		-0.17
Initial GDP per capita	-0.17	
Cyclical Reversion		0.36
Initial output gap	0.36	
Structural Reforms		0.55
Education	-0.02	
Financial depth	0.03	
Trade openness	0.07	
Govt. burden	0.10	
Public infrastructure	0.35	
Stabilization Policies		0.14
Inflation	0.02	
Cyclical volatility	0.04	
Real exchange rate evaluation	0.07	
Systemic banking crisis	0.00	
External Conditions		-0.39
Terms-of-trade shocks	-0.39	
Period shift	0.00	
Projected change		**0.49**
Actual change		**0.70**

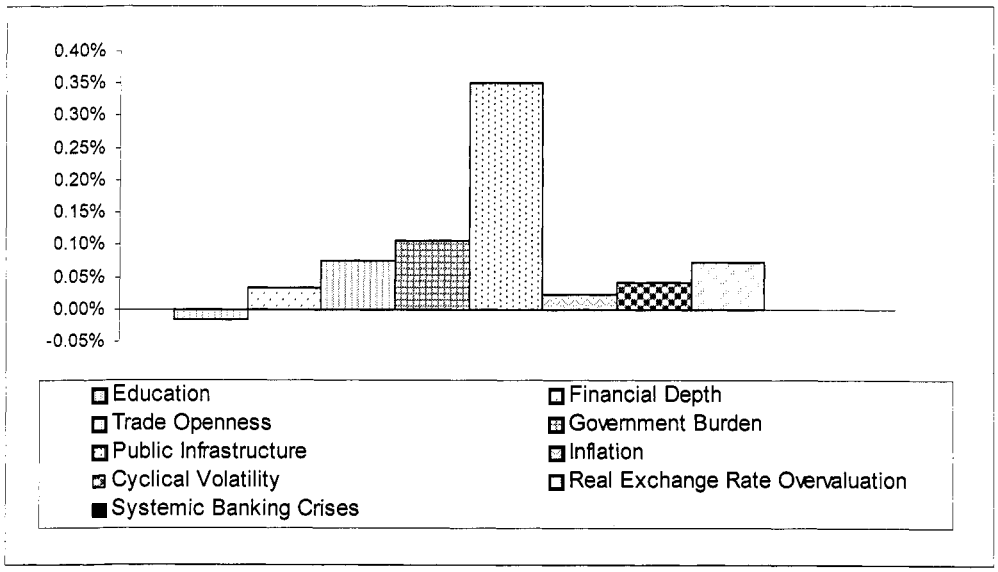
Source: Staff calculation

16. ***Explaining Pakistan's recent growth performance.*** The 1990s and particularly its second half were a disappointing period for economic growth in Pakistan. However, as noted above, in recent years the rate of per capita GDP growth increased substantially. In order to understand the sustainability of current growth rates, it is necessary first to examine the statistical properties of historical GDP series in Pakistan and, second, to analyze the sources of recent growth. The first type of analysis was conducted at the beginning of this chapter through the estimation and review of the trend component of per capita GDP. The second was started with the Solow growth accounting exercise and is now completed with regression analysis.

17. In the case of Pakistan, it is particularly interesting to attempt explaining the change in average per capita GDP growth between the first years of the current decade (2001-2005) and the previous decade (1991-2000). Figure 2.9 and Table 2.4 present the actual and projected change in average growth between the two periods as well as the corresponding contributions of growth determinants grouped in the categories of conditional convergence, cyclical reversion, structural reforms, stabilization policies, and external conditions. Figure 2.10 further decomposes the contributions of each variable in the categories of structural reforms and stabilization policies.

18. *Average per capita GDP growth increased by 0.7 percentage points between 1991-2000 and 2001-2005.* The estimated regression model predicts an increase of 0.5 percentage points, that is, 70 percent of the actual change. According to the regression projections, the increase in economic growth occurred despite an unfavorable external environment reflected in a negative terms-of-trade shock that reduced growth by 0.4 percentage points.[9] *The increase in growth was due to a mild improvement in stabilization policies and most importantly to structural reforms and cyclical reversion.* ***Progress in structural reforms contributed to a growth increase of 0.55 percentage points, while cyclical recovery from the stagnation of the late 1990s was responsible for 0.36 percentage points of the growth increase.***

Figure 2.10: Growth Contributions of Structural Reforms and Stabilization Policies 2001-05 vs. 1991-2000



19. Within the group of structural reforms (see Figure 2.10 and Table 2.4), *the strongest contributions to growth came from the improvement in public infrastructure, the reduction of the government burden, and the expansion of trade openness.* Although there was some progress in financial depth, on average it was still too small to produce a significant growth improvement. On the other hand, the area of education showed no consistent progress. Finally, in the category of stabilization policies, there was marginal improvement (from already respectable levels) in lowering macroeconomic volatility and RER overvaluation.

20. As indicated above, the regression model cannot fully explain the increase in per capita GDP growth in the last five years with respect to the previous decade. The remaining 30 percent of the growth improvement is likely to be explained by factors not captured in standard growth

[9] This exercise assumes that the world growth trends, reflected in the period shift, have not changed since the 1990s.

determinants.[10] The most important of them are the significant resource flows coming from abroad in connection with the war on terror. First, through support from the United States, the Pakistani government is receiving financial assistance in the form of direct grants and rescheduling of debt payments. Second, and not less important, Pakistanis living abroad are repatriating a share of their wealth and investing it in the local stock market, real estate, and other assets. Finding its budget constraints relaxed by the new resource flows, Pakistan's government is allowing fiscal and monetary expansionary policies and a lax credit stance by public and private banks. Finally, and outside the sphere of government policies, some sector-specific factors have prompted high growth recently. This is the case of agriculture, whose yields have benefited enormously from good rains in the last two years.

21. It is also important to draw attention to the *complementarities* among various reform actions and their reinforcing effects. The findings of some recent studies once again remind us the critical role of policy complementarities --Bolaky and Freund (2004); Chang, Loayza, and Kaltani (2005).[11] For example, reforming a highly restrictive regulatory regime and improvements in other key behind-the-border elements of the investment environment would enhance the expected gains from trade liberalization. In recent years, the productivity and growth enhancing impacts of Pakistan's trade liberalization might have been stronger had the improvements in the regulatory environment and factor markets started earlier.

A.4 Growth Forecasts Based on Regression Analysis

22. *What can be realistically expected for economic growth in Pakistan in the next decade? And, if Pakistan makes significant progress in economic reforms, what is its growth potential?* This study forecasts Pakistan's future growth using cross-country empirical results. That is, it uses the framework of the cross-country growth regressions presented above to forecast economic growth under alternative scenarios for the behavior of the variables that drive growth and, adopting realistic growth expectations, it projects growth under the assumption that the explanatory variables continue their recent past trends into the next decade. To address the issue regarding the country's growth potential under a scenario of strong reform, the study considers the possibility that Pakistan advances up to the top 25 percent of developing countries regarding the growth determinants where the country is deficient.

23. ***Future growth under realistic expectations.*** This forecasting scenario is based on projecting the future behavior of growth determinants. The quality of the forecasting exercise depends on three factors: first, the correct specification of the regression model; second, the accuracy and future stability of the estimated regression coefficients; and third, the prediction precision for all explanatory variables. Given that the emphasis of this study and its empirical analysis is on long-run growth, the objective here is to forecast the average growth rate for a relatively long-period (a decade) rather than specific annual growth rates for the immediate future.

24. *Projections for growth determinants.* In practical terms, two ingredients are needed to generate a growth forecast. The first are the estimated regression coefficients, which are taken from the previous section. The second are projections for the future behavior of the proposed growth determinants. Given the goal of providing realistic forecasts, this study uses recent trends

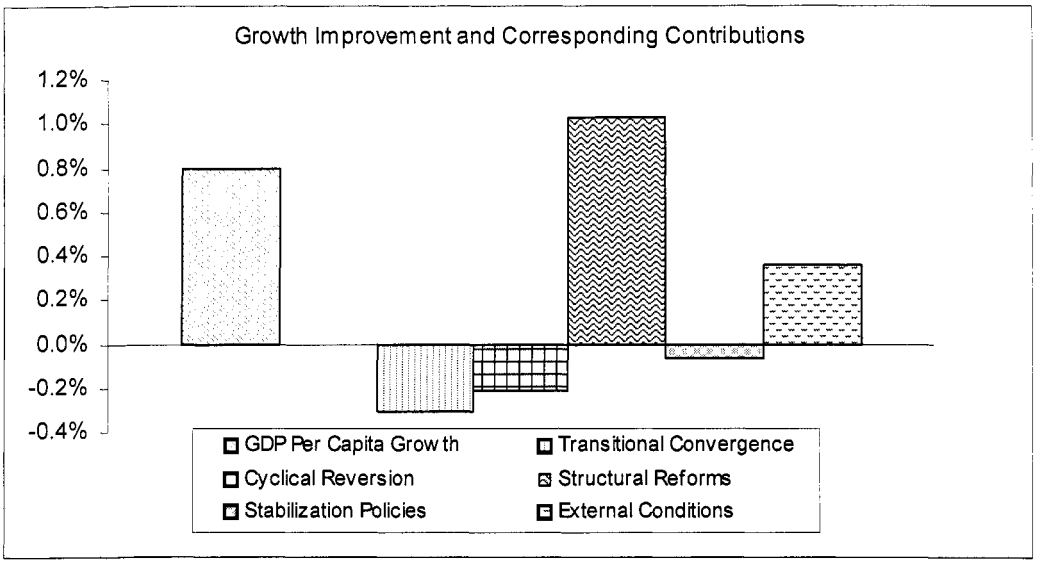
[10] If part of the level increase in GDP resulting from the 2000 national accounts revision actually reflects a growth performance in the 1990s that is better than what was officially recorded, then the difference between growth in 2001-05 and 1990s would be smaller, and the regression projection may fit even better.

[11] Bolaky, Bineswaree and Caroline Freund (2004), "Trade, Regulations, and Growth", World Bank, Policy Research Paper, No. 3255; Chang, Roberto, N. Loayza, and L. Kaltani (2005), "Openness Can be Good for Growth: The Role of Policy Complementarities", World Bank, Policy Research Paper, No.3763.

in each variable to project their behavior into the next decade. (In practice this means that for the majority of variables, its forecast is obtained using its own history as well as linear, logarithmic, and/or quadratic trends. Annex 2.6 provides details on the methods used to generate the prediction for each growth determinant).[12]

25. *Realistic growth forecast.* If growth determinants follow their recent trends, per capita GDP growth rate is projected to reach an average annual rate of 2.88 percent for 2006-15 (see Table 2.5). This rate represents an increase of 0.8 percentage points over the 2001-05 growth rate (see Figure 2.11). The rise in growth would be due to a strong contribution from structural reforms (1 percentage point) and, to a lesser extent, favorable terms-of-trade shocks (0.36 percentage points). Both transitional convergence and cyclical reversion would play against growth in the following decade (by -0.5 percentage points), which is to be expected given the trend and cyclical expansion that already occurred during 2001-05. A slight deterioration in stabilization policies is also expected to subtract from growth in the next decade.

Figure 2.11: Forecast for the Change in Per Capita GDP Growth under a *Continuos Trend* Scenario, 2006-15 vis-à-vis 2001-05



26. Figure 2.12 presents the individual growth contributions from the variables included in the categories of structural reforms and stabilization policies. Projected improvements in education, financial depth, public infrastructure, and to a lesser extent trade openness would contribute to a growth expansion. The slight deterioration in stabilization policies is explained by the emergence of a small but influential probability of systemic banking crises, due mainly to the rapid expansion of consumer and business credit in recent years.

[12] As explained in Annex 2.5, for a few variables the forecasting procedure is somewhat different. First, to account for transitional convergence, the forecast uses the actual level of GDP per capita at the start of the forecasting period (2005) and a model-consistent forecast for GDP per capita at the middle of the forecasting period (2010). Second, for the probability of systemic banking crises, apart from its own history, the behavior of variables representing macro imbalances is taken into account. And, third, it is assumed that the period-specific effect will remain approximately the same in the next decade as in the last five years. This assumption is reasonable given that the declining trend in world growth rates observed since the beginning of the 1980s has tapered off over time.

Figure 2.12: Contributions to Growth Improvements from Structural Reforms and Stabilization Policies, under a *Continuous Trend* Scenario, 2006-15 vis-à-vis 2001-05

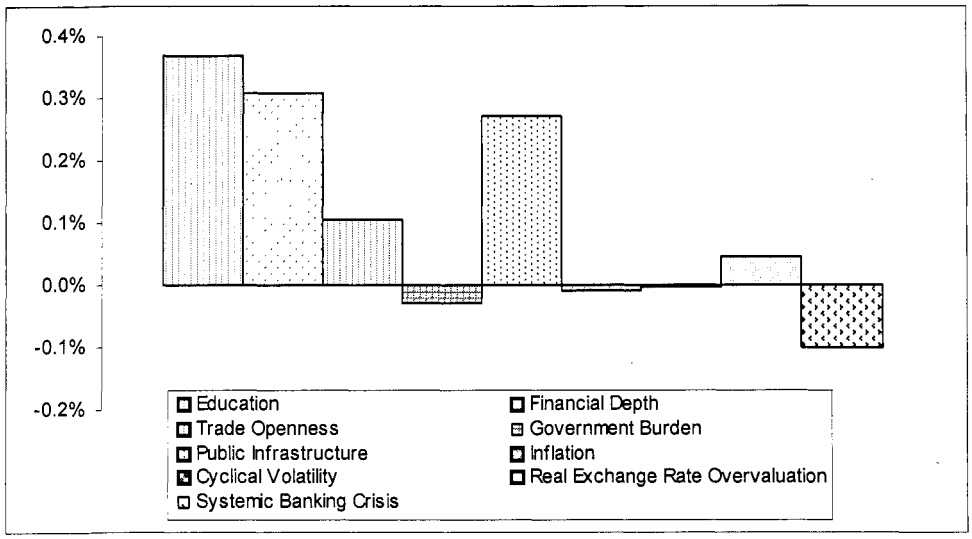


Table 2.5: Forecast for the Change in Per Capita GDP Growth under Alternative Scenarios 2006-15 vis-à-vis 2001-05

	Continuous Trend		*Strong Progress (top 25% of developing countries)*	
Growth determinants				
Transitional Convergence		-0.31%		-0.94%
Initial GDP per capita	-0.31%		-0.94%	
Cyclical Reversion		-0.21%		-0.21%
Initial output gap	-0.21%		-0.21%	
Structural Reforms		1.03%		4.07%
Education	0.37%		2.02%	
Financial depth	0.31%		0.50%	
Trade openness	0.11%		0.24%	
Govt. burden	-0.03%		0.21%	
Public infrastructure	0.27%		1.11%	
Stabilization Policies		-0.07%		0.07%
Inflation	-0.01%		0.02%	
Cyclical volatility	0.00%		0.06%	
Real exchange rate overvaluation	0.05%		0.00%	
Systemic banking crisis	-0.10%		0.00%	
External Conditions		0.36%		0.36%
Terms-of-trade shocks	0.36%		0.36%	
Period shift	0.00%		0.00%	
Projected change		0.80%		3.35%
Forecast growth rate for 2006-15 (rate of 2001-05 + projected change)		2.88%		5.43%

Memo

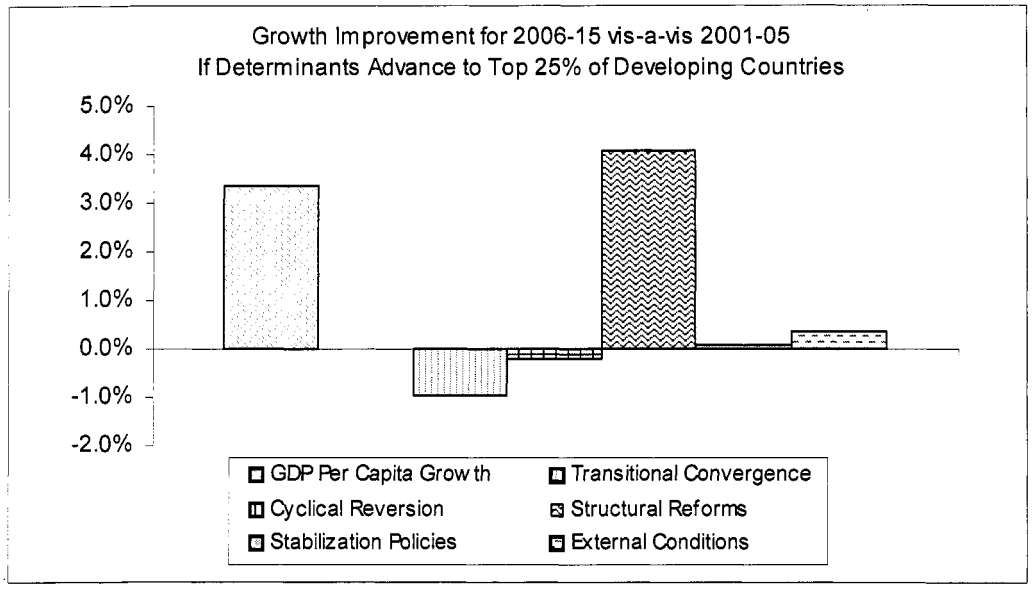
	Initial GDPpc	Education	Financial depth	Trade openness	Govt. burden	Public infrastructure	Inflation	Cyclical volatility	Real exchange rate overvaluation	Systemic banking crisis
Pakistan 2001-05	1751	23.9	24.7	38.8	11.3	26.5	3.9	0.017	88.4	0.0
Continuous trend 2006-15	1943	39.7	39.7	50.1	11.5	39.1	5.9	0.001	63.5	0.0
Developing countries Top 25%	2985	78.3	52.4	43.5	9.9	125.9	1.5	0.008	71.2	0.0

Source: Staff calculation.

27. ***Future growth under strong progress***. In contrast to the realistic scenario, assessing the country's growth potential calls for an optimistic scenario where strong progress in growth determinants is achieved. The study implements the strong progress scenario by assuming that in the course of the next decade Pakistan's reaches the top 25 percent of the developing-country distribution in each of the areas where it is deficient. Given that improvements in some reform areas are normally preceded by income expansion, this scenario sets the forecasting period's starting per capita GDP at the level of developing countries' top 25 percent. Under the forces of conditional convergence, this implies slower growth which moderates the large gains produced by strong progress in growth determinants. (By necessity, the indicators of investment environment chosen are those that are easily comparable and measurable across countries by way of proxy variables).

28. *Optimistic growth forecast.* Under the scenario of strong progress in deficient areas, the potential growth contribution from a given policy variable is larger the more backward it is in Pakistan with respect to the most advanced developing countries. The growth contributions from the variables not subject to reform (cyclical reversion, and external conditions) are the same as in the continuous-trend scenario.

Figure 2.13: Per Capita GDP Growth Forecasts under a *Strong Progress* Scenario



29. Unlike the areas of trade openness and government burden where Pakistan is fairly close to the top 25 percent of the developing country distribution as a result of the significant improvements in recent years, the country is lagging substantially behind the benchmark group in education, public infrastructure, and financial depth. Bringing Pakistan to the same level of achievement as this group of countries would require 228 percent improvement in education, 375 percent in infrastructure, and over 100 percent in financial depth, while only 12 percent improvement in trade openness is necessary (see the bottom section of Table 2.5).[13]

30. Advancing Pakistan's standing in the above identified structural areas to the level of top 25 percent of developing countries would generate an average per capita GDP growth rate of 5.43 percent for 2006-15 (see Table 2.5 and Figure 2.13). This represents a gain of 3.35 percentage points above the growth rates in 2001-05, even after discounting the negative impact of

[13] Explicit indicators of regulatory environment/economic governance are not included in this exercise.

transitional convergence and cyclical reversion. The contribution from stabilization policies is small, not because they are unimportant but because in this regard Pakistan is well positioned with respect to the best developing countries.

31. *Among structural reforms, not surprisingly, significant contributions to this outcome would come from improvements in education, public infrastructure, and financial depth, since the magnitude of the implied catching up is so large. And despite the fairly small improvements assumed in the calculations with respect to trade openness and government burden, considerable contribution would also come from more trade liberalization and reduced government burden.*

32. ***Investment* and productivity growth requirements.** Putting together the growth accounting analysis with the projected forecasting scenarios, it is possible to obtain estimates for the required contribution of capital and productivity to per-capita GDP growth in the next decade. In turn, the required capital contribution implies, under initial conditions for capital and depreciation rates, an average investment rate. Taking the realistic scenario first, it is natural to assume that the relative contributions of capital and productivity to per-capita GDP growth during 2001-05 continue into the future (60 percent and 40 percent, respectively --see Table 2.3). Then, productivity would need to grow at an annual average rate of 1.6 percent, while capital would need to expand at a rate of about 6.7 percent (Table 2.6). Assuming an initial capital-output ratio of 2.3,[14] the required average investment rate would be around 15-17 percent of GDP, that is, similar to current rates. Under the optimistic scenario, characterized by strong progress in structural reforms, the share of productivity's contribution to economic growth could increase, so that productivity's and capital's contribution nearly equalize. Then, productivity would need to grow at an annual average rate of 3.2 percent, while capital would have to rise at around 9.2 percent per year. In this case (Option 1), the investment requirements would be considerably higher, with an investment rate of 21-23 percent of GDP. Assuming, however, that the relative contributions of capital and productivity continue at their 2001-05 levels, productivity would need to grow at 2.8 percent and capital at 11.1 percent annually. And, accordingly, the investment requirement would be much higher, reaching an investment rate of 27-29 percent of GDP.[15]

Table 2.6: Required Productivity and Capital Growth to Achieve the Projected Growth Rate in Per Capita GDP, Growth under Alternative Scenarios, 2006-15

Scenario	Projected Economic growth	Share of contribution to Economic growth		Required growth		Required Investment /GDP
		Productivity	Capital	Productivity	Capital	
Continuous trend	2.88	40 %	60 %	1.56	6.74	15-17 %
Strong progress –Option 1	5.43	50 %	50 %	3.23	9.23	21-23 %
Strong progress –Option 2	5.43	40%	60%	2.57	11.13	27-29%

Memo: Initial capital/GDP=2.2, capital depreciation rate=.04, share of capital in value added=0.35

B. PRODUCTIVITY GROWTH IN AGRICULTURE

33. ***Agricultural has a special role in future growth***. The findings of growth analysis summarized above cover the whole economy. Before moving to further details of constraints on productivity growth and competitiveness, it is important to emphasize the critical role *agriculture* plays in Pakistan's economy. It employs almost half of the labor force, supports (directly and

[14] This figure was obtained from Safdar Ullah Khansimilar, 2005, "*Determinants of Total Factor Productivity in Pakistan*" working paper, State Bank of Pakistan.

[15] In this 'potential growth' forecasting exercise, it is assumed that labor's contribution to overall GDP growth rate remains at the same level as it was during 2001-05, which is 1.92 percentage points (see Table 2.3).

indirectly) nearly two-thirds of merchandise exports, and serves as an important source of employment and income in rural areas where 80 percent of the poor live. The agricultural sector also accounts for about 70 percent of rural household incomes and nearly one-quarter of GDP. Therefore, further productivity growth in agriculture is critical to raise the sector's contribution to the economy's growth as well as to employment generation. Both crop and livestock sub-sectors have enjoyed substantial growth over four decades, but Pakistan's agriculture remains highly susceptible to droughts and is heavily reliant on irrigation.

34. Though with wide year-to-year variations, annual agricultural growth averaged 3.7 percent over the four decades from 1959-60 to 2001-2002. Apart from a period of slow growth in the first half of the 1970s, average agricultural growth exceeded 3.2 percent per year in each quinquennium from 1960 to 2000, due in large part to high growth in the crop sector in the 1970s and 1980s from Green Revolution technology (improved seeds, increased fertilizer use, and irrigation). However, the performance of the agriculture sector (particularly the crops sub-sector), has suffered in recent years because of severe droughts in the country, as well as environmental factors (increased soil salinity and deteriorating groundwater quality).

B.1 Measures of Total Factor Productivity

35. ***The Green Revolution in Pakistan involved large expansion in inputs (seed, fertilizer, irrigation) as well as output.*** Major investments in land, and most importantly in water supply, particularly through tubewells, allowed increases in net area sown.[16] Non-factor input use (fertilizer, pesticides, tractor services) also expanded rapidly. Nonetheless, total factor productivity in crop agriculture, as well as in agriculture overall, have increased substantially since about 1970, with estimates ranging from about 1.5 to 2.3 percent per year, depending on the definitions of variables, methodologies and time periods of analysis. (For further details on trends in crop production and yields, see Annex 2.7).

36. Ali (2005) estimated total factor productivity growth in agriculture (both crops and livestock) for Pakistan as a whole at 2.3 percent per year from 1960 to 1996, with TFP growth accounting for 58 percent of the growth in gross output (4.0 percent per year) over this period. For 1991-1996, total agricultural output increased by 4.0 percent per year; inputs increased by 1.8 percent per year; and TFP increased by 2.2 percent per year.

37. ***Detailed analysis of productivity growth in Punjab (which accounts for about two-thirds of agricultural output) suggests that TFP growth has not been smooth over this period, however*** (Table 2.7). Based on analysis by Ali and Byerlee (2002; 2004), several somewhat distinct periods can be defined: early Green Revolution (1966-74); Intensification of Inputs (1975-84); Post-Green Revolution (1985-94); Stagnation (1993-2003). The early Green Revolution period, when modern varieties were initially adopted, was marked by a sharp increase in input use, including land, (4.62 percent per year) that exceeded increases in output (3.23 percent per year); thus, TFP in this period fell by an estimated -1.38 percent per year. From 1975 to 1984, labor, fertilizer and water use per hectare intensified, and TFP growth rose to 1.40 percent per year. TFP growth accelerated further to 2.86 percent in the Post-Green Revolution Period (1985-94), when growth in input use per hectare slowed, likely due to gains in productivity as farmers acquired more experience in fertilizer application and tubewell irrigation.

[16] Increases in cropping intensity, (gross cultivated area divided by net area sown), through multiple-cropping were also made possible, in part, by increases in water availability. In Ali (2005), land use is defined in terms of net area sown, so increases in cropping intensity are captured mainly through increases in land and total factor productivity. In Ali and Byerlee (2003), land use is measured as a flow variable (as the rental value of the land for a period). By this measure, land use rose rapidly over the past three decades, and the measured increase in land and total productivity is smaller.

38. ***In the 1993-2003 period, however, the analysis suggests that there was no growth in TFP in crop agriculture in the Punjab.*** During this decade, total input use increased by 1.80 percent per year, but output increased by only 1.69 percent per year, as TFP stagnated. Severe droughts in several years are part of the explanation along with evidence of long-term deterioration in water and soil quality (Ali and Byerlee, 2002). Reduced effectiveness of the agricultural research and extension services also played a role. Labor productivity (measured as 'partial factor productivity') also declined, though this could be due to a combination of deterioration of the natural-resource base, drought, and increased underemployment in agriculture due to a slowdown in rural non-farm employment and out-migration (see Annex 2.8).

Table 2.7:Estimates of Total Factor Productivity Growth in Punjab Agriculture

	Crops			Livestock	Agriculture
	Output	**TFP**	**TFP/Output**	**TFP**	**TFP**
Green Revolution, 1966-74	3.23	-1.38	-42.7%	-0.38ns	-1.04
Input-Intensification, 1975-84	2.84	1.40	49.3%	0.71	1.37
Post Green Revolution, 1985-94	3.27	**2.86**	87.5%	3.29	3.51
Total Period, 1966-94	3.23	1.26	39.0%	1.25	1.51
1971-81	2.71	0.79	29.2%	----	----
1982-92	3.91	**2.86**	73.1%	----	----
1993-2003	1.69	-0.11	-6.5%	----	----
1971-2003	3.01	1.54	51.2%	----	----

Source: 1966-94: Ali and Byerlee (2002); 1971-2003: Ali and Byerlee (2004).

39. Examination of output, input, and TFP changes across agro-ecological zones in Punjab sheds some more light on the decline of TFP growth. Output and TFP growth were highest in the 1982-92 period, (3.91 and 2.86 percent, respectively), a period in which output and TFP growth in the wheat-cotton system were 5.10 and 3.96 percent, respectively. Yield growth of cotton in Punjab overall in this period was 9.29 percent per year (1981-90). In contrast, during the 1991-2002 period, cotton yields fell by 2.59 percent per year due to virus problems and poor weather. *Improved yields of cotton through better pest control and improved seeds would likely add substantially to overall TFP growth in Punjab (as well as in northern Sindh).* Comparisons of differences in agricultural productivity in Punjab, India and Punjab, Pakistan further shed light on the sources of spatial and temporal variations in TFP (see Annex 2.9)

40. Irrigated areas growing mainly wheat and rice appear to be enjoying increasing productivity in spite of environmental issues. In contrast to the sharp changes in cotton yields, the growth in wheat yields in Punjab has increased slightly over time. Yields increased by an average of 2.32 percent per year in the eighties and 2.66 percent per year from 1991 to 2002. Likewise, yields of basmati rice increased in the 1991-2002 period (by 3.63 percent), reversing a 2.00 percent per year decline in the 1980s. Overall output in the rice-wheat system rose by 4.08 percent per year in the 1993-2003 period, compared to only 1.31 percent per year in the 1980s. Moreover, TFP in this system rose by 2.83 percent per year in the 1993-2003 period, compared with essentially no gain in TFP in the 1980s.

41. TFP growth was also negative in the non-irrigated (barani) region, apparently reflecting a long term trend in declining productivity. TFP growth in this region in the 1980s was not significantly different from zero, but has declined since then, with negative growth rates of -2.67 percent in the 1980s and -4.55 percent in the 1991-2002 period (see Annex 2.10).

42. Detailed analyses of productivity growth in other provinces are not available. For Sindh, which is more heavily dependent on irrigated agriculture than Punjab, wheat output has fluctuated substantially with water availability, particularly during the 1999/2000-2001/02 drought years. From 1972 to 1996, canal water releases in Sindh were negatively correlated with rainfall, thus stabilizing total water availability in the province. From 1995 to 2001, however, releases were positively correlated with rainfall, with releases essentially constant at about 50 MAF/year from 1995-98, years of normal rainfall, but only about 35 MAF in 1999-2001, years of protracted drought that reduced availability of canal water along, as well. Analysis of average water productivity in Sindh indicates that cereal yields are higher in areas of above-average rainfall, but that cereal yields are negatively correlated with canal water availability. In contrast, area cultivated is positively correlated with both rainfall and availability of canal water.[17] As a result, total production of cereals is not highly correlated with rainfall or canal water availability, except for the drought years of 1999/2000 to 2001/02 when wheat production fell by 23 percent relative to the 1996/97 to 1998/99 average.

43. Nonetheless, there is evidence of substantial inefficiencies in water use in Sindh. Net returns to irrigation water use vary widely across crops, suggesting that substantial savings in water could come from shifting away from water-intensive ordinary (non-aromatic) rice (with net income of 66 Rs/acre-inch and water use of 64 acre-inches) to cotton (with net income of 361 Rs/acre-inch and water use of only 20 acre-inches), in areas where drainage is adequate.

44. ***Agriculture's future growth potential.*** Agricultural production has increased substantially, though with considerable volatility, over four decades. Punjab, the source of about two-thirds of all output, has been hit hard by the severe droughts of recent years, and heavy dependence on irrigation in Sindh has brought environmental damage in its wake. Operations in the sector are marked by numerous shortcomings, some of them in the areas of economic policy, governance, and irrigation. One result is impaired performance of Pakistan's major crops: wheat, rice, cotton and sugarcane. Although better farm technology and more efficient use of water -- e.g., drip irrigation and better drainage-- could bring some production increases in these mainstay crops, the key to future increases in agricultural productivity and rural incomes is greater diversification into such areas as horticulture and livestock --the latter sub-sector accounts for almost 50 percent of the agricultural value-added.

- To promote diversification in agriculture, the government needs to consider removing all (price and non-price) policy bias in favor of major crops, particularly relatively low-value water-intensive crops with heavy water use requirements such as non-basmati rice and sugarcane. Research and extension services also need to be restructured to meet the needs of a more diverse agriculture, including provision of region-specific information packages.
- In the medium- and longer-term, investments in irrigation and drainage, together with reforms in irrigation management are also crucial to arresting environmental degradation, especially in some major irrigated areas of Punjab and Sindh. Expanded use of water-conserving technology, such as drip irrigation, can increase the efficiency of use of scarce available water.
- Finally, more resources are needed for the provision of research, extension and veterinary services for livestock, particularly for larger animals. The poultry sector is already expanding rapidly, including both substantial growth in maize production (a major feed) and in poultry and egg production. Productivity gains in the livestock sector are

[17] See R. Damania, "Water and Agricultural Productivity in Sindh", DRAFT, April 2005.

especially important for pro-poor rural income growth since the distribution of livestock in rural Pakistan is more equitable than the distribution of land.

45. ***Next chapter***. The next chapter presents findings of value-chain analyses carried out on five specific products. This micro-level analysis provides more specific evidence on the productivity-lowering and cost-raising impacts of various policy, institutional, and infrastructure bottlenecks that firms encounter in Pakistan. Because of the possibility of cross-country comparisons and benchmarking, the results also help identify which issues are of priority concern.

CHAPTER 3: INTEGRATED VALUE CHAIN ANALYSIS OF STRATEGIC EXPORTABLE PRODUCTS

ASSESSING EXPORT COMPETITIVENESS THROUGH VALUE-CHAIN ANALYSIS: AN OVERVIEW [1]

1. To provide specific and concrete micro-level evidence on the cost raising and productivity lowering impacts of the existing deficiencies in Pakistan's investment environment and to identify the more critical of these binding constraints, the study uses the findings of the integrated value-chain analyses (IVCA) carried out on five specific products. A highly useful tool in *assessing export competitiveness*, the exercise also helps in prioritizing the needed reforms by identifying specific areas where policy/institutional actions may have the greatest positive impact on the productivity of local firms, export competitiveness and diversification, and on overall economic growth. Some priority measures may involve stroke-of-the-pen type decisions and others may involve longer-term actions, as in the case of physical infrastructure and human capital.

2. ***Cost analysis***. The IVCA is developed via a channel mapping exercise that helps quantify production costs associated with all segments of the value chain involved, for example beginning with the production of raw materials, such as cotton growing, all the way to a finished good, such as a denim jean. The technique makes it possible to breakdown the costs involved in the value-chain process of a specific product. To provide reference points for analysis, *some of these costs are selectively benchmarked against costs incurred in the value chains of a number of similar export products of comparator countries*. The findings connect relevant policies/constraints to cost and quality issues and also identify inappropriate or antiquated technologies resulting from inadequate institutions and policy distortions.

3. ***Product selection***. The IVCA focuses on five specific key products/sectors, identified after consultations with the Government and the private sector: (i) readymade garments (as illustrated by cotton denim jeans); (ii) fisheries (frozen, peeled shrimp); (iii) mining (polished marble tile); (v) dairy (powdered milk); and (iv) light engineering (automobile radiators). Each sector has been chosen as strategically important for Pakistan and the products identified span a range of product types and production technologies involving relatively labor-intensive processes in line with Pakistan's current comparative advantage. As a group, the products analyzed are meant to be representative of key activities in the economy, thereby highlighting a range of specific issues which illustrate core challenges to Pakistan's global competitiveness.

- The *ready-made garment* (RMG) industry is an obvious choice, representing an upgrade in Pakistan's traditional strength in basic textiles. With over US$8 billion of exports as well as direct and indirect employment creation of several million, the textile and garment industry will undoubtedly continue to drive growth and employment in the near-term. Cotton weaving is a growing component of RMG exports. The phase-out of the textile and clothing (T&C) export quotas at end-December 2004 raises considerable speculation over the competitiveness of Pakistan's RMG exports in a fiercely competitive external environment.
- *Fisheries,* a product of the small-and medium-scale economy, is experiencing rising demand globally, but growth and expansion is constrained by low capacity utilization stemming from supply constraints, sanitary and phytosanitary (SPS) requirements, and large amounts of waste.
- *Mining* represents a potential export earner for the less developed provinces, given the large stock of high quality minerals in the North West Frontier Province (NWFP) and Baluchistan. Logistics, property-rights issues, and huge wastage characterize the sector and undermine export

[1] Chapter 3 is based on the findings of a parallel study on value-chain analyses of several, strategically identified actual and potential export products. The latter is a jointly-led work by South Asia Region's Finance and Private Sector (SASFP) unit and International Finance Corporation's Foreign Investment Advisory Service (FIAS) unit.

competitiveness of processed products.

- *Light engineering* is a sector which involves a complex web of backward and forward linkages and represents a new area of competitiveness for Pakistan. The auto industry, in particular, is a rapidly growing domestic sector which itself is creating high demand for auto parts. The way market signals are transmitted through the value chain to the parts manufacturer is illustrative of the reverberation of protectionist policies down the supply chain, adversely impacting the competitiveness of related industries.
- The *dairy* industry, with its roots in the rural economy is an important sector for its potential exports. Although the fifth largest producer of milk and milk products in the world, Pakistan exports only a small amount of domestic production -- exclusively to Afghanistan. Maintaining adequate capacity in the processing stage based on low and volatile supplies of milk, along with issues associated with food safety are the main challenges.

Although the coverage of products in this study is limited, the IVCAs of these five products, by revealing particular policy, institutional, and market-based constraints, contribute to the analytical basis for a broad based package of policy and institutional changes that can enhance export competitiveness in general.

4. Sections A through E below detail the IVCAs of the five key products. The end of each section presents a summary of key constraints along with a description of the adverse impact on competitiveness they engender. These constraints were identified through field-level interviews of representative firms. Associated with the key constraints, are policy and institutional issues, such as badly formulated public policies that create distortions or disincentives, or market failures that call for public intervention at present poorly delivered. In addition to these areas which can be viewed as in the domain of the public sector, there are also constraints which call for actions by the industry --in some cases by an individual firm and in others requiring group action through associations and cooperatives. Finally, as discussed in Part II – Chapters 5 – 8, a set of priority corrective actions require the involvement of public-private partnerships that can draw on the strengths of both sides.

A. AN INTEGRATED VALUE CHAIN ANALYSIS OF COTTON JEANS

Background

5. The textile and garment industry's share in the economy along with its contribution to exports, employment, foreign-exchange earnings, investment and value added make it Pakistan's single largest manufacturing sector,[2] accounting for around 8.5 percent to GDP, 38 percent of the employed labor force, and between 60 – 70 percent of merchandise exports. Indeed, with exports reaching about US$ 8.6 billion in FY05, Pakistan is one of the largest textile and garment exporters in the world. The variety of products ranges from cotton yarn to knitwear. Garment made-ups and bed wear are the most important exports with an export value of about US$1.35 billion each. Knitwear, ready made garments and cotton yarn also have important shares in total exports. Overall, the US and the EU are Pakistan's largest trading partners accounting for 25 percent and 20 percent share of Pakistani exports respectively. Other major importers include China, Dubai, and Saudi Arabia.

6. Globally, the textile and garment market is highly competitive and price sensitive market with large-scale, end-buyers such as Wal-Mart, Gap, and Levi's defining the price, quality, and delivery requirements of their suppliers. The ability to respond quickly and effectively to these demands and to the rivalry of competitors in the market defines the players' competitiveness. In this environment, two

[2] The industry is comprised of 453 textile mills: 50 integrated units; and 403 spinning units, with 9.33 million spindles and 148,000 rotors. The capacity utilization was 83% for spindles and 47% for rotors during 2003 – 2004.

principal market drivers set the terms to which manufacturers must respond in order to remain competitive: (i) the post-Agreement on Textiles and Clothing (ATC) export-quota free trade environment, and (ii) the leverage that consumers exert through large global buyers in requiring manufacturers to respond quickly to rapidly changing fashion trends.

- *Elimination of the ATC Quotas*. The most important event that the global textile and garment industry has seen in a generation has been the lifting of T&C export quotas under the ATC that came into effect on January 1, 2005. Unlike neighboring Bangladesh and Sri Lanka, whose textile industries developed chiefly due to T&C quotas, Pakistan is widely believed to be one of the nations that stand to benefit from the new quota-free regime.[3] Its strengths are not only cheap labor costs, but also proximity and easy access to a raw-material base in both cotton and man-made fibers. In addition, in anticipation of a more competitive world market, large investments have been made over the past four years which have further enhanced the Pakistani textile industry. In some market segments, such as bed linen, towels and made-ups, Pakistan has achieved strong global competitiveness.
- *Mass customization and increased leverage of buyers*: For big buyers of textiles and garments, the fast-moving, consumer-driven market adds enormous value in being able to buy 'closer to the market'. By shortening the buying cycle, buyers can gauge market trends and achieve substantial savings from avoiding end-of-season inventory markdowns. The fundamental characteristics of the market have come to include: (i) demand for multiple fashion trends within one season; (ii) mass customization of orders to the needs of the customers;[4] (iii) environmentally friendly and socially responsible production, (iv) buying power of large global retailers exerting downward pressure on prices; and (v) shortened lead-times.

7. Together, these trends have put tremendous pressures on retailers, distributors, and producers to tailor products specifically for their customers, deliver fast and within multiple fashion cycles in one season. As a result, lead-time pressures have increased dramatically across the entire supply chain as product cycles have become extremely short, increasing dramatically the risk of obsolete inventory and a drive on the part of buyers to minimize inventory exposures. Suppliers with the best lead times and good prices attain contracts while laggards rarely get a second chance. This new environment has unleashed competition at levels of core competence such as quality, price, and timely delivery. Therefore, strategic options for growth of the sector in Pakistan are clear: pursuit of time-to-delivery and price efficiencies in combination with increased capabilities in research, development, and design to gain greater mobility in responding to changing demand.

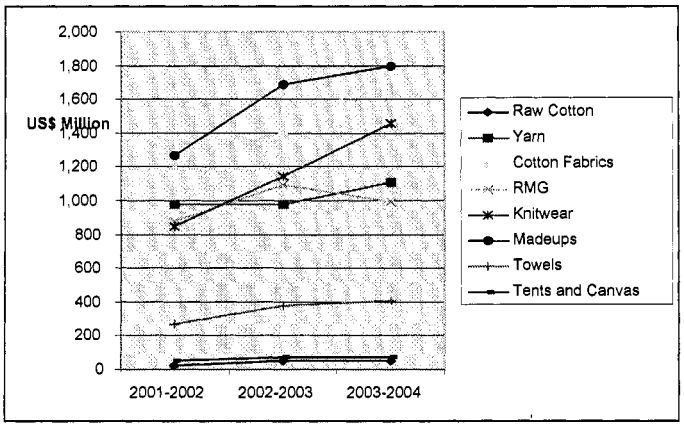
Ready Made Garments (Denim Jean)

8. *Sector profile.* Pakistan, being amongst the biggest cotton producing countries, has considerable potential for producing high value-added textile garments. There are an estimated 1,400 units engaged in the manufacture of woven readymade garments in Pakistan with approximately 250,000 machines producing over 750 million pieces a year. The readymade garments (RMG) woven industry in Pakistan accelerated internationally in the early 1980s, when the country's exports increased to $613 million in 1982/83 from a weak $123 million in previous years. By 2003/04, RMG exports surpassed $1 billion. That total, however, does not match the full potential inherent in Pakistan's abundance of cheap cotton.

[3] See for example, The World Bank, South Asia Region, *Implications For Pakistan of Abolition of the Textile and Clothing Quotas*, South Asia Region Policy Note, 2004

[4] Mass customization in clothing means production of clothing, in small batches, customized for particular consumers and their preferences. Economies of scale are more difficult to reach in this setting compared to production in large batches, with pre-determined sizes and colors.

Figure 3.1: Cotton Sector Manufactured Exports 2002 - 2004



Source: Export Promotion Bureau, Pakistan

9. *Product profile.* Denim jeans are a woven RMG, requiring coarsely processed cotton. New designs are being produced with enzyme, dirt, bleach and stone washes as well as finishes such as sandblast, grinding, water-resistant and fire-retardant as well as recent fancy models with bold stripes and increased elasticity. More than 36 million pairs of denim trousers, mostly at the lower end of the design and quality spectrum, were exported from Pakistan in 2004 worth over $800 million, supporting employment of almost half a million workers.

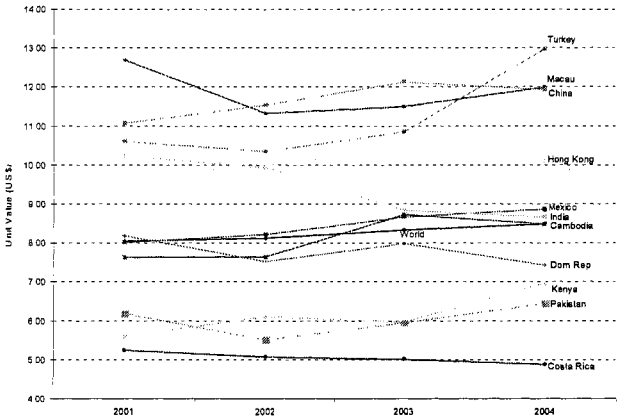
10. *Benchmarking.* Jeans manufacturers in Pakistan have traditionally faced the challenge of exporting lower-end denim jeans products as compared to manufacturers in China and India who invest more in special designs and mass customization. However, in recent years, Pakistani jeans exporters have demonstrated evidence of increased mobility up the quality scale. Unit values for Pakistani denim jeans have risen faster than all competitors, and in the first half of 2005, although volumes largely remained flat following the removal of quotas, unit values continued to rise slightly.

11. *Business model.* Two types of business models prevail in the RMG sector in Pakistan. Over three quarters of jeans producers are small-to-medium sized makers of standard products, employing up to 200 people, and purchasing raw materials from textile mills. These SMEs produce the standard 12-ounce pair of jeans for $4.17 --lower than the costs for large scale producers-- and sell to large retailers like Wal-Mart that attract price rather than fashion-conscious clients. Such producers keep margins between 10 and 19 percent by pricing the product from $4.60 – $4.95.

Table 3.1: T&G Exports 2004 *($ mill)*	
Yarn	1,260
Fabrics	1,949
Garments	2,567
RMG	*1,025*
Knitwear	1,542
Made-ups	2,043
Towels	440
Other	680
Total	**8,939**

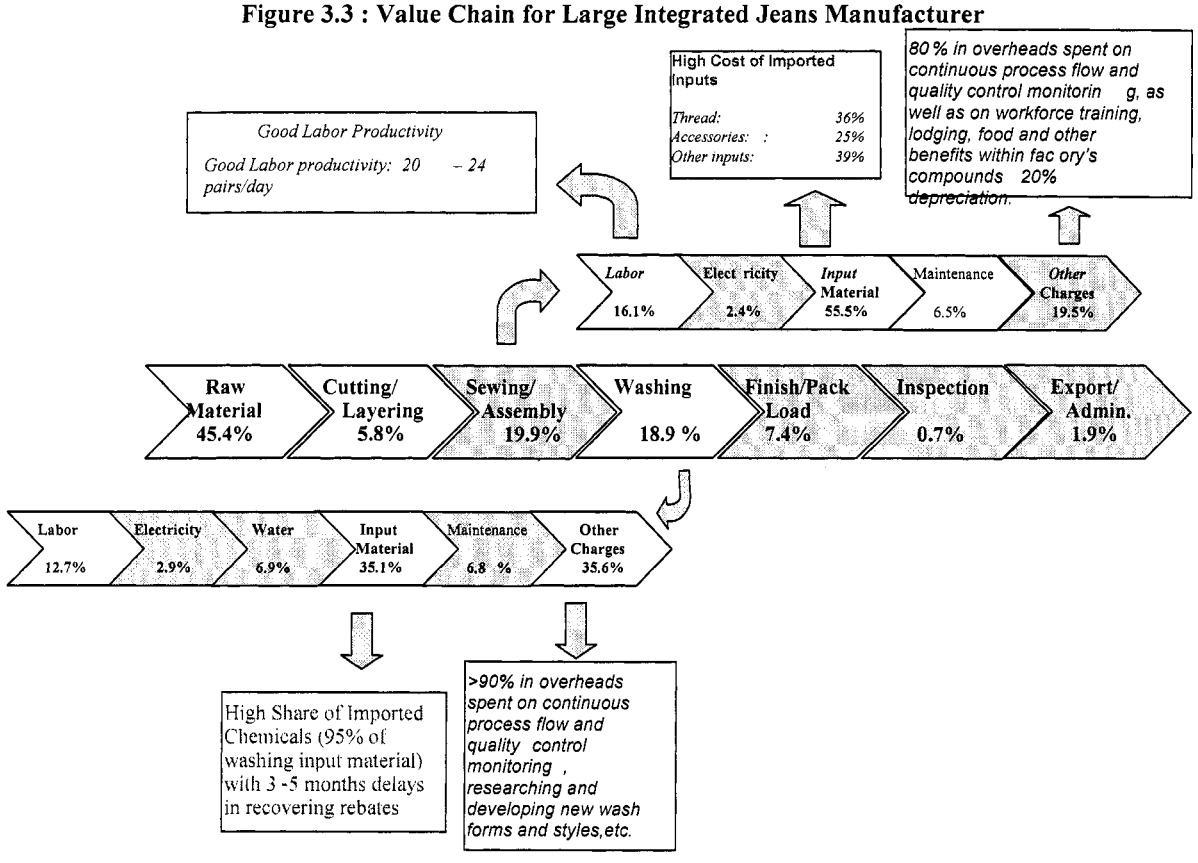
Source: BOI

Figure 3.2 : Export Unit Values for Pakistan and its Competitors



12. Most exporters, however, are large garment producers, employing thousands of workers, and are largely integrated down to the spinning or weaving stage.[5] A fifth of all jean producers are large industrial units. Exporters are more likely to employ up-to-date technologies and business processes, and have become better at meeting the mass customization needs of foreign buyers. The production (factory gate) cost of a pair of their jeans ranges from $5.15 to $5.25, and their selling price of around $7.75 to large, brand-name retailers yield a margin between 48 and 51 percent.

Figure 3.3 : Value Chain for Large Integrated Jeans Manufacturer



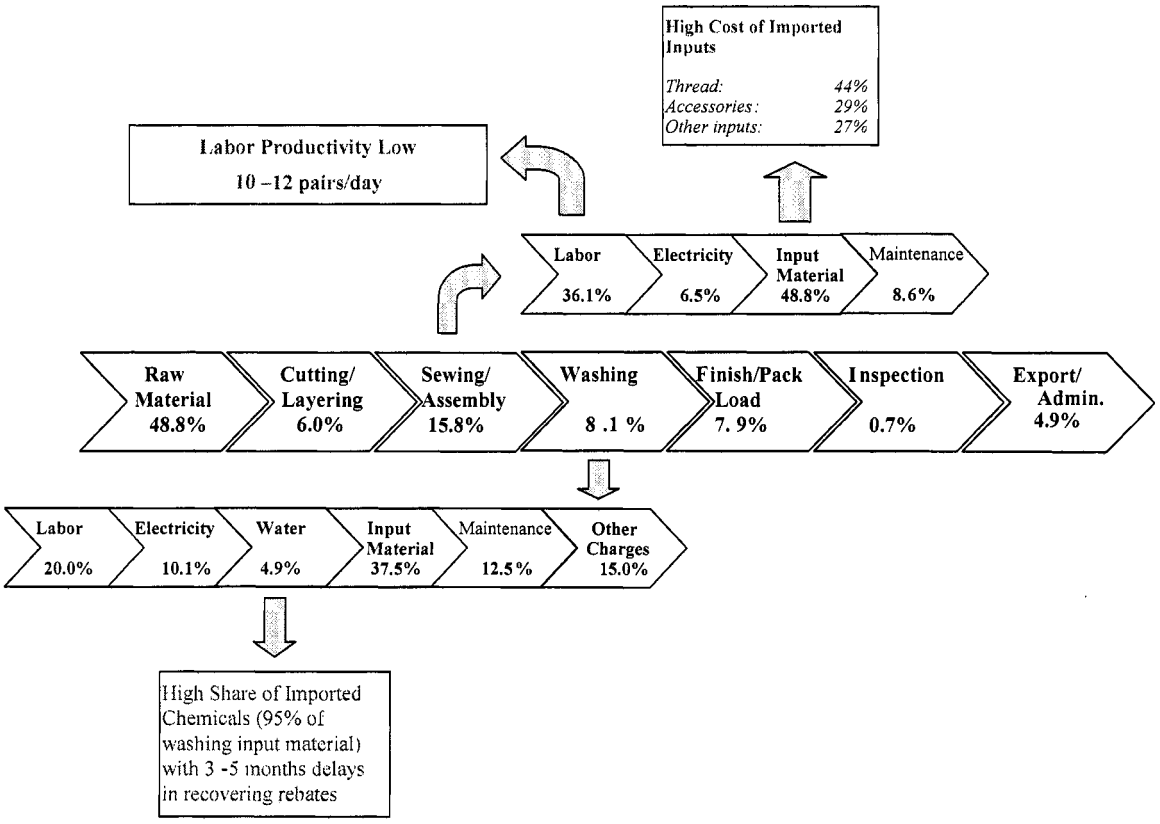
[5] The integrated jeans manufacturer procures the fabric from its own integrated business unit at around $2.45, with pocketing material procured from local suppliers at around $0.20.

13. *Value chain.* The value chain analysis examines the two types of producers of denim jeans as a proxy for RMGs. From the receipt of the cotton cloth, the value chain is divided into six activities: (i) cutting/layering; (ii) sewing/assembly; (iii) washing; (iv) finishing/packing; (v) inspection; and (vi) export and administration.

14. For the large-scale producer, the *sewing-and- assembly* stage constitutes almost a fifth of total cost followed by *washing* at approximately 19 percent. Although sewing and assembly is a labor-intensive process, for large, advanced exporters of denim, the labor share in sewing and assembly is a mere 16 percent. This level is a result of labor efficiencies in these factories that make it possible for one worker to stitch and assemble an average of 20-24 pairs of jeans per day, on par with the most competitive countries like China. Substantial investment in capital equipment, training and benefits to the workforce in terms of lodging, food, and other expenses is reflected in the 19 percent overhead. These companies maintain high labor retention ratios, and coupled with continuous training and investment in productivity-improving machinery, remain at the cutting edge of global competitiveness as the chosen suppliers to international clothing heavyweights like GAP, Levi's, and others.

15. The small-to-medium size producer has a cost structure skewed more toward labor intensity in important processes such as sewing and assembly as well as washing. Notable differences include manual labor for creating master copies of design and cutting instead of computer-aided modeling and cutting technology. As a result, smaller companies record lower labor productivity and levels of technological input.

Figure 3.4: Value Chain of Standard Jeans Manufacturer



16. *Low labor productivity of SMEs.* Pakistani jeans manufacturers produce an average of 10 - 12 pairs of jeans per person per day. Compared to competitors like China and India, Pakistani garment industry labor is cheaper but, also the least productive. Including the estimated rework rate of 10 percent lowers labor productivity further, to around 9-11 jeans per worker, per day.

Table 3.2 : 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. (See: paragraphs 11, 12, 14, and Figures 3.3 and 3.4).

17. The lack of shop-floor management and limited training in productivity, design, and other product-related skills are the key constraints to raising productivity. These compound difficulties in turning customer demand at pre-order level into rapid, satisfactory finalized orders. In the standard business processes in Pakistan, producers react to customer orders by hiring extra labor when demand peaks. The general practice of remuneration on a per-pair basis as an incentive for higher productivity of assembly workers does not substitute for training, tools, and techniques. Although some institutions for training and skills upgrade exist,[6] generally the country has a deficit of institutes and centers that specialize in extending support services to garment manufacturers. Although some 500 skilled textile and garments technicians have graduated from institutions of higher and vocational education, the demand is at least 10 times as high.

18. *Transit time and costs.* The removal of import quotas has unleashed competition in clothing markets based on time-to-delivery and fashion-requirements. In that calculus, efficient port infrastructure, reliable and competitive modes of transport, as well as efficient customs procedures figure as important public goods. Efforts have been made to improve customs administration to the benefit of speed and efficiency. For textiles and garments, it reportedly now takes around 36 hours to clear a container through inspection, charges, loading, so that it is ready for shipment abroad. Compared to other reforming countries, based on this amount of time, clearance and export administration charges do not impede Pakistan's textile and garment exporters' competitiveness. However, in terms of comparative time and freight costs to the US as a percentage of export values, Pakistan is at a disadvantage, mainly resulting from shipping transit time (Table 3.3).

[6] Most notably with the Pakistan Readymade Garment Manufacturers Association (PRGMEA).

Table 3.3: 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.

19. With regard to costs, for a sample factory gate-to-export market cost structure of a manufacturer of denim jeans located 37km from Lahore with C&F Europe and four weeks order delivery, the 5.8 percent share of freight cost in total value added is well within the international average. However, geography -- distance to US and EU markets-- imposes disadvantages on the textiles sector, although internal import and export transaction costs do not. For this reason, the efficiency of the export and import administration would need to exceed comparators to compensate for the time costs associated with higher distances.

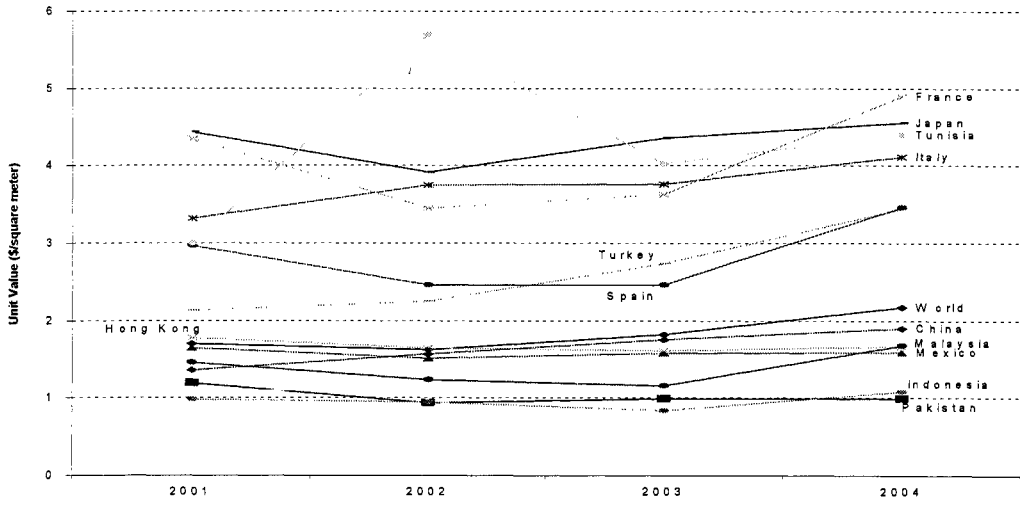
Table 3.4 : Share of Freight in Jeans Export Cost

	Rs/Pair	%		Rs/Pair	%
Fabric	122.5	47.6	Labels	3.0	1.2
Pocket Lining	6.0	2.3	Stitching	13.0	5.1
Zipper	9.0	3.5	Pressing	3.0	1.2
Button	1.5	0.6	Washing	18.0	7.0
Rivets	3.6	1.4	Wastage	10.0	3.9
Thread	6.0	2.3	**Freight**	**15.0**	**5.8**
Paper	5.0	1.9	Overheads	15.0	5.8
Leather Patch	3.0	1.2	Profit	20.0	7.8
Packing Mat.	4.0	1.6	Total	257.6	100.0

20. *Slow rebates on chemicals and accessory intermediary inputs.* Imported chemicals and accessories used in sewing, assembly, washing and dying account for approximately 19 percent of total costs. The duty drawback system suggests that duty rebate amounts are in-line with duty payments for intermediate inputs (between 5-10 percent depending on the product).[7] However, the 3-5 months needed to recover rebates remains a long period during which cash-flow is squeezed and administrative costs raised.

[7] The current duty drawback of tariffs on accessories and chemicals ranges from 1.68 percent to 1.71 percent of FOB value of garments (rebate rule S.R.O. 412(I)/2001 of the Central Board of Revenue). A positive improvement in the duty drawback system has been the fact that exporters can claim drawbacks on intermediary inputs procured locally for which sales and duties paid by the local supplier are passed on to the exporter at the time of the transaction.

Figure 3.5 : US Cotton Denim Fabric Imports



Textile Production (Denim Fabric)

21. *Business model.* Two types of producers are examined. A non-integrated mill and one which integrates the processes from lint cotton to cotton fabric. As non-integrated mills are the norm world wide, for the purpose of this analysis, the non-integrated mill is examined in greater detail with reference to gains Pakistan producers achieve from integration.

22. *Benchmarking.* Despite inefficiencies in the value chain, the cost structure of Pakistani textiles is not hindering the competitiveness of basic textiles, Pakistani woven fabrics are price competitive and of sufficient quality for basic denim export. The key problem when compared to other global players is the need to produce higher quality cloth in order to move quickly to the medium-to-high unit price segment. Compared to other global players, Pakistan is operating at the lowest price and quality levels.[9] Export-oriented denim fabric and garment manufacturers tend to rely exclusively on yarn from local lint (or in the case of an integrated garment manufacturers, on local lint), since its quality is sufficient for production of coarser yarn counts used for denim cloth. Although competitively priced, the poor quality of the local lint confines both denim fabric and denim jeans to the lower end of the market's quality range.

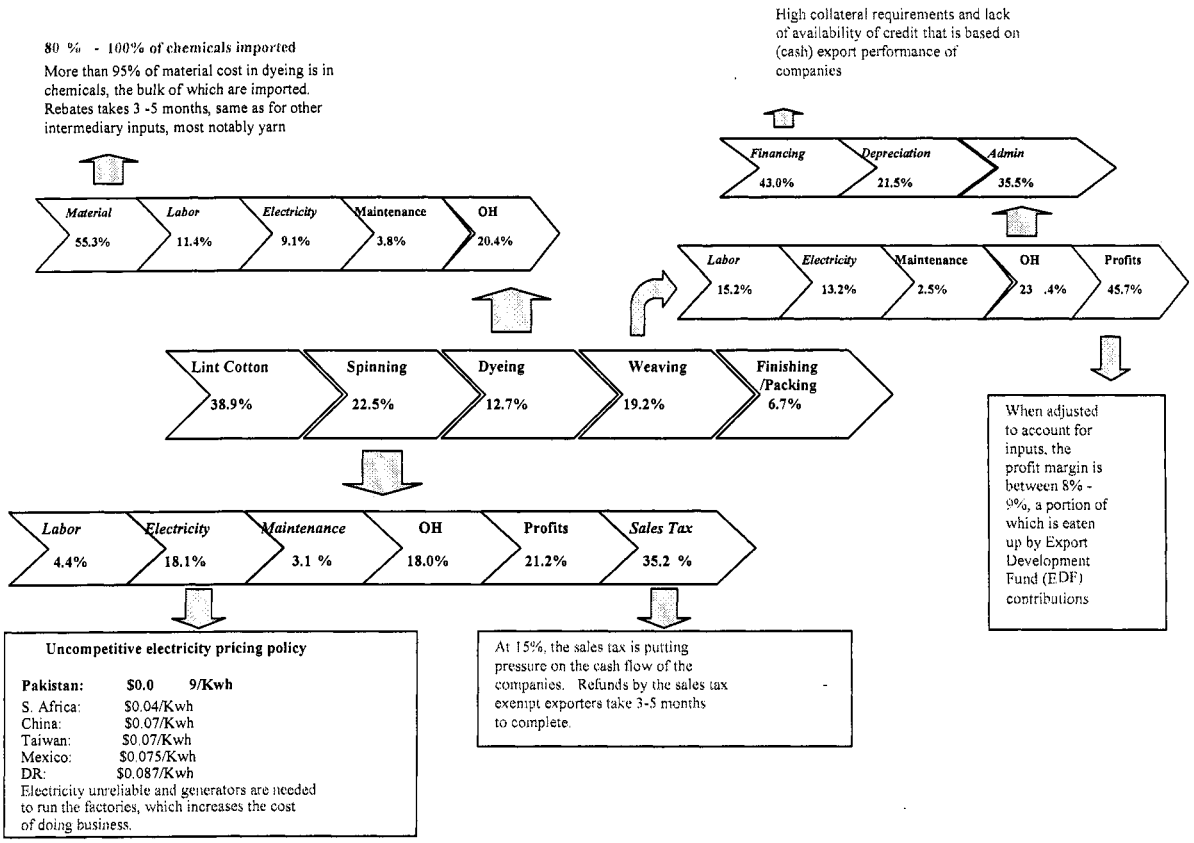
Table 3.5: Woven Fabric Benchmarks[8] ($/m^2)

Pakistan	0.64
India	0.67
China	0.70
Brazil	0.66
Korea	0.75
Turkey	0.73
USA	0.81
Italy	1.04

Source: GDS, APTMA, and ITMF 2003 data

[8] Open-end yarn woven fabric, not including dyeing, packaging/finishing, profit, overheads, taxes
[9] Pakistan exports denim fabric at US$1/m^2 to the US, and it is the lowest level of any major exporter.

Figure 3.6: Pakistan Denim Fabric Value Chain, Non-integrated Mill



23. *Woven-fabric value chain.*[10] After seed cotton has been ginned, in order to produce denim cloth, lint cotton must go through four value-adding processes to produce woven denim fabric: (i) spinning; (ii) dyeing; (iii) weaving; and (iv) finishing.[11] The highest costs involve lint cotton as an input (39 percent), followed by spinning (22 percent), weaving (19 percent) and dyeing (13 percent).[12] The delivered price for fabric that goes into a standard pair of 12 ounce unisex jeans is approximately $2.30 [13] includes processing and packing costs as well as profit margins and the 15 percent sales tax.[14]

24. *Integration.* In denim jeans manufacturing, where garment producers' key competitiveness drivers are the quality of lint, yarn, chemicals, and weaving, vertical integration in the textile and garment sector is a frequent mode of industrial organization, particularly for exporters. The delivered price of

[10]The current cost structure as per value chain was assumed and adjusted for data for 2003, as per a study based on value chain principles Data for 2003 as provided in "Quantitative Possibilities of Value Addition Along the Textile Chain in Pakistan", Pakistani Textile Journal/Textile Institute of Pakistan, 2003.

[11] Finer count yarns and cloth use imported cotton, while export oriented denim fabric and garment manufacturers rely on yarn from local lint as its quality is sufficient for production of coarser yarn counts used for denim cloth.

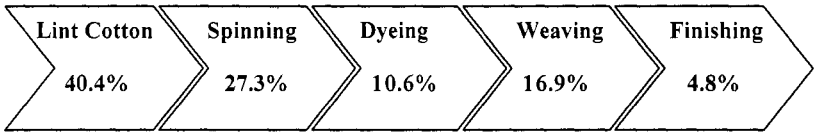
[12]The value chain has been presented in an integrated manner, even though in this particular case, the spinning and weaving are two separate business units within a single company, and operate as separate cost centers.

[13] Based on the end price of one meter 12 ounce fabric (of standard 1.5 meter width) at approximately $1.73. The end-price is as of March 2005 at 102.8/meter of denim cloth.

[14] Sales tax has been removed from lint sales but is allocated to spinning value sales. Spinners purchase lint without sales tax but sell the yarn in the local market with sales tax, as does each subsequent player in the chain.

fabric as well as the cost breakdown in an integrated mill setup are similar to the non-integrated mill,[15] suggesting that integration, although not a cost-savings model per se, does mitigate quality and delivery risks, particularly in dyeing and weaving quality.

Figure 3.7: Denim Fabric Integrated Mill



25. *Poor quality of lint.* Despite the impact of integration in mitigating quality and delivery risks, lint quality remains a hindrance to upgrading fabric for all types of producers. Characterized by mixed fiber length and quality, high moisture content and a high level of contaminates, poor-quality lint has such a substantial impact on denim fabric production that the lint-to-yarn conversion ratio of locally ginned lint is only 83 percent compared to 90 percent for imported lint. The price advantage from locally produced, lower quality lint keeps fabric prices low, but with the cleaner cotton imports readily available, price – quality tradeoffs have become more accessible to spinners and integrated mills.

26. *High cost of electricity.* As a capital-intensive operation, spinning is affected by the high electricity tariffs for businesses. Power costs account for a fifth of total costs and 42 percent of conversion costs. Along with the cost factors, outages at an average rate of three per day, further complicate the production process, raising inefficiency and costs. To mitigate the risk of outages, and doubting future improvements, many textile mills invest in gas or diesel power generators, further raising the costs of production.[16] In addition, particularly for integrated mills, the uncertainties and cost of power supply suppress technology upgrading at the margin.

27. *Cumbersome sales tax rebates.* Starting with the spinning stage, sales tax is passed on to the subsequent value-addition components, in this case dyers and weavers, who purchase yarn to dye and weave into fabric. Moreover, as the quality of the color and texture of denim fabric are the defining characteristics of the product for the clients, high-quality chemicals, which account for more than 55 percent of dyeing costs, are generally imported. Recovery of tax on sales made to domestic customers is straightforward, but when fabric is exported, sales tax recovery from the Central Board of Revenue reportedly takes between three and five months, locking up a significant amount of cash flow. Recently, duties have been reduced or removed for imported chemicals used in the garment business which in the case of jeans manufacturing, should help support the introduction of the upgrading of manufacturing.

Table 3.6 : Pakistan's Ginning Sector Profile

Number of ginneries	1,200
Ginning capacity	
Number of saw gins	5,000 – 6,000
Total ginning capacity	3.4 mill Tons
Average capacity utilization	24%
Ginning outturn (GOT)	
Potential	35% - 40%
Actual	33% - 35%
Cotton purchasing method	
Direct purchase from farmers	By exception
Intermediary/brokers	Prevalent
Cotton purchasing schedule	7-10 mo. Season
Ave. paid for cotton by ginneries	$US 0.37/kg

Source: GDS

[15] The production cost, excluding overheads, of one meter, 12 ounce denim fabric in the integrated setup is between $1.50 - $1.58, depending on the price of lint - almost identical to the non-integrated setup (where spinners turn lint into yarn and weavers turn yarn into fabric, as separate entities), hovering between $1.69 - $1.84/meter.

[16] Estimated operating costs of power generation is US$0.05 and US$0.10/Kwh for gas and diesel, respectively.

Cotton Ginning (Lint Cotton)

28. *Sector profile*: It is estimated that there are approximately 1,200 ginners in Pakistan with an installed capacity of 3.4 million tons per annum. Ginneries in Pakistan rely principally on saw-gin technology as opposed to rolling gin. Saw-gin technology is more productive but its rough approach is only suitable for short-staple cotton.

Table 3.7: Lint Yield Benchmarks

Country	Yield (kg/ha)
Kyrgyzstan	2,450
Israel	1,700
Australia	1,600
China	1,270
Cambodia	1,200
Mexico	1,000
USA	745
Kenya	572
Pakistan	562
India	315
World Average	642

Source: GDS

Table 3.8 :Ginning Costs Benchmarks

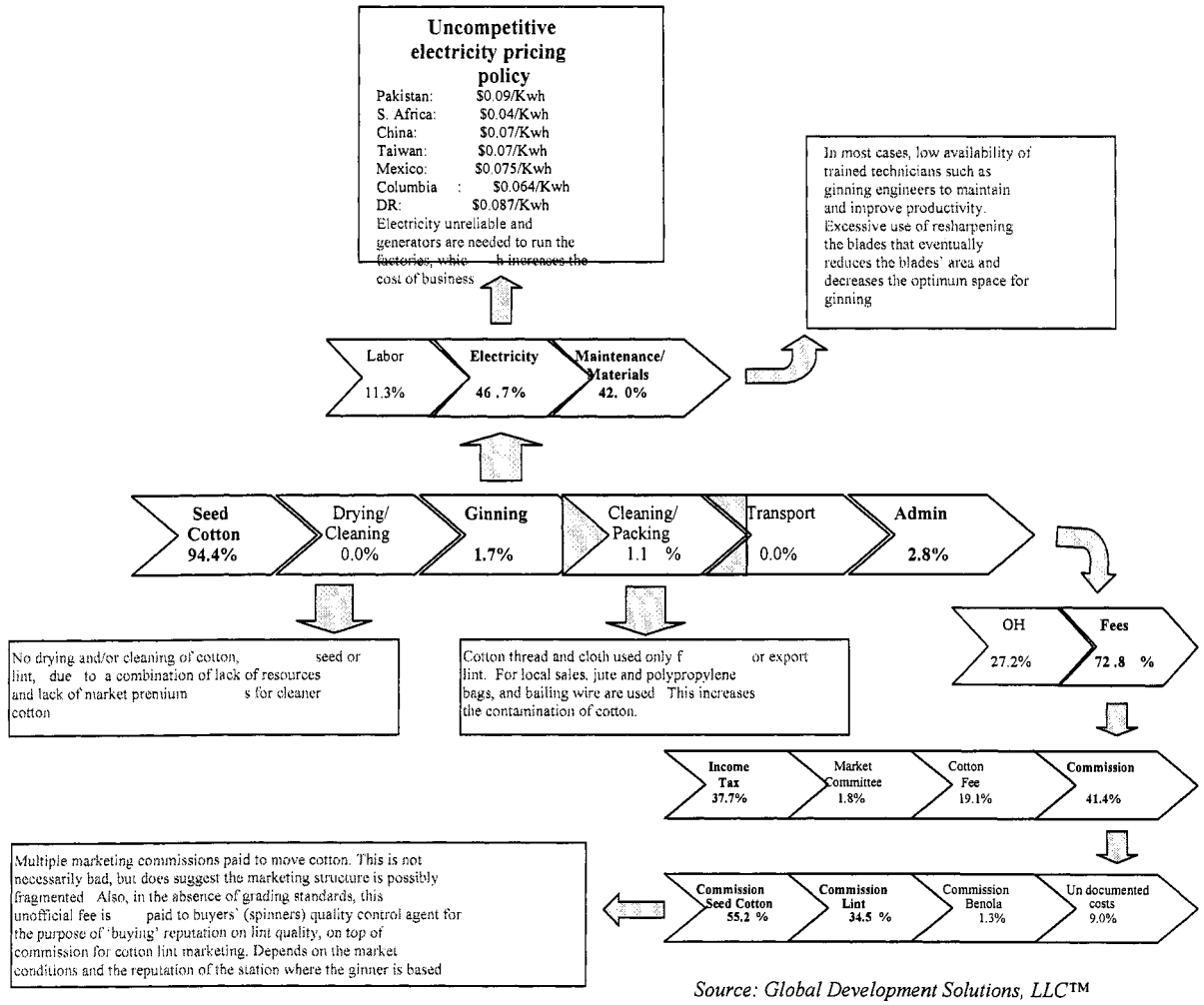
Country	Ginning (US$/kg)
China	0.050
Brazil	0.050
Pakistan	0.076
Kyrgyzstan	0.130
Syria	0.230

Source: GDS

29. *Benchmarking.* Pakistan's ginning costs are average compared to other countries but the yield rates are relatively low, hovering between 500 and 600 kg per hectare with 562 kg/ha recorded in the most recent years. Generally speaking, custom ginning is not popular globally and in some markets not available, depending upon the local industry structure. Such is the case in Pakistan.

30. *Ginning value chain.* After procuring seed cotton, the ginning process is divided into five activities: (i) drying/cleaning; (ii) ginning; (iii) cleaning/packing; (iv) transportation; and (v) administrative costs. The highest cost component is the seed cotton --95 percent of the total value -- followed by administrative costs (2.8 percent) and ginning (1.7 percent). Consequently, the price, yield, and quality issues associated with lint cotton are intimately tied with seed cotton (analyzed below) and at least four other factors, including: (i) low profitability in ginning; (ii) contamination and high moisture content of output; (iii) low productivity (ginning outturn rates); and (iv) high electricity costs.

Figure 3.8: Ginning Value Chain



Source: Global Development Solutions, LLC™

31. *Low profitability in ginning.* By and large, the ginning business is not very profitable. The ginners have not yet adjusted to Pakistan's new open trade regime. Export duties in place to maintain low domestic prices of cotton for the spinning sector were removed only in the late 1990s.[17] In many cases, sales of seeds are needed to cover costs. The ginner, upon acquiring seed cotton, basically assumes all the market risk.[18] For ginners as title holders of lint, the pressure to sell and recover investment (as well as mitigate the risk of escalating storage and other costs) is significant. Spinners can and do import lint cotton while ginners, with a legacy of producing low quality cotton seed for domestic consumption, have not yet made the adjustments in quality necessary to export. Therefore the price/quality valuation of cotton remains in favor of the domestic spinner while the marketing agent between the ginner and spinners/weavers hinders the transparent flow of market signals from the denim jean manufacturer upstream through the value chain. Making matters worse, one fifth of all ginners' costs (two percent of total costs) of converting seed cotton to lint cotton go to cover various commissions.

[17] During the 1980s and early 1990s, yarn exports tripled but remained level after that.

[18] In fact, since ginners do lend and finance the agents who in turn finance the farmers, the purchase of cotton seed also involves recovery of money lent by the ginner.

Table 3.9: Commissions and Fees in Ginning Costs

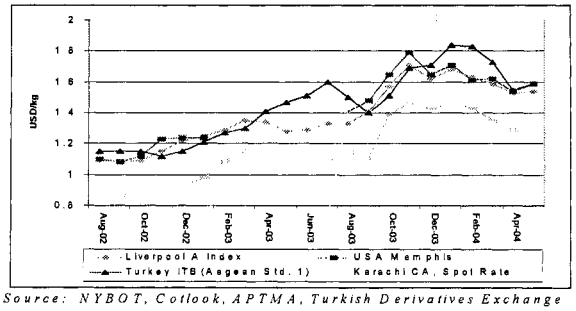
	Conversion Cost (%)	Total Costs (%)
Commission, Seed Cotton	7.38	0.52
Commission, Lint	4.64	0.38
Commission, Oil Seed	0.17	0.05
Unofficial Expenses[19]	1.24	0.10
Market Committee Fee	0.63	0.05
Cotton Excise Fee	6.28	0.45

Source: GDS

32. *Low ginning outturn ratio.* In extracting lint from seed cotton, ginning outturn (GOT) or the ratio of lint-to-seed cotton produced by the ginning process is a critical factor that defines the competitiveness of the ginning sector. The potential GOT for the cotton varieties grown in Pakistan is around 40 percent while the average achieved by most ginneries in Pakistan falls around 33 - 35 percent. In addition to the high impurity content and moisture level of seed cotton, old and dilapidated technology diminishes outturn.

33. *Inadequate cleaning and drying.* The ginner passes on its own inefficiencies, and those picked up from farming, down the value chain. One of the most important of these is that hand-picked cotton is priced according to weight without considerations of enhanced quality gained through drying and cleaning. As a result, valuation discounts on contaminated cotton make locally ginned cotton attractive, but at low levels of quality.[20] Therefore, the market prices adjust to account for lint contamination, and ginners and ultimately farmers, receive lower valuations for cotton than they would if quality considerations were addressed at the picking and ginning stage. Clearly, given the history of a captive domestic market for cotton and the inability to export lint cotton until recently, the ginning sector has not adjusted toward higher quality, despite the unambiguous return to cleaner, dryer cotton.

Figure 3.9: Correlation between International and Domestic Prices



Source: NYBOT, Cotlook, APTMA, Turkish Derivatives Exchange

34. *Absence of cotton standards.* In addition to open trading of cotton and cotton products at each stage of the value chain, one of the most fundamental changes worldwide is the improved information flow new technologies have produced regarding global lint prices. In contrast to earlier decades, the farmers, ginners, and traders of cotton in Pakistan are always just one mouse click away from finding out the prevailing prices of lint over the Internet. As ginners and farmers can see clearly the price-quality trade off for cotton seed and lint cotton, the under-valuation of uncontaminated lint will become increasingly untenable. However, third-party verification of cotton quality through universally adopted

[19] These refer to unofficial payments to buyer's quality control agent on the sale of lint.

[20] Local spinners estimate that lint to yarn conversion ratio of locally ginned lint is at 83 percent, compared to the one for imported lint at 90 percent. However, the price of locally ginned lint is still 15.5 percent; cheaper than imported lint after adjustments for the cost of cleaning and drying.

cotton standards remains a weakness in Pakistan. Even though official grades of cotton exist, no standardized system exists, and the final say as to the grade of cotton is in the hands of the buyers --i.e., the textile mills, who keep an advantageous position in choosing to buy domestic or imported lint cotton.

35. *Antiquated equipment and high electricity costs.* Ginners have not been able to upgrade the quality of their lint cotton because of antiquated machinery and the high cost of electricity. Almost half of ginning costs are electricity expenses. A high share of electricity costs is expected in the energy-intensive industry, but the situation is exacerbated by old, energy-inefficient production lines coupled with poor supply reliability and an electricity pricing policy that causes businesses to pay rates higher than in competing countries. As a result, ginners forgo electricity intensive drying and accept lower quality which is then priced into the lint cotton. The attractiveness of upgrading power-intensive equipment to clean and dry for a higher standard would depend on competitively priced and reliably supplied electricity.

Farming (Cotton Seed)

36. *Sector profile.* Cotton not only provides raw material to Pakistan's largest export-earning sector, it is an export crop in itself, and therefore tremendously important to the economy. More than three quarters of cotton is grown in the Punjab with the remainder coming from Sindh. The sector is characterized by a large number of small-holders (1.6 million farms) with a low average yield rate.

37. Cotton production, which accounts for 8.2 percent of the value added in agriculture and contributes about 2 percent of GDP, is growing rapidly. Pakistan now ranks as the fourth largest producer in the world after China, the US and India, and it is one of the world's largest cotton yarn exporters. Cotton production initially peaked in the 1991/92 season at 2.18 million metric tons (MT). Following a decline during the 1990s, it reached about 2.25 million metric tons during the 2004/05 season ---the highest in the country's history-- and is expected to remain at this level for subsequent years.[21]

38. *Benchmarking.* For the smallholder, Pakistan has one of the lowers production costs at $387 per hectare, but its lower yields, compared with major competitors such as China, adversely impact Pakistan's unit cost of production. For the average cotton farm with a yield rate of 1,680kg/ha,[22] the average production cost per hectare of seed cotton is estimated to be approximately $387.34. This translates to a production cost of $0.23/kg - relatively competitive in world terms. The large, advanced farm model has much higher costs and yields, revealing similar results but different potential for efficiency gains.

39. *Business model.* Two types of cotton farmers have been analyzed in the value chain. Small scale farmers with landholdings from 2 to 10 hectares, representing around 94 percent of all cotton farms use traditional, non-mechanized farming techniques, inadequate spraying, fertilizer and seed treatment, and pest management. Larger farms with landholdings of more than 60 hectares, of which there are just a few in Pakistan, use more advanced techniques involving mechanized farming and advanced crop growing knowledge and techniques have access to improved seed variety and better fertilizer, and use superior spraying processes. The existence of large holders with high yield rates-- though few in number and very high-cost producers, gives an indication of Pakistan's potential and provides a domestic benchmark for the small holders, who dominate coverage of the sector in number and land holding.

[21] "*Cotton Production in Pakistan and Role of Trading Corporation of Pakistan in Price Stabilization*", Mahbob Akhtar, General Manager.

[22] Which converts to a lint yield rate at 588 kg/ha.

Table 3.10 : Pakistan Cotton Sector Profile

Land available for cotton production	22.3 million hectars
Of which: Irrigated	18.2 million hectars
Land utilization for cotton crop	13 percent (2.8 mill)
Production level (2004/05)	2.25 mill MT (est.)
Farmers in cotton production	1.6 million farms
Smallholder share of cotton farming	94% of farms
(up to 10 hectars)	70% of land
Average Yield	
Smallholders (up to 10 ha)	1,680 kg/ha
Large Farms (more than 60 ha)	2,700 kg/ha
Production cost (average)	$0.23/kg
Market price (average)	$0.37/kg
Import (2004/05)	323,000 MT (lint)
Export (2003/04)	34,000 MT (lint)

Source: GDS

Table 3.11: Seed Cotton Farming Benchmarks

	Yield/ha (tons)	Cost/ha (US$)	$/kg Cost
Kyrgyzstan	2.45	394	0.16
China	3.50	752	0.21
Pakistan (SH)	1.68	387	0.23
Pakistan (LH)	3.10	680	0.23
Kenya	0.57	184	0.32
India	1.70	549	0.32
Cambodia	1.20	415	0.35

Source: GDS

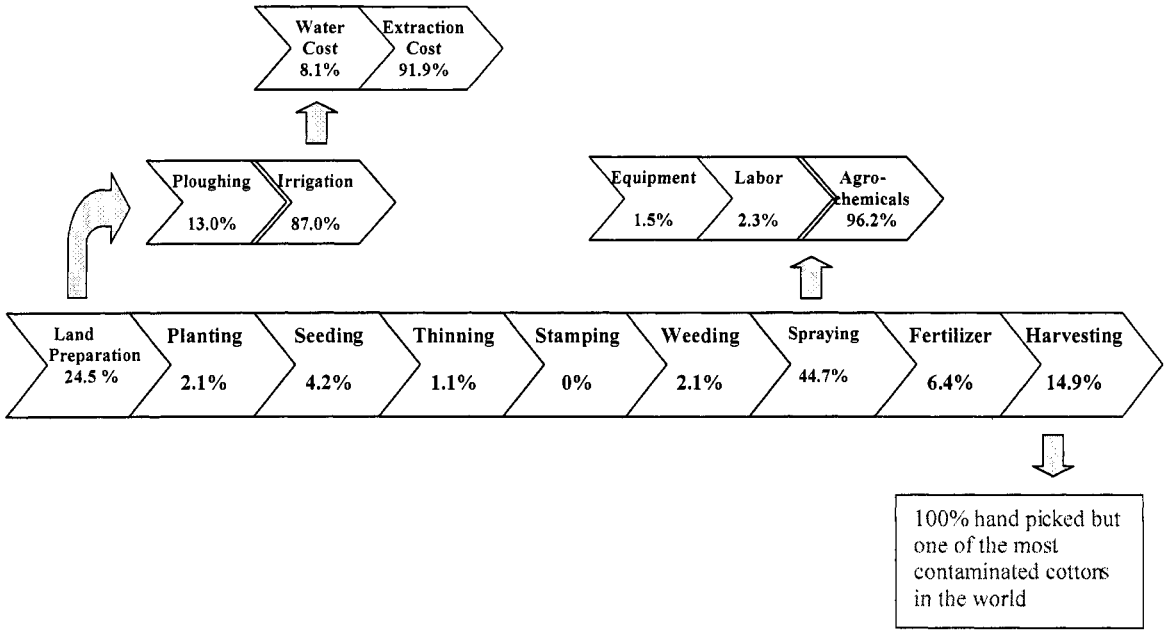
Table 3.12 : Small vs. Large Scale Cotton Farming in Pakistan

Smallholder	***Large Scale***
Conventional, labor-intensive farming, with a "more-water-is-always-better" attitude, with no precision farming technique	Mechanized farming with introduction of modern technology such as leveling equipment to maximize crops watering requirements
Some use of improved seeds and reliance on informally exchanged, retained hybrids and linted seeds	Extensive use of improved seed varieties and reliance on retained hybrids
No use of seed treatment	Use of seed treatment
No use of pest-management such as pest scouting	Use of pest-management such as pest scouting
Exclusive reliance on urea for fertilizing	No exclusive reliance on urea for fertilizing
Maximum 5 sprayings, with hand sprayers	Between 8-12 sprayings, with mechanized sprayers
Hand picking of cotton with trash	Hand-picking of cotton with trash

40. *Value chain.* The value chain is defined for a typical smallholder based in Multan, a district at the heart of cotton production in Pakistan, with average landholding of four hectares. Nine value adding activities are specified: (i) land preparation; (ii) planting; (iii) seeding; (iv) thinning; (v) stamping; (vi) weeding (3 times/season); (vii) chemical spraying (5 times/season); (viii) fertilizing (2 times/season); and (ix) harvesting. The same value chain for an advanced, large farmer (101 ha) does not differ much from that of the smallholder, as spraying (42.3 percent), harvesting (17.9 percent) and land preparation (16.9 percent), remain the biggest cost drivers. While the cost per hectare of cotton farming is significantly higher than the one for smallholder at $690/ha, yields almost double mean that the per-kilogram cost of production is virtually the same.

41. Despite Pakistan's competitive labor costs, inefficiencies and low quality in garments production have some of their origin in upstream parts of the supply chain such as seed quality, pest management, and irrigation practices. The fact that large-scale holders can achieve almost double the yield levels of smallholders suggests an overall failure in the country to transfer know-how and replicate commercial farming practices to smallholders. Current yields would need to increase by 150 percent to reach the yield potential of the most common seed varieties used in Pakistan (estimated at 4,000kg/ha to 4,300kg/ha of cotton).

Figure 3.10: Smallholder Cotton Value Chain



42. *Insufficient availability of improved seeds.* Insufficient availability of improved seeds is a key reason behind poor yield performance, particularly as Pakistan's cotton varieties are highly susceptible to worms and viruses like CLCV that develop new pesticide resistant strains. Even for the existing seed varieties, between 35 and 53 percent of seed requirements were not met through distribution over the last 5 years to 2003 causing smallholders to resort to informal means,[23] adversely impacting yield. The lack of a continuous supply of new improved varieties to some extent is related to the market dominance of the two state-owned seed companies, Sindh Seed Corporation (SSC) and the Punjab Seed Corporation (PSC), which supply seeds below costs. The policy of maintaining low costs of seed to farmers limits availability, suppresses R&D capabilities, and limits production capacity.[24]

43. *High cost of spraying.* As Pakistani cotton is highly susceptible to viral and pest-related diseases,[25] a robust spraying regime is required, with 8-12 sprayings per season. However, the smallholder farmer can only afford five sprays per year, compromising yield rates and fiber quality. Even with this under-spraying, spraying dictates over 44 percent of farming costs. With a proper 8-12 sprays/season, cost of sprays can reach over 57 percent of the overall cost of farming.[26]

[23] Informal acquisition takes three forms: (i) exchange between farmers; (ii) use of retained hybrids; and (iii) purchase from local traders in the market, some of which is sub-quality imports. Infusion of poor varieties and sub-quality imported seed are reportedly exacerbating the already difficult situation of pest containment and control.

[24] PSC's and SSC's cotton seed production capacity is estimated at between 31,000 and 40,000 tons in 2003 with insufficient supply exacerbated by a lack of storage facilities. SSC was closed recently due to poor financial and operational performance.

[25] The 1992-1995 period was a time when Pakistani cotton faced substantial losses as a CLCV outbreak hit the country and caused estimated losses of 510,000 MT.

[26] The cost of sprays by smallholder farmers varies from Rs2,000 - 4,500, depending on quantity and retail price differences.

Table 3.13 : Illustrative Mark-up Structure of Pesticides, 2005

Breakdown	Cost (Rs/ltr)	% of total
Cost of import in bulk from China, CIF Karachi	*100.0*	54.3
Customs Duty	5.0	2.7
Sales Tax	15.7	8.6
Income Tax (Direct on Sales)	7.2	3.9
Inland Insurance, Clearance, & LC opening charges	5.0	2.7
Transport Karachi-Multan, (Karachi Port Trust fee)	2.0	1.1
Sindh Government Tax	1.0	0.5
Miscellaneous charges, unofficial and dispute charges	3.0	1.6
Subtotal, bulk to packager's gate in Multan	*139.0*	
Mark-up, Packaging Co. (20%)	28.0	15.2
Mark-up, Retailer (10%)	17.0	9.2
Retail Price (Rs)	*184.0*	100.0

Source: GDS

44. Packaging companies (mainly from China) impose an 85 percent mark-up over the imported cost on pesticides sold to farmers. In addition to the direct costs, in the absence of third party extension services, smallholders rely on biased information from retailers and are not informed on proper pest management and control, including proper dosage and appropriate chemicals.[27] In addition to the health issues, they therefore run the risk of commercial penalties including negative publicity or even non-tariff barriers on cotton-based garments coming from sources where hazardous chemicals are unsafely applied.

45. *Inefficient water utilization and high cost of irrigation.* The smallholder's second highest cost is land preparation, accounting for a quarter of total cost, of which, irrigation accounts for 87 percent. While the cost of water accounts for only 8 percent of irrigation costs, the remainder comes from the energy costs of electric and/or fuel pumps for pumping water from tube wells.[28] The effective subsidy on the water that runs through the vast canal network causes excessive usage of water by the farmer. It is estimated that out of 90 billion cubic meters of water that reach the fields through canals, approximately 22 billion cubic meters, or a quarter, is wasted. Moreover, the inefficient use of the cheap water indirectly increases the cost of irrigation to the individual farmer as water availability in canals declines and farmers have to pay for tube wells, open shared wells with other farmers, or purchase water from the farmers with operating wells.[29]

46. *Highly contaminated harvesting.* Though hand picked cotton generally produces lint with a limited amount of trash, in Pakistan, trash is actively collected due to the fact that cotton seed is priced on weight and variety rather than a grading or valuation standard. As a result, approximately 5 percent of seed cotton is trash. Lint yield losses accumulate up the value chain as the ginner also has an incentive to add weight to his bales, since his lint cotton sales are based on weight as well.

47. *Buying agents as financiers.* The system of moving cotton from the farm to the ginner involves a sophisticated network of marketing and financing agents.[30] Growers often receive inputs and needed finance for crop farming from the agents to whom farmers deliver their harvests. Due to lack of direct access to other capital, marketing agents play a vital role for the farmer but prevent full information flow

[27] Farmers also lack techniques and knowledge required to limit injury stemming from spraying hazardous pesticides. They work with leaking equipment, do not use gloves during spraying or mixing of chemicals, and inhalation and skin contact during spraying and hand-picking is significant. Research by the Integrated Pest Management Program in 2003 found that 87 percent of female cotton pickers suffered from pesticide-related diseases, 63 percent of farmers fell sick while spraying chemicals and one person per 800 households died from it each year. *Pakistan Agricultural Research Council, Vol.23.No.9.*

[28] For nearly 80 percent of farmers in Pakistan, water from canals is inadequate, requiring pumped water from wells. The cost of irrigating one hectare of land is approximately Rs 5,000 – 6,500 for electrical and diesel powered pumps respectively, and is dependent mostly on the cost of powering pump equipment.

[29] Around 60 percent of cotton cultivation in Pakistan is rain-fed, and only 40 percent of the cotton cultivated is covered by canal irrigation and/or groundwater tube wells. Moreover, the averages of 130 billion m^3 of canal head water during the 1990s fell to 90 billion m^3 in 2001 – 2002; source: *Pakistan Economist,* February 3 - 9, 2003.

[30] For the small farmer, a buying agent is generally a middleman between the farmer and the middleman. Large farmers directly contact ginners, while marketing agents are intermediaries between farmers and ginners.

throughout the system. Yields consistently below the potential of varieties used suggest an inadequate flow of information regarding the return from better agricultural practices as well as other technical yield-improving information.

48. *Insufficient crop maintenance*. Thinning, stamping, weeding, and fertilizing are important for crop maintenance, but gain insufficient attention and resources due to imbalanced use of fertilizers,[31] intercropping where field thinning is compromised and no stamping. For the small holder, the costs total less than 10 percent of the total but have the adverse affect of harming nutrition and lowering crop yields.

B. AN INTEGRATED VALUE ANALYSIS FOR SHRIMP

Background

49. Global production of shrimp experienced explosive growth during the last decade, rising by 75 percent between 1987 and 2000 to a total output of about 4.2 million metric tons.[32] Total trade now exceeds $10 billion. In recent years, the value of shrimp trade declined due to falling prices, but not the volume.[33] The largest contributors to the increase in export volume were Southeast Asian producers particularly, Thailand, Vietnam, and China, but production in South Asia also doubled during the period from South Asia's leading shrimp exporters, India and Bangladesh.

Table 3.14 : Leading Shrimp Exporters

	Value (US mill)			Global Share (%)		
	2000	**2001**	**2002**	**2000**	**2001**	**2002**
Thailand	2,682	2,221	1,719	30.6	27.2	22.2
Vietnam	638	774	906	7.3	9.5	11.7
India	898	807	906	10.3	9.9	11.7
China	430	454	610	4.9	5.6	7.9
Denmark	383	368	398	4.4	4.5	5.1
Netherlands	301	302	280	3.4	3.7	3.6
Canada	215	203	323	2.5	2.5	4.1
Mexico	482	406	301	5.5	5.0	3.9
Bangladesh	346	262	280	3.9	3.2	3.6
Argentina	249	406	250	2.8	5.0	3.2
Malaysia	201	197	196	2.3	2.4	2.5
Pakistan	78	59	44	0.9	0.7	0.6
Others	1,862	1,700	1,525	21.2	20.8	19.7
Total	8,765	8,159	7,738	100.0	100.0	100.0

Source: COMTRADE, and Global Trade Atlas.

50. The main importing markets are the United States and Japan, which together account for 57 percent of all shrimp imports, and the EU -- particularly Spain, France, and the UK. The *EU* markets are of particular importance to Pakistan and – with notable exceptions of the UK and Germany where South and East Asian exporters prevail -- are increasingly being dominated by new South American suppliers including Ecuador, Brazil, and Argentina.

[31]Only nitrates usage is in line with country-wide recommendations of fertilizer usage, at around 130kg/ha, mostly in the form of urea which costs from Rs8/kg to Rs9/kg depending on the location of the farm. Price disparities lead to high use of urea on the part of the small holder, low use of phosphates, potash and micronutrients, and thus lead to imbalanced fertilizer use level.

[32] AO GLOBEFISH, World Shrimp Markets 2004, 26-27 October, Madrid Spain.

[33] The downward pressure on prices has been particularly acute in the U.S. where anti-dumping duties were imposed on Thailand, Brazil, Ecuador, India, China and Vietnam.

51. Two critical areas are becoming increasingly important for export competitiveness in the shrimp industry: (i) increasing proportion of shrimp production (currently about 38 percent) from farming operations, led by Thailand, China, India, Bangladesh, Ecuador, and recently Brazil and Vietnam; and (ii) increasingly, the role in export competitiveness being played by health and safety standards.[34]

Table 3.15 : Fishing Resources in South Asia

	Bangladesh	India	Pakistan	Sri Lanka
Coast Line (km)	480	8,085	1,120	1,700
Exclusive Export Zone ('000 km2)	124	2,020	300	256
Inland Waters ('000 ha)	1,473	1,090,000	35	382
Fisherman ('000)	1,057	3,837	361	120
Fish and Shellfish Captured ('000 tons)	1,141	3,689	564	279

Source: FAOSTAT and industry sources

Sector Profile

52. With its 1,100 km. coastline and fishing area of more than 3000 sq.kms., Pakistan has a rich marine life, including more than 30 different species of shellfish and 70 species of commercial finfish. While larger than Sri Lanka, Pakistan's fisheries sector is around half that of Bangladesh and a fifth of India's in terms of fish caught but even smaller in terms of number of fishermen.

53. The domestic market consists of a large number of informal and formal, small-scale fishermen, combined with a small number of medium and large-scale commercial fishing vessels. It is estimated that over 12,000 boats and vessels are registered, but fewer than 4,000 of various sizes are currently active. The fisheries sector provides employment to about 361,000 people, of whom almost 40 percent are engaged in marine fisheries, and over 60 percent in inland fisheries.[35] An additional 400,000 people are estimated to be employed in ancillary industries related to the fisheries sector, such as ice-making, packaging and distribution.

54. While Pakistan boasts a large amount of sea resources, as a semi-arid country, it lacks the inland and fish farming resources of its neighbors. Unlike Bangladesh, which has almost 40 percent of its resource from coastal aquaculture, the open sea is Pakistan's only resource. Moreover, the EEZ represents 85 percent of the total fishing area but less than 1 percent of the landed marine catch.

Table 3.16 : Fish Production in Pakistan (000 Metric Tons)

Year	Marine				Inland	Total
	Sindh	Baloc	E.E.Z.	Total		
1999	333	123	18	475	180	655
2000	294	130	14	438	176	615
2001	278	123	0	402	153	555
2002	275	124	2	401	161	562
2003	270	127	3	401	166	566

*E.E.Z. refers to the Exclusive Economic Zone, 35-200 nautical miles from the Pakistan coast. *Source: Marine Fisheries Department, Government of Pakistan*

55. Most fish are caught in Sindh, landed at fish harbors in Karachi and Korangi, and in Balochistan at harbors in Gowadar and Pasni. In particular, the Karachi Fish Harbor was originally built in 1955/56 to accommodate 400 vessels, but the demand now exceeds 2,000 vessels, overcrowding the already over-utilized facility. Though the last complete fishery survey was conducted more than 20 years ago, it is

[34]Thailand lost significant market share globally in 2002, due to allegations of chemical usage, and in Bangladesh and Pakistan the industry has also been hit hard by bans due to health and safety issues.

[35]*Economic Survey of Pakistan* 2001/02).

clear that the sector faces a grave problem of over-fishing. The existing open-access policy to sea fishery resources has implications for yield, costs, and long term sustainability of the sector.

56. The sector is a major source of export earnings with almost a third of production being exported. While export earnings varied between $60 and $100 million between 1997/8 and 2002/3, they jumped in 2003/04 to US$153 million. Even so, many observers judge this value to be far below potential, given local endowments and global demand.[36] In particular, it is estimated that as much as 83-85 percent of a catch is trash fish, due to the type of equipment and techniques which historically have resulted in capturing a high level of inedible product.[37] Of the remaining edible catch, shrimp represents 15 percent of weight and half of value.

Table 3.17: Principal Importers of Pakistani Shrimp – 2003

	Value ($ mill)	% Share
UK	11.5	23.1
Japan	5.9	11.8
UAE	4.9	9.8
Germany	3.2	6.4
USA	0.7	1.4
Malaysia	0.7	1.4
Sri Lanka	0.4	0.8
Other	22.5	45.2
Total	49.8	100.0

Source: COMTRADE

Product Profile

57. Pakistan is home to 15 species of marine shrimp with the most important, Kiddi shrimp, accounting for nearly 49 percent of total production.[38] These shrimp are found in varying salinity and depth, ranging from brackish and coastal waters to a depth of nearly 200 meters. As fishing is carried out close to land rather than in the EEZ, shrimp fishery peaks between August and February in the shallow waters. A government-imposed ban operates in June and July to protect spawning. Frozen shrimp exports are 12 percent of the volume of fish exports but 40 percent of export receipts, demonstrating the high value that shrimp brings to the industry. Until a recent voluntary ban on fish exports to the EU, the largest EU markets for Pakistan shrimp exports were in the UK and Germany with significant exports going to Japan and the UAE and lower penetration in the US and Malaysia. Consignments destined for the EU, Japan and the USA are exclusively frozen, whereas the shipments to Sri Lanka are dried and salted.

Process Profile

58. Port clearance procedures are time-consuming and redundant, often requiring 2-3 days just to obtain clearance to leave port. After the catch, upon arrival at Karachi Fish Harbor, the vessel contacts a commission agent ("mole holder") to request auctioning and arrange for auction space, labor, and offloading equipment. The catch is offloaded, sorted, and weighed.[39] Based on overburdened port management, overcrowding without traffic management, and clearance requirements, the vessel may take

[36] In 2004, the Small and Medium Enterprise Development Authority (SMEDA) estimated a $1 billion per year potential based on maximum sustainable yield figures, existing value addition, and foreign benchmarks (Indian, Bangladesh and Malaysian).

[37] Without guidance, survey's, locational or communication equipment, fishermen generally drag nets along the bottom in a random and haphazard way, thereby collecting mostly inedible catch. The inedible portion is generally used for fish meal and carries a Rs3-6 per kg, price.

[38] Generally, the four most important types of shrimp for commercial exports include Penaeusspp (Jhaira), Metapenaeus spp (Kalri), Parapenalopsis styliferia (Kiddi) and the tiger shrimp.

[39] Trash fish is sold directly to fish meal processors at the harbor area at a price which ranges between Rs 3 – 6/kg.

upwards of three days to return to sea after unloading its catch.

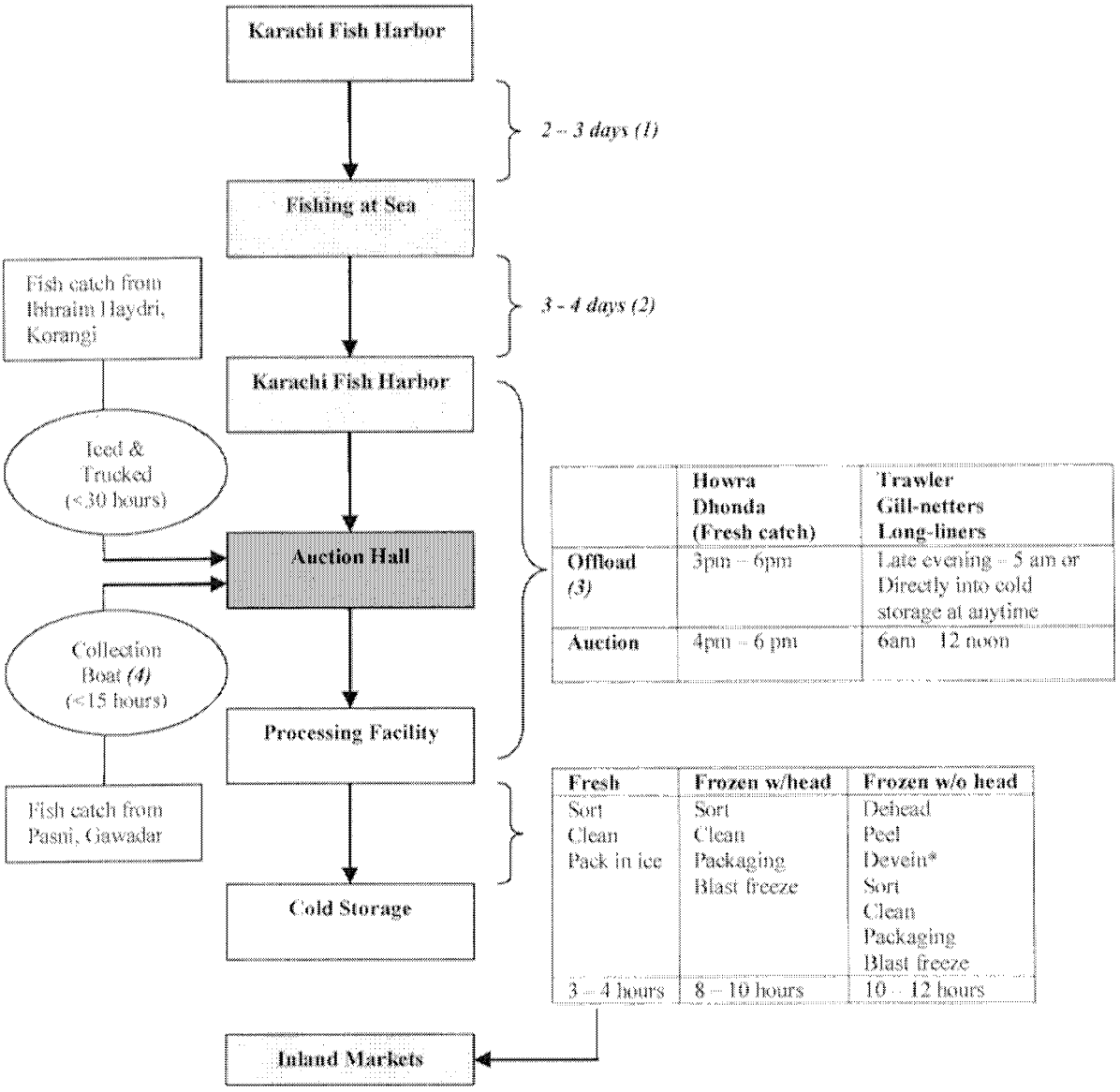
59. The harbor accommodates two fish market halls, and though it has cold stores, the lack of a hygienic preparatory area for deicing, sorting, and grading contributes to large post-harvest losses. These functions are either performed on the boat or on the unclean floor of the Auction Hall. Generally, a fifth of the catch is lost prior to auction. Alternatively, catch may be directed to the cold storage to be kept until auction the next day.[40] After auction, the mole holder is paid and pays both the boat owner and the fishermen, while the buyer transfers the purchase to a frozen shrimp-processing facility.[41]

60. Generally, the processing of exported shrimp takes one of two forms: de-heading and peeling, or freezing with head-on. Shrimp with the head on is generally sorted, washed, packed, and then frozen, a 10-hour process, of which 8 is freezing time. For frozen cleaned shrimp with the head removed, the process entails additional steps of de-heading, peeling, and possibly de-veining, thus adding around 2 hours to the processing cycle. Generally, inefficiencies characterize shrimp processing, include long cooling times and high electricity consumption. In addition, the 21 operating freezing facilities report 25 percent capacity utilization.

[40] Fish landed in nearby Ibhraim Haydri and Korangi are packed in ice and driven by truck to the Karachi market in time for the fresh fish auction, taking up to 30 hours to reach the Auction Hall in Karachi. Similarly, fish landed in Pasni and Gawadar are collected by fishing boats acting as collection and distribution vessels, and shipped to the Karachi Fish Harbor.

[41] Given that 99.6 percent of all the exported shrimp catch is frozen (the remaining 0.4 percent is either dried or consumed fresh), the focus of the analysis will be on freezing.

Figure 3.11: Shrimp Fishing and Process Flow Map Pakistan



	Howra Dhonda (Fresh catch)	Trawler Gill-netters Long-liners
Offload (3)	3pm – 6pm	Late evening – 5 am or Directly into cold storage at anytime
Auction	4pm – 6 pm	6am – 12 noon

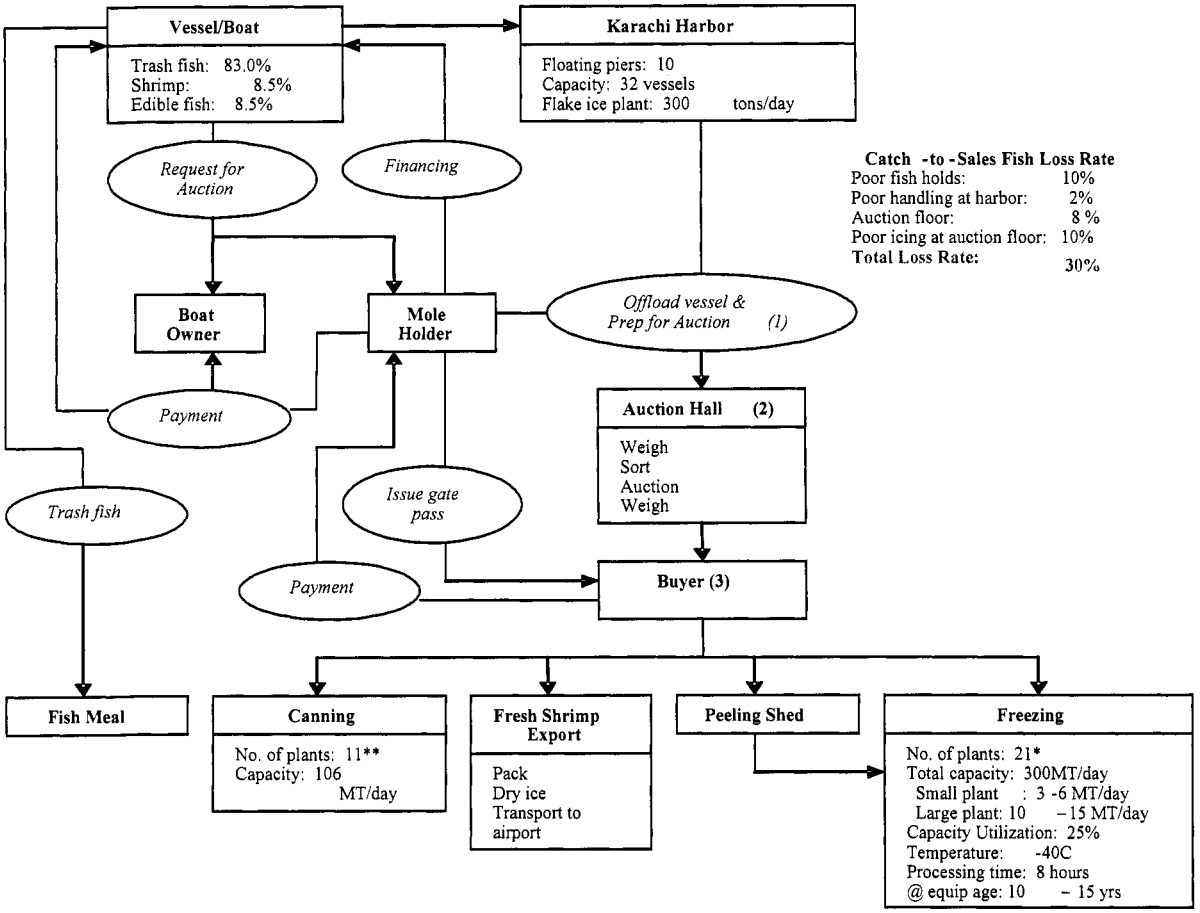
Fresh	Frozen w/head	Frozen w/o head
Sort Clean Pack in ice	Sort Clean Packaging Blast freeze	Dehead Peel Devein* Sort Clean Packaging Blast freeze
3 – 4 hours	8 – 10 hours	10 – 12 hours

Notes:

1. No system to manage vessel movement after unloading. Complete application on crew and intended location for fishing required. Permission required from Customs/GoP, Fisherman's Cooperative Society (FCS), Coast Guard, Karachi Fish Harbor Authority (KFHA), Marine Fisheries Department (MFD), Navy & Marine Security Agency (MSA). MFD is required to inspect boats but generally bribes are paid to officials to avoid inspections required under EU regulations.
2. Short haul boats
3. After offloading, the Auction Hall does not have a preparation area for deicing, sorting and grading. Thus, these functions are performed either on the boat or on the floor of the Auction Hall using untreated channel water.
4. Shipping boats doubling as collection and delivery vessel.

Source: Global Development Solutions, LLC

Figure 3.12: Shrimp Supply Chain



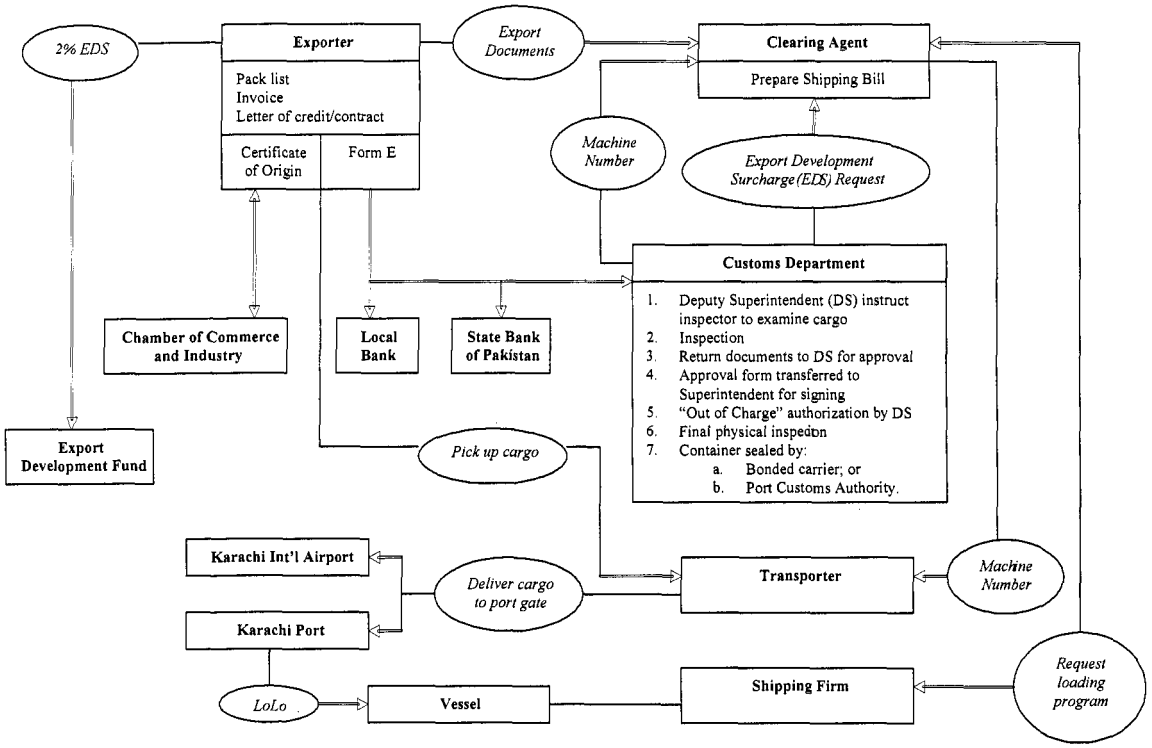
Notes:
* Operational plants
** Only 1 currently operating
(1) Use hired labor to offload at a cost of Rs100/day
(2) Only 50% of Auction Hall protected from the sun, exposing fish to directly sunlight for up to 4-5 hours.
(3) Large buyers dominate the market, with possible colusion to set prices. 90% of purchase through own buyer, and 10% from buying agents (typically buying agents purchase from village fishermen and can sell products anywhere and get paid a commission.

Source: Global Development Solutions, LLC

61. For export, once inspections are completed, the exporter compiles the requisite set of documents[42] and contacts a clearing agent to prepare a shipping bill, submitted with the documents to the Customs Department. The Customs Department allows the clearing agent to instruct the transporter to retrieve the container from the exporter and take it to the port gate for inspection. Upon final approval, Customs authorizes a final physical inspection of the container before it is sealed by the port customs authority or a bonded carrier. The exporter pays the Export Development Surcharge to the Export Development Fund and the clearing agent arranges container transfer to the terminal for loading onto the vessel.

[42] Including the packing list; invoice; letter of credit/contract; Certificate of Origin; and Form E. A request for the Certificate of Origin must be made through the Chamber of Commerce and Industry, and Form E (required under the Foreign Exchange Act) must be completed with a copy distributed to the local bank, the State Bank of Pakistan, and the Customs Department.

Figure 3.13: Export Procedure for Pakistan



Source: Based on data from SMEDA

Catch to Processing Value Chain Analysis

62. *Benchmarking.* Pakistan's export price averages around US$4.8 per kilogram as compared with around $9 -$11per kilogram for Thailand, Vietnam, and Bangladesh shrimp exports.[43] Apart from these three, in 2002 countries generally received around US$6 per kilogram. Comparing production costs of Pakistan with three countries -- Bangladesh, Indonesia, and China-- large producers of shrimp using aquaculture, the notable aspect is that the cost accounted for by raw material is higher in Pakistan than in the other countries. Correspondingly, packaging as well as labor and management costs are lower.

Table 3.18 : Comparative Production Costs (%)

	China	Indonesia	Bangladesh	Pakistan
Raw Material	55.0	68.0	65.0	78.2
Labor	9.5	13.5	11.5	6.4
Utilities	4.0	6.2	1.4	1.9
Packaging/Storage	14.0	5.2	1.9	2.7
Management/Admin.	3.5	4.4	7.9	2.0
Other costs	14.0	2.8	12.3	8.8
TOTAL	100.0	100.0	100.0	100.0
Average Value ($/kg)	6.28	3.78	3.25	5.74

Source: GDS estimates extrapolated based on FAO Fisheries Technical Paper 351 "Economic Engineering Applied to the Fishing Industry", A. Zugarramurdi, M. Parin, H. Lupin, (1995).

[43] The differential between the average export unit value and the production costs used in the value chain are reflective of the large price differences between the premium shrimp and the low costs PATAS (rice shrimp).

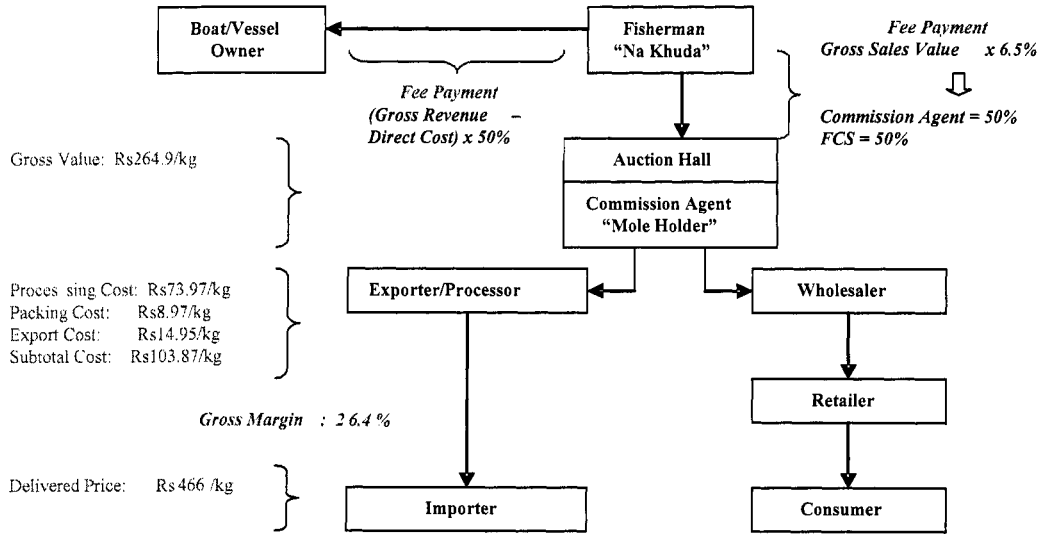
63. *Business model.* The value chain analysis examines a 45-foot-average keel-length trawler[44], employing a crew of approximately 21 men: a captain, driver, cook; two men filling the fish hold; and 16 general laborers which makes approximately 20 fishing trips/year, for an estimated 8–10 days per trip. Shrimp represents approximately 5 percent of the catch, which averages an estimated 141kg of shrimp per trip. This high by-catch rate, (marketable non-shrimp catch representing an additional 5-8 percent and trash fish, representing 85-90 percent of total catch by volume), is substantially higher than some of its competitors from South America and Asia where the by-catch rates recorded hover around 75-85 percent. As such, the high by-catch rate represents a considerable disadvantage for the processed shrimp industry, keeping returns low and suppressing capacity in the processing aspect of the supply chain.

Table 3.19: By-Catch Rates
percent of total catch

Columbia	75.0
Costa Rica	80.0
Cuba	87.5
Indonesia	87.5
Iran	83.0
Pakistan	95.0
Venezuela	94.0

Source: Reducing the Impact of Tropical Shrimp Trawl Fisheries, FAO Fisheries Report No. 627

Figure 3. 14: Transaction Costs and Margins Along the Boat-to-Consumer Supply Chain for Shrimp in Pakistan



Sample Revenue for Commercial Fisherman per Catch	
Gross Value of Catch	$633.07
Catch Loss	$189.92
Gross Value Avail for Auction	$443.15
Direct Cost	$241.53
Auction costs	$23.90
Gross Revenue	$177.72
Margin Payments	
Commission Agent	$5.55
FCS	$5.55
Total Net Profit	$166.61
Payment to Vessel/Boat Owner	$83.31
Fisherman's Gross Income	$83.31
Other deductions	
fees	$2.08
Food	$16.95
Labor	$17.80
Fisherman's Net Profit	$46.48
% of Gross Value of Catch	7.3%

Assumption	
Gross value Rs/kg	264.9
Catch/trip (kg)	141
Catch Loss	30%
Total value of catch (Rs)	37,350.9
Total value of catch ($)	$633.07
Margin payment	6.25%
Commission agent's share	50%
FSC share	50%
Payment to vessel owner	50%
Exchange rate (Rs/$)	59

Source: Global Development Solutions, LLC

[44] Five categories of fishing vessels are distinguished according to size: (i) trawlers (12.1 percent); (ii) gill netters (16.3 percent); (iii) long-liners (0.4 percent); (iv) Howra (38.0 percent); and (v) Dhonda (30.3 percent).

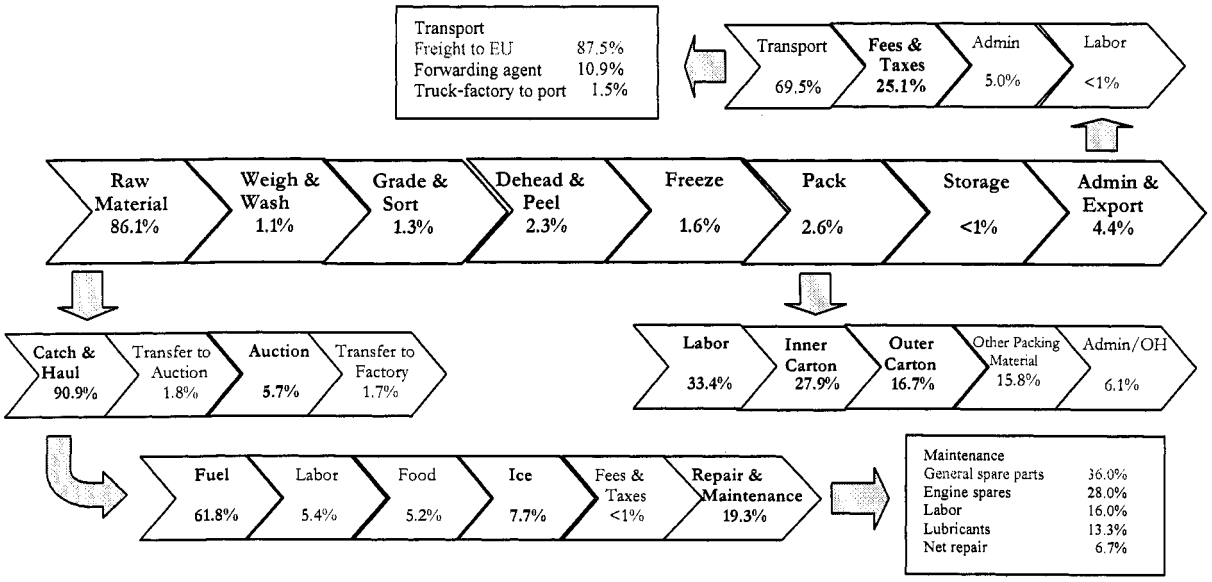
64. The various costs associated with the trip, the high loss rate and fees, demonstrate the low profitability of the business model. In this example, the gross value of the catch is estimated to be approximately $633 (4.49/kg). With a catch loss rate of 30 percent, marketable value catch is $443. Generally, the vessel owner first deducts direct costs from this value, in this case $242,[45] and pays the auction cost of $24 for gross revenue of approximately $178. Based on this amount, $11is subtracted for mole-holder and FCS fees, split evenly and the net profit is $167, split evenly between the vessel owner and the fishermen. The fisherman deducts $37 for food, fees, and casual labor, which leave a net profit of $46 or 7.3 percent of gross value of the catch. Once shrimp is auctioned, it must be processed, packaged and exported.[46] According to field interviews, the transaction cost for these activities equals $1.76/kg for a total cost of $6.24/kg. With a delivered price of $7.76/kg, the estimated margin for the exporter is approximately 26.4 percent.

Table 3. 20 : Shrimp Loss: Rate Boat to Auction
% of shrimp catch lost

Losses at Sea	**15**
Poor fish hold and handling on boat	10
Contaminated ice used on boat	5
Poor Post Harvest Handling	**20**
Losses at Fish Landing	2
Contamination on Auction Floor	8
Contaminated Ice at Auction	10
Total Loss	**35**

Source: GDS

Figure 3.15: Value Chain for Frozen Shrimp Production and Processing in Pakistan



Source: Global Development Solutions, LLC

65. *Value chain.* Based on this model, the total catch-to-processed shrimp is $5.74/kg. The cost of catching and transferring the shrimp constitutes 86 percent of the cost for the final product followed by administrative and export costs (4.4 percent) and packaging (2.6 percent).

[45] Direct cost includes fuel, lubricants, and other essential operating inputs, but does not include maintenance and repair costs.
[46] In this example, freight and other logistics costs associated with exporting to the EU were used. Further detailed analysis of processing costs is presented in the integrated value chain analysis section of this report.

66. Within *fishing*, the three costliest components are: trawler fuel (62 percent),[47] repair and maintenance (19 percent), and ice (8 percent).[48] Generally, the costs for fishing are high due to the low yield per trip which, in turn, is attributable to: (i) the high loss rate from spoilage; (ii) fishing methods which bring in non-edible catch and cause over-fishing; (iii) overcrowding the harbor and over-fishing of landings; and (iv) lack of technical support to help fishermen find fish efficiently.[49] In particular, these factors increase the usage of fuel which is already high and taxed at fifteen percent. As noted in the business model, the low return due to low yields prevents enough cash flow for investment in technical equipment, or even upkeep of the vessel and fishing mechanism.

Table 3. 21: Breakdown of Catch and Haul Costs

Item	Cost per kg (Rs)	% of Fishing Costs	% of Product Costs
Fuel	85.1	61.8	25.1
Water and Ice	10.6	7.7	3.1
Repair & Mainten.	26.60	19.3	7.9
Other	15.40	11.2	4.5
Total	137.75	100.0	40.6

Source: GDS

67. Therefore, not only is there high spoilage from lack of ice, refrigeration, and insulated holds, the cost of repairs and maintenance is high, as higher quality equipment and parts are forgone.[50] For imported parts, taxes and duties can be as high as 46 percent of import price.[51] Ice is the third highest cost of fishing, accounting for three percent of fishing and delivering costs, but is generally of insufficient quality, responsible for 10 percent of the post harvest losses.

68. Within the *administrative and export* costs, ocean freight to the European Union equals 70 percent of shrimp export costs and is well within the range of international freight costs. However, closer scrutiny of the data suggests that freight forwarding constitutes 7.6 percent of export costs -- almost twice as high as in Cambodia, for example. Government fees and taxes representing a quarter of export costs come from three areas: the petrol tax, 1 percent of export invoice; export development fund, 0.25 percent of export invoice; and unofficial, speed-money payments, approximately Rs1,250 per consignment. Exporting involves considerable amount of transaction time as well.

Table 3. 22 : Breakdown of Administration and Export Costs

Item	Cost per kg (Rs)	% of Admin & Exp Costs	% of Product Cost
Transport	10.39	69.5	3.0
Fees and Taxes	3.74	25.1	1.1
Administration	0.75	5.0	<0.01
Labor	0.07	0.5	<0.01
Total		100.0	

Source: GDS

Critical Issues

69. The open sea is the only resource currently available to Pakistan fish industry, *so the critical issues facing the shrimp value chain center around the costs and yields in fishing, open access to the resource, and the application of heath and safety standards*. The high proportion of catch which is wasted and the third of non-waste which spoils leave fishermen with low margins and little cash flow to upgrade technology. Processing in a situation of low capacity utilization also forgoes the needed scale economies. This, along with open access to the resource, has imposed supply constraints on the raw material.

[47] At 2005 prices of approximately Rs28.14/liter

[48] Though poorly enforced, the providing high quality ice is the responsibility of the Karachi Fish Harbor Authority, as designated under the Karachi Fish Harbor Authority Ordinance No. 11 of 1984 with the monitoring and inspection function defined under the Pakistan Fish Inspection and Quality Control Rules, 1998.

[49] According to trawler owners, they spend as much as 50 percent of their time searching for areas where fish are located

[50] These costs include items such as ropes, nets, wooden parts and other non-engine, and maintenance items. Given the mechanical nature of fishing and the wear and tear from sea conditions (wind, salt water, weight bearing stress, etc.), these items need replacement and are often considered operational expenses.

[51] Including 25 percent duties, 6 percent advanced income tax and 15 percent sales tax.

70. On the demand side, the lack of hygienic conditions starting with the fishing boats, through the landing sites and the auction house, and into the processors has led to a voluntary export ban to buy time to comply with EEC standards. Improved quality performance will help Pakistan take advantage of growing world demand for shrimp, but increased supply volume will be needed to absorb the added costs. Indeed, as described in more detail below, actions to improve the hygienic standards across the supply chain will go far to reduce the 30-35 percent wastage rate due to spoilage, presenting the industry with the opportunity to improve competitiveness on the demand as well as the supply side.

71. *High costs and low yields.* Operating costs -- specifically fuel and transactions costs in fishing -- are a burden on the competitiveness of Pakistani shrimp exports, particularly in view of the high amount of waste from both by-catch and spoilage in the shrimp value chain. Without the short term option of increasing lower-cost aquaculture, the industry must rely on improving yields and on gaining cost efficiency in open-sea fishing. Specific challenges include the following:

- *Technological upgrade.* Currently, most short-haul fishermen have limited, if any, technical equipment, that would let them economize on increasingly expensive fuel. Fishermen generally do not have a radio to communicate with other fishermen about fish runs, weather and current conditions, and other factors that improve fishing efficiency.[52] Icing equipment and vessel refurbishment are forgone as loss rates increase. A major constraint is the low margin and limited amount of free cash flow available to fishermen and ship owners, owing in large part to low fishing yields. Fishing costs such as fuel have risen, while shrimp prices have either remained steady or declined, imposing financing shortfalls and indebtedness for boat owners. Lack of access to affordable financing has suppressed investment in basic technologies and opened the door for informal financing channels, such as through mole holders.

- *Reduction in harbor overcrowding.* Although a 1996 FAO report suggested limiting the utility to 600 – 700 trawlers, approximately 2,000 trawlers occupied the fish harbor in March 2005. The costs of such over-crowding include wasted fuel spent waiting for berths, boat damage, and potential over-fishing. The long delays before off-loading typical of overcrowding also contribute to the high spoilage rate. Such congestion calls for improved management of vessel traffic.

- *Lowered transactions costs.* As a catch moves along the supply chain, a number of transaction costs are incurred. These costs include: (i) taxes and duties on imported parts and supplies; (ii) handling, auction, and dues for the mole holder and Fishermen's Cooperative Society (FCS); and (iii) high unofficial costs to clear and enter the port. Acting to the cost of production, stifle investment, and ultimately limit competitiveness, these costs need to be reduced to the extent possible so that Pakistan's fisheries can capture the rising demand in a global environment of low prices and thin margins. A number of export incentives are offered in the form of duty exemptions for fishing and processing equipment and subsidies for ISO certification, but difficulties with implementation and access limit their impact. However, continued reform of Pakistan's customs duties and further improvements in the functioning of the duty-drawback system, as recommended in Chapter 4 would also help improve competitiveness and encourage fishermen to undertake needed investments in upgrading.

[52]Three examples of simple technologies include: (i) an e*cho* location boat or on-board system to radio the location of the fish, but also the precise depth at which the fish may be caught, i.e., to what depth to lower their nets --estimated to raise income by around Rs48,000 per/trawler/trip through yield increases and fuel saving; (ii) a triad GPS on board which would provide an estimated net income increase of Rs50,000/trawler/trip, and costs Rs38,000, plus an operational cost of Rs108/minute; and (iii) a less expensive UHF radio with Single Sideband (SSB) on board to communicate with an on-shore base station and other boats to improve the fish location process –this option could increase gross income amounting to Rs20,000/trawler/trip but costs Rs45,000, plus a one-time registration fee of Rs1,000. However, the ban by the Army, Navy and the Maritime Security Agency (MSA) on civilian use of these radio bands/frequencies prevents widespread use. A base operator would also need to be established and financed.

- *Upgrading the management and infrastructure of Fish Harbor and Auction Hall.* To provide fishermen with adequate cash flow to upgrade vessels and invest in technology, post-harvest losses have to fall. Currently, the percentage of losses that result from spoilage at the Auction Hall is estimated to be about 10 percent due to poor icing and water and a further 8 percent due to lack of adequate storage. The provision of quality ice, cold storage, clean water and hygienic physical conditions is lacking, partly due to poor on-site management, an absence of performance incentives for the authorities and monopolistic control by mole holders and local government officials, directly and through the FCS. While facilities at Karachi fish harbor and auction house are being improved, additional costs and improvement in incentives to maintain the improvements will become increasingly important.

- *Training and technical support.* Improved yields require better knowledge of improved fishing techniques, sanitary management, and technical advances. While the FCS has the mandate to support fishermen in these areas and receives fees to do so, it is dominated by public-sector appointees who not adequately implemented the associations training mandate. With eight of fifteen members of the Board of Directors appointed by the provincial government, the body lacks independence and therefore does not adequately represent the private fishermen.

72. *Inadequate resource management.* The open-access issues associated with open-sea fishing also causing excessive waste and rapid exploitation of the resource. To create adequate incentives to lower waste and raise supply over the long run, the government and the private sector participants in the sector will need to better manage the fishing resource. The key issues involved are as follows:

- *Coordination of multiple organizations involved with support and regulation.* A wide range of federal, provincial, local, autonomous, and private institutions influence, support and regulate fishing. Issues ranging from access to the sea, coastal management, health and safety, customs, and environmental standards are of great importance from a regulatory perspective, while support and training are needed to upgrade production. Given the range of services, including sector regulation, technical support, trade promotion, and quality control according to jurisdiction and function, the myriad of regulations and institutions that influence the fisheries sector, the lack of coordination and the overwhelming confusion that result are not surprising.[53] The lack of effective regulation and the absence of technical support impede efficient use of the resource.

- *Lack of enforcement of fishing net laws.* A lack of law enforcement on the use of illegal nets allows PATAS or rice-shrimp netting and contributes to the high share of scrap fish, wasted resources, and the depletion of the fish landings.[54] The PATAS rice shrimp sells for only an estimated Rs3/kg but would sell for 40 times the price, if allowed to grow to full size. The high fixed costs of purchasing and equipping a boat cause small fishermen to use inexpensive but illegal nets to catch rice-shrimp, which lead to over-exploitation of the fish resource. Effective enforcement of fishing net laws according to the Sindh Fisheries Ordinance, 1980 (for Karachi), the Balochistan Sea Fisheries Act, 1971 and the Exclusive Fishing Zone Act, 1975 is needed.[55]

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[53] For example, the jurisdictional reach of various federal and provincial government agencies is defined according to area of the sea. Coastal waters (0 – 12 nautical miles) are the under the jurisdiction of various agencies of the Sindh and Baluchistan Provincial Governments which require no licensing, while deep sea fishing in Zone 1 (12 – 35 nautical miles) and Zone 2 (35 – 200 nautical miles) fall under the guidance of Federal Marine Fisheries Department of the Ministry of Agriculture, Food and Livestock which does require licensing. The federal government is also present in coastal waters through customs, immigration, maritime security, shipping and ports.

[54] Conservative industry estimates of the PATAS caught during this activity equal 50 MT/day, every other week from August through September; and 10 – 15 MT/day, every other week from October through July.

[55] The Exclusive Fishery Zone of 1975 conferred powers to the Federal Government which resulted in S.R.0. 329(1)/79 that regulates the use of appropriate net size in waters outside of coastal areas (more than 12 miles).

Table 3. 23 : Organizations and Their Roles and Responsibilities Related to Fisheries

	Planning & Development	Resource Management	Fisheries Management	Ports & Shipping	Resource Protection & Conservation	Development Program	Management Planning	Land Use Planning
National Level								
Planning Commission	X							
Environmental & Urban Affairs Division, (MoE)	X				X			
WAPDA	X					X	X	
Federal Institutes		X						
Federal Gov't (EEZ beyond 12 n.m.)		X						
Marine Fisheries Department			X					
Min of Communications				X		X		
Port Authority				X				
Pasni & Gwadar Port Authority				X				
Maritime Security Agency					X			
National Institute of Oceanography					X	X		
Indus Water Authority							X	
Environmental & Urban Division (MoHW)								X
Local Level								
Environmental Protection Agency	X							
Karachi Development Authority	X					X		X
Sindh, Dept of Forestry & Fisheries	X				X			
Balochistan, Dept of Forestry & Fisheries	X				X			
Balochistan Development Authority	X					X		
Gov't of Sindh	X	X*						
Gov't of Balochistan	X	X*						
Sindh, Fisheries Dept			X					
Balochistan, Fisheries Dept			X					
Provincial Depts				X				
Karachi Fish Harbour Authority				X				
Karachi Port Trust				X				
Korangi Fish Harbour Authority				X				
Port Qasim Authority				X				
Sindh, Evironmental Protection Agency					X			
Balochistan, Environemntal Protectin Agency					X			
Gov't of Sindh, Min. of Fisheries & Coastal Development						X		
Gov't of Sindh, Irrigation Dept							X	
Water & Sewage Board							X	
Gov't of Balochistan, Min of Fisheries & Coastal Development							X	
Sindh, Board of Revenue								X
Gov't of Sindh, Planning & Development								X
Gov't of Balochistan, Planning & Development								X

Notes
X* = up to 12 nautical miles
n.m. = nautical miles
Source: Compiled by Global Development Solutions, LLC based on findings from "Technical Assistance for Institutional Strengthening and Capacity Building in Coastal Marine Evironmental Sector Shahid, Amjad, July 2002

- *Inadequate technical knowledge about fish landings.* Market participants, including trawler owners and shrimp processors, are concerned over decreased fish landings in Pakistan. The lack of a comprehensive and updated survey[56] of fish stocks could not only sub-optimize the fish harvest taken by the Pakistani fish industry, but could also jeopardize future fish harvests if certain fish are so over-harvested that they do not recover. The lack of scientific evidence is apparent in the debate over continuing the annual June-July fishing ban which fishermen claim is no longer necessary but which remains a critical element in ensuring regeneration of the shrimp stock.

- *Lack of substantive shrimp aquaculture* The largest exporters of shrimp --China, Thailand, India, Canada, and Argentina-- utilize aquaculture to generate a large share of production. Moreover, as fish farming techniques become increasingly refined, it is expected that expenses will decline, supply will increase, and shrimp prices will fall, presenting a significant challenge to fishermen employing more expensive, open-sea fishing methods. Although aquaculture is practiced on a limited scale throughout Pakistan, the country's semi-arid climate, limited access to land, and lack of R&D makes aquaculture a distant option. Despite private-sector reluctance to invest in the practice, aquaculture has gained increasing attention from the government and NGOs in recent years.[57]

[56] The last survey of fish stocks in Pakistani waters was completed in 1982.
[57] One of the initiatives includes the promotion of shrimp farming activities along the Sindh and Balochistan coastlines. Within this framework, the Marine Fisheries Department is in the process of establishing a hatchery complex for the production of fish and shrimp seeds. In addition, Aquaculture Technologies Pakistan, a local consultancy, is developing a farming system suitable for local conditions.

73. *Improved compliance with sanitary and phyto-sanitary standards (SPS).* Related to the supply side challenges facing the industry, success in raising shrimp exports requires increasing attention to health and safety standards. Boats, harbor landing sites, the auction house and processing facilities need to be modernized and upgraded, while inspection and testing facilities are improved.. Adequate handling facilities are badly needed at Karachi but also at the other main ports in Korangi and Gwadar harbors. Since the UK absorbs almost a quarter of Pakistani shrimp exports while Germany and Japan account for 16 percent, the importance of maintaining hygienic conditions, for example in compliance with EU91/493 EEC, is paramount.[58] The Pakistan Fish Inspection and Quality Control Act, 1998, introduced in response to WTO agreements and trading partners, is currently the only SPS-related Act in the country. In addition, a range of regulations governing pre-shipment inspections and quality control functions regulate the fisheries sector. However, despite a comprehensive legal framework, the shrimp industry faces considerable challenges meeting food safety requirements for highly demanding export markets and maintaining its favorable "List 1" status in the EU market).[59]

74. *Compliance* with SPS standards involves a concerted effort from both the private and public sectors to upgrade facilities, management practices, and inspection/testing regimes. Processing plants are inspected and approved on an individual basis by the Marine Fisheries Department. Only approved vessels and processors are permitted to export to the EU. The Fisherman's Cooperative Association has the mandate to enforce the sanitary requirements at port landing sites and in the auction house.[60] Other institutions are also involved, including the Karachi Harbor Authority and the Quarantine Department. In parallel, the fish processing industry needs to upgrade its own management and sanitary practices and carry out "own checks" to demonstrate compliance with standards broadly based on Hazard Analysis Critical Control Point (HACCP).

75. The Ministry of Food, Agriculture and Livestock, supported by UNIDO has developed an action plan to upgrade SPS requirements and management and implementation has begun. Key elements include (i) specific investments in fish handling and personnel hygiene facilities, (ii) strengthening the legal framework as well as procedures for boat and processing inspection authorities from MFD, (iii) provision of training and advisory services for HACCP for processing facilities and (iv) developing a system to achieve "traceability" of fish destined for export markets. (For a detailed assessment of health, safety and quality standards as well as specific recommendations, see Chapter 7 below).

[58]EU legislation specifies detailed requirements regarding the landing of fish, structure of auction markets and processing facilities, processing operations, transportation storage, packaging checks on finished products, laboratories and the quality of ice and water.

[59] In March of 2005, based on the findings of an EU inspection visit, the Government of Pakistan imposed a ban on exports of seafood to the EU to give the industry time to enhance quality and safety standards and prevent an EU imposed ban, which could have had catastrophic results for the industry. Estimated losses range from US$10 - 40 million during the first months of the ban. Since then, EU inspectors noted improvements, but have raised serious concerns regarding the inspection and sanction system on the part of the Government coupled with industry deficiencies, including inadequate processing, unhygienic fishing vessels, and poor conditions in the harbor and auction house. Currently, most shrimp trawlers are not approved for EU export, and only 5 processing plants are approved to export directly to the EU.

[60] Ports other than Karachi and Korangi, accounting for 10 percent of fish exports to the EU, are not under official control.

C. AN INTEGRATED VALUE CHAIN ANALYSIS OF MARBLE TILES

Background

Dimensional Stones
Estimated Global Production
(mill m2)

Year	Production	Finished Products	Total
1996	88.4	171.0	259.4
1997	103.7	179.2	282.9
1998	96.7	181.7	278.4
1999	111.5	195.8	307.3
2000	120.6	212	332.6
2005	179.2	315.1	494.3
2010	266.4	468.4	734.8
2015	396.1	696.2	1,092.3
2020	588.8	1,034.8	1,623.6
2025	874.7	1,538.3	2,413.0

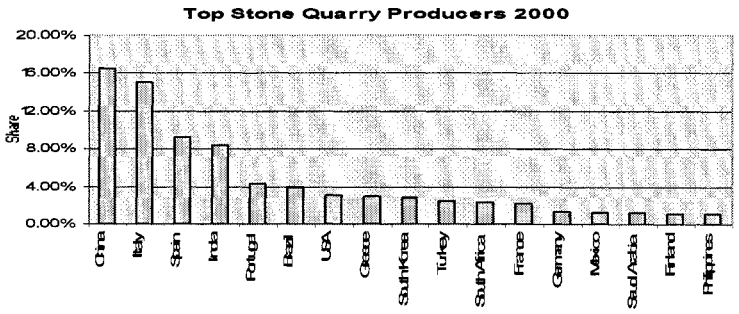
Sources: Mineralzones.com 2005 and Dimension Stone Advocate News, April 2005

76. The processing of dimensional stones has seen dramatic and varied improvements over the last 40 years. Throughout the value chain -- across quarrying, cutting, polishing, and finishing technical advances have improved quality and lowered production costs through simpler and cheaper production methods.[61] Prices on the main global markets have been relatively constant over the years, confirming a long-term trend caused by rapid technological development and easier trade. At the same time, the global construction boom has increased the demand for building materials in Europe, the United States and Australia, and marble along with other high-value added materials, is in great demand, particularly in North America. As a result, global net production rose by a third in the five years ending in 2004, reaching 50 million tons. International marble and granite trade alone is approaching 20 million tons (valued at around US$4 billion) or around 35 percent of world production. These growth and trade trends will likely continue as production levels are estimated to more than triple over the next 20 years.[62]

Table 3.25: Top Exporters of Marble and Granite 2002

	Mill $	Thousand tons
Italy	1,597	3,974
China	1,035	7,197
Spain	546	1,360
India	530	2,449
Brazil	280	1,058
Pakistan	7	21

Source: Mineralzone.com, SMEDA



77. Dimensional stones, of which marble is one, are produced in over 40 countries around the world, of which around 12 dominate. They include China, Italy, Spain, Portugal, and India, accounting together for 53 percent of world quarrying production. Italy, China, Spain, Japan, Taiwan, Portugal, Germany, France, USA, and Greece have developed highly efficient technology with good supply-chain linkages. India's sector has also improved considerably in the last 20 years. Italy has historically been the major producer of stones for the building trade, commanding 38 percent of the dimensional-stone export market as well as being the leading importer, accounting for over 18 percent of total global imports. While imports of marble exist in over 50 countries, the principal importers, in addition to Italy, include the U.S., China, Japan, Germany and Hong Kong. Turkey, Switzerland, Lebanon, Taiwan, South Korea, and Malaysia have joined the EU, USA, and Japan in having developed a strong processing base.

[61] Cutting, sizing, profiling, and polishing technology has changed from using simple blades, wires, and cutting tools to highly efficient cutting machines and abrasive materials.
[62] GDM Stone Industries Handbook, Mineralzones.com 2005, and Dimension Stone Advocate News, April 2005.

Table 3.26: Pakistan's Marble Mining Sector Profile

Estimated Reserves	2-3 billion tons
Total Number of Active Mines[63]	350 - 500
Micro Mines (3 - 5 tons/day)	325 - 375 (~85% of total)
Small Mines (5 - 20 tons/day)	25 - 65 (~10% of total)
Medium Mines (05 - 100 tons/day)	10 - 15 (<5% of total)
Processing Units	>1,200 (estimated)
Production (2004)	1,545,000 MT
Production Ave Annual Growth (%)	
1997-2002	19 percent
2003-2004	50 percent
Exports	
1997/98	$5 million
2003/4	$20 million
Product Use	Slabs, tiles, crafts, furniture
Total Estimated Waste (of which)	74% - 85%
Mining	61% - 73%
Processing	55% - 65%

Sector Profile

78. Mining and quarrying represent an important activity in Pakistan's economy, contributing around 0.5 percent to Pakistan's Gross Domestic Product since 1990. Moreover, mining has a high presence in the poor areas of Pakistan where the industry's development could further employment and income generation. Deposits are found mostly in NWFP and Balochistan. According to industry sources, there are around 1600 processing units in the country with as many as 932 marble processing factories in the NWFP alone. Most of the processing units in NWFP are micro units with 1-3 cutters, and the bulk of processing for export takes place in Karachi.

Table 3.27 Provincial Marble Production (MT)

	1997	2000	2003
Punjab	2.2	.4	nil
Sindh	2.3	1.0	3.6
Balochistan	79.7	158.1	242.9
NWFP	260.7	419.3	895.7
Pakistan	344.9	578.7	1,142.1

79. Marble is one of the largest minerals extracted, but others include coal, chromium, rock salt, limestone, china clay, dolomite, fire clay, gypsum, and silica sand. The quality of the raw marble extracted from Pakistan is one of highest international standard with potential to bring top end prices. However, only a small number of mines has enough capacity to produce significant orders for the international market. Most mines are micro operations, which extract marble to be used for producing tiles and handicrafts and only produce a few slabs suitable for high-value goods like larger furniture and decorative pieces. On a per-capita basis, the Pakistani industry is larger than India's but the percent of extraction, level of productivity, technology, and trade orientation are far behind.

80. Despite reserves of high quality marble[64] over 90 percent of all Pakistan's marble is sold in the domestic market or in Afghanistan. India, by contrast, exports more than half of its production. While growth of production has been high at over 20 percent per annum over the past decade, and exports have quadrupled between 1997 and 2004, in recent years, the construction needs in Afghanistan have led to

[63] Information obtained from SMEDA and Directorate General Mines and Minerals, NWFP.

[64] Though 168 million reserves are considered to be known, some estimate reserves at 1-3 billion tons with the greatest concentration of reserves are Chitral, Swat, Buner, and Mardan. See for example, *Economic Review*, March 2003, Marble Industry, p55 and *Investment Study on Minerals Based Industries*, by Expert Advisory Cell, April 2004. The highest reserve concentration is in Chitral, Swat, Buner, and Mardan.

a doubling of production over the past two years. Even so, Pakistan marble exports of around US$20 million account for only about 0.5 percent of global trade.[65]

Table 3.28: Comparison of Indian and Pakistani Marble Industries

	India	Pakistan
Reserves of marble ('000 MT)	1,200,000	168,000
Annual production 2002 - 2003 ('000 MT)	5,970	1,142
Percent of production which is exported	>50	<10
Percent share of total world trade in marble	>10	<1
Gang saws in operation	>1,100	<150
Workers (approximate)	165,000	25,000
Average Annual Productivity (ft^2 per worker)	36	24

Sources: Global Development Solutions, LLC; Rajasthan State Industrial Development & Investment Corp; Indian Stone Industry -- An Insight (Kumar/Singh)

81. Moreover, marble producers sell in predominantely low-value- added segments of the market: marble chips and powder dominate sales to Bangladesh, and raw or roughly cut marble goes to markets in Italy, Taiwan and increasingly to China. The bulk of exports is in the form of raw blocks of unprocessed stone. Though the Afghanistan construction boom is temporarily sustaining a production boom in Pakistan, sustained global competitiveness in processed marble products will depend on increased outward orientation or higher-value-added products, exploiting rapidly advancing technologies throughout the industry as described in the processing profile below.

Product Profile

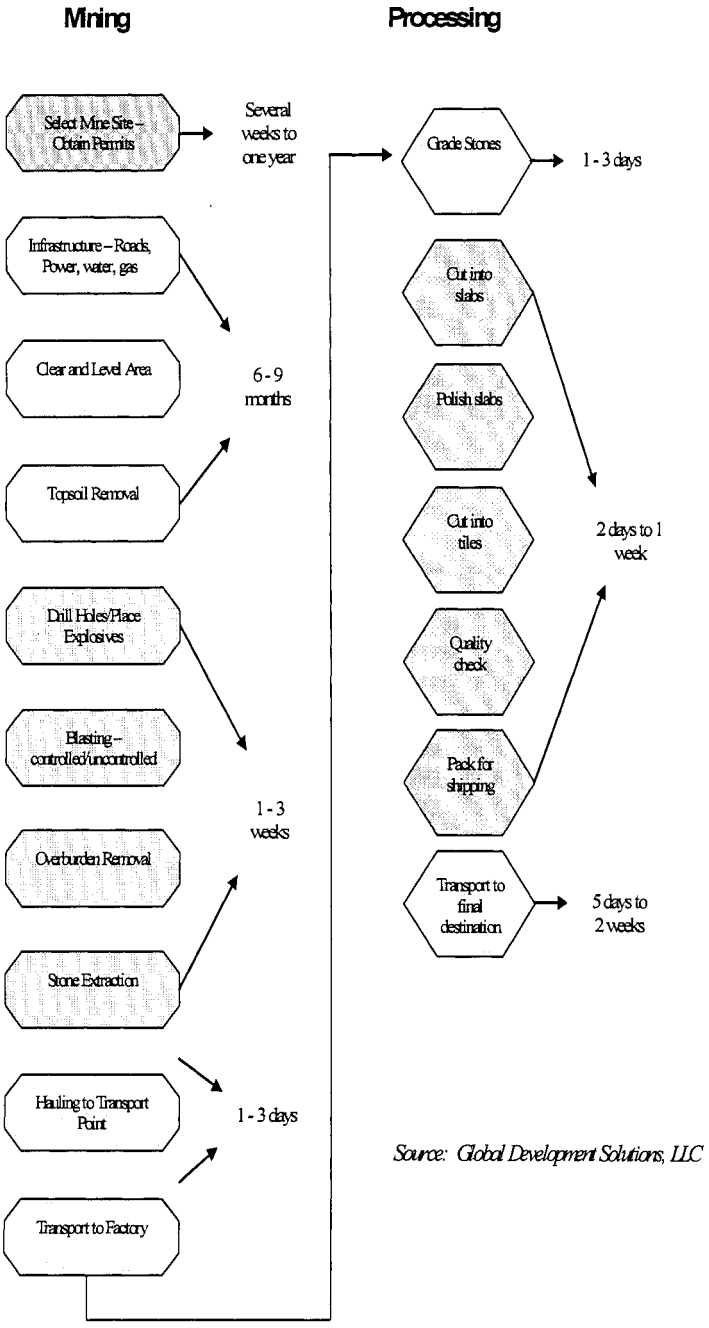
82. The value chain analysis examines polished floor tile one square foot by 2cm made of Badal marble popular for use in homes and offices. It is sold domestically, exported to Afghanistan and to a lesser extent exported to Europe and parts of Asia. The marble example under analysis is extracted from a mine in NWFP where this type of marble is very common, using an uncontrolled blasting extraction method. Used for production of tiles, it is cut and processed in NWFP and transported to Karachi for packaging and shipment.

Process Profile

83. The first step to open a mine in NWFP is a concession from the Mining and Mines Department, which has sole responsibility for reviewing and granting licenses and leases. The first license is a Reconnaissance License, which is good for one year and can cover an area as large as 5,000 square kilometers, allowing the company to determine if there might be minerals in a selected area. After location of minerals, Exploration Licenses good for 3 years with two possible three-years each possible three-years renewals gives the right to explore with heavy equipment. The next license, the Mineral Deposit Retention License and mining lease is good for as long as 30 years. Licensing costs to open the mine can reach 200- 350 thousand rupees depending on the number of renewals.

[65] While Pakistan exports marble to as many as 52 countries, the main markets have been the United States, Taiwan, Gulf States, Europe and to a lesser extent, East Asia. However, the recent production boom has been in large part directed to Afghanistan. These exports generally are not been fully reflected in the official trade statistics.

Figure 3.17:



Source: Global Development Solutions, LLC

84. After preparing the site by clearing, leveling, and removing topsoil, geologists specify the best techniques for blasting. Typically, the optimal extraction method is to drill holes around the desired block size and using hydraulic and splitting equipment, remove a square block of bed-rock. These blocks, can weigh up to 8 tons for large blocks and 5-7 tons for small ones. They are priced from Rs 200-Rs 2000, depending on the size and quality.[66] The blocks are used to produce "slabs" used for higher-value-added products including tabletops, kitchen counter tops, wall facing, and flooring. However, only a fifth of extracted marble is in the form of small and large blocks.

85. The generally used mining technique of filling holes with explosives and blasting produces boulders of irregular shape which often contain cracks. Most mines in Pakistan do their blasting without employing geologists. The large boulders with a standard weight of around 2 tons and the smaller "chowka" boulders weighing up to 50 kilograms, although only by-products in international mining, are the main product line in Pakistan, accounting for around three quarters of mined marble. Fetching between Rs120 – Rs 300 per ton for large boulders and Rs 80 per ton for chowka, the marble is used to produce polished and unpolished tiles. The blasting blows blocks, boulders, stones and rubble free from the blast site. The most valuable pieces are chosen and put on the truck with crane and pulleys,[67] while the rest is left as waste.

86. After exit taxes are paid, the blocks and boulders move by truck to factories where they are inspected and graded. The cheap, locally manufactured cutting machines, with 40-45 blades used in the processing phase are unable to do precision cutting job and produce inconsistent thickness of the marble tiles. Modern cutting uses an imported, 60-blade gang saw or more often, block cutters to turn the blocks into slabs for large blocks or, in the case of boulders, into tiles. Polished or more often not, tiles are packed for shipping and transported.[68]

[66] Quality in the case of marble, depends on color, evenness of shades and other aesthetic qualities.
[67] Although the mining leases explicitly state that there will be no blasting at the mines, every mine does it.
[68] Though most exported tiles throughout the world are polished, 80 percent of tiles produced in Pakistan are not.

Table 3.29: Marble Tile Costs
(Rs per ft²)

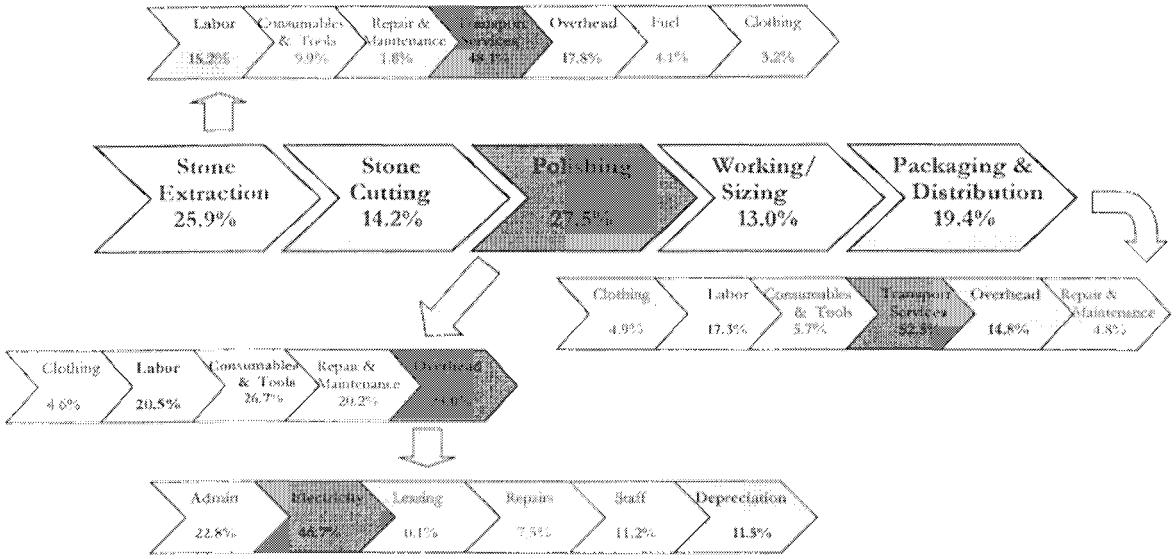
	Extraction	Cutting	Polish	Working & Sizing	Package & Distributing	Total
Unit Cost	5.6	3.1	5.9	2.8	4.2	21.7
% of Total	25.9	14.2	27.5	13.0	19.0	100.0

Source: GDS

Value Chain

87. The value chain for a polished marble tile involves five major activities: extraction; cutting, polishing, working/sizing, and packaging/distribution. The cost to produce a square foot of polished marble tile was estimated at about Rs21.70. Of this amount, polishing costs account for 27.5 percent, followed by stone extraction at 25.9 percent and packaging and distribution at 19.4 percent.

Figure 3.18: Value Chain for Polished Marble Tile



88. *Extraction.* Half of extraction costs go to *transport services.* Another 18 percent is attributed to overhead -- in large part *electricity* and depreciation of motor vehicles. *Labor* adds another 15 percent. The cost of extraction is high principally due to: (i) the high price of electricity; (ii) remote locations and poor roads that elevate transport and repair costs; and (iii) blasting techniques that contribute to excess waste and result in cracked, potato shaped blocks that are inefficient to transport and inadequate for higher-value-added slabs.

Table 3.30: Breakdown of Extraction Costs

Item	Cost per ft² (Rs)	% of Extraction Costs	% of Product Costs
Labor	0.84	15.1	3.9
Fuel	0.23	4.1	1.1
Consumables & Tools	0.55	9.9	2.6
Repair & Maintenance	0.10	1.8	0.5
Clothing	0.18	3.2	0.8
Overhead	0.99	17.8	4.6
Transport Service	2.67	48.1	12.4
Total	5.55	100.0	25.9

Source: GDS

89. *Polishing*. For exportable products, the polishing costs represent the highest cost in the value chain as marble traded in the international market is polished at the factory[69] while most tiles sold in Pakistan are polished after installation. The cost breakdown reveals that *overhead* accounts for 28 percent of the cost of polishing, while *consumables and tools* account for 27 percent, and *labor* for 21 percent. *Repairs* generate another fifth of polishing costs

Table 3.31: Breakdown of Polishing Cost

Item	Cost per ft^2 (Rs)	% of Polishing Costs	% of Product Costs
Labor	1.20	20.5	5.6
Consumables & Tools	1.58	26.7	7.4
Repair & Maintenance	1.20	20.2	5.6
Clothing	0.27	4.6	1.3
Overhead	1.65	28.0	7.7
Total	5.90	100.0	27.5

Source: GDS

90. As a share of marble polishing, overhead is high, because capital-intensive production, requiring high electricity input, characterizes the process. In addition, since the marble industry requires significant amounts of water from wells, electricity intensive pumping systems are needed, further raising the power requirements. However, even though production technology is high for polishing, and despite the high cost and low reliability of power supply in Pakistan, the electricity share of total production costs, as compared to other nations, is relatively low, due to the relatively less mechanized processing of marble in Pakistan. As a result, the labor share of production costs is much higher in Pakistan than in comparator countries. In addition, due to relative prices that favor a more labor-intensive production process, the quality of the final product on the export market suffers as a result. The consumables and tools category involves relatively high cost items marble-processing companies import all blades, tips for blades, polishing crèmes and related substances. These items generally carrying high duties and taxes,[70] with the costs often increased by valuation and classification problems with customs procedures, requiring excessive official and unofficial payments.[71]

Table 3. 32: Comparative Costs of Electricity and Labor in Polishing (ft^2 tile)

	% of Cost	
	Elect.	Labor
Jordan	10.1	2.5
Pakistan	12.6	21.1
Turkey	12.9	9.2
Palestine	14.2	5.4
Italy	18.0	14.2
Egypt	23.0	3.2

Source: GDS

91. *Packaging/distribution.* Packaging and distribution account for a combined 19 percent of total production costs broken into *transport services* (52 percent), *labor* (17 percent) and *overhead* (15 percent). *Packaging material costs* are not represented, but the failure to use them in transporting exportable tiles from NWFP to Karachi for finishing and export leads to excessive damage en route and adds to an already high level of waste.[72] In fact, tiles are cut larger to anticipate damage from poor packaging and bad roads.

Table 3.33: Breakdown of Packaging and Distribution Cost

Item	Value per ft^2 (Rs)	% of P&D Cost	% of Total Cost
Labor	0.72	17.3	3.4
Consumables & Tools	0.24	5.7	1.1
Repair & Maintenance	0.20	4.8	0.9
Clothing	0.20	4.9	0.9
Overhead	0.61	14.8	2.9
Transport Service	2.18	52.5	10.2
Total	4.16	100.0	19.4

Source: GDS

Critical Issues

92. Given the quality of the stone in Pakistan and the growing demand globally for good marble, high

[69]Exported marble tiles for Afghanistan, the European and Asian markets are polished in the factories, using polishing equipment which can range from trolley & single head drive polishers to state-of-the-art Italian made bridge polishing machines. Most polishers use a skilled worker with a manual polishing machine.

[70]Imported blades from China and South Korea require duties and taxes amounting to: 15 percent duty, 15 percent general sales tax, and 6 percent advanced income tax. General sales tax and advanced income tax are deductible, duty is not.

[71] Examples given include artificial diamonds for blade tips classified as *real diamonds* to inflate duties and taxes.

[72] Processors, in transporting goods to Karachi, cut tiles 25 percent larger than the specified size.

returns are possible if effective policy adjustments, better management, and improved investment come to Pakistan's marble industry. Currently, the mining and processing industries lack the proper equipment, skilled manpower, and transparent, consistent, regulatory environment they need to engage in quality production suitable for the international market. Extraction and processing technology in Pakistan is crude as compared to modern production methods. Access to new international markets requires that marble mining, stone cutting, and tile finishing be done in such a way as simultaneously to induce economically sound management of the resource and, raise the quality of the final product. The current approach by the industry wastes most of the extracted marble and forgoes quality production in exchange for fast and low-cost returns. Foreign investment in the sector is non-existent. A number of critical issues require attention by both private participants and the public sector as the industry regulator and manager of the resource.

93. *Nascent sector strategy.* Working through technical expert groups, a large number of stakeholders, orchestrated by the Ministry of Industry through SMEDA are developing a sector-wide strategy for marble and granite, including support for a model marble mine to assist with technical and management skills. However, while the sector strategy is examining in detail, technical, skill and market issues of great importance to private operators, issues relating to the regulatory, governance, and property rights issues have not been examined sufficiently to guide relevant government policy. Exploitation of the country's mining resources involves a range of issues falling within the responsibility of the federal, provincial and local authorities and requires good dialogue across a range of stakeholders. Accordingly, a comprehensive, industry-wide, strategic approach is needed to identify policy and regulatory weaknesses, coordinate various interventions, and manage the inter- and intra- government coordination.

Table 3.34: Mining Concession Regulatory Framework for the NWFP

License/Lease	Fee (Rs)	Duration	Time to Process	Area Covered km^2
Reconnaissance License	15,000	1 year	3-6 months	100 to 5,000
Exploration License	2,500 (50,000 renewal)	3 years (3 years renewal)	3-6 months	≤ 500
Mineral Deposit Retention License	100,000 (10,000 renewal)	2 years	3-6 months	Exploration license and less
Mining Lease	100,000	Up to 30 years	3-6 months	≤ 250

Source: Directorate General of Mines and Minerals, NWFP

94. *Licensing and concession regime.* All minerals are the property of the state, leased to the investors under contractual arrangements with the relevant government. The surface land under which the mineral lies is the property of the land holder. Therefore a key consideration encouraging the sustained domestic and foreign investment needed to upgrade the competitiveness of the industry is confidence in the documentation and enforcement of property rights covering lease arrangements, land ownership, and the payment of surface rent. Without confidence in the robustness of this complex system of property rights, the large amount of investment needed to upgrade the methods, equipment and quality of the mining will not be forthcoming. Banks remain unwilling to lend to the industry because of uncertain collateral and property rights issues, further hindering technological advance and investment. Although provincial governments are acutely aware of deficiencies, and steps have been taken to strengthen the clarity and sanctity of property rights associated with mining, significant uncertainty remains.

- *Application, renewal and assignment of mining leases.* It reportedly requires up to six months to process applications for the various licenses leading to a mining lease. The process often involves considerable discretion on the part of the provincial authorities based on vague wording in the mining rules. In addition, assignment to second parties and the inclusion of third parties (e.g. in the case of joint ventures), requires surrender of the lease and application for a new one.

The mining rules allow unchecked power on the part of the leasing authority, creating the possibility that 30-year leases can be cancelled with the stroke of a pen without recourse. Investors require certainty in the security of tenure with recourse available through independent adjudication.[73]

- *Surface rent and land ownership.* As the mining lease refers to Government concessions for underground marble, payment of rent to the rightful owners of the surface land is required for miners to gain access. However, due to lack of clarity in land ownership as well as the terms and conditions associated with surface rents, disputes often arise between miners and land owners causing disruption and sometimes stoppage of the mining activity.[74]

- *Land hoarding.* Leases require all efforts to mine the minerals for which the lease is written. Processors and miners report, however, that provincial governments issue leases to people who do not mine and are believed to be holding the leases as property investments.

95. *Mining techniques.* In large part due to uncertainty of property rights and the inability to upgrade the machinery needed for world class extraction techniques, miners take the short-term approach in blasting marble from the ground. Uncontrolled blasting creates a number of quality problems in the final product, in processing productivity, and in the long-term viability of the mine itself. This particular form of blasting produces the potato-shaped boulders rather than square or rectangular blocks which: (i) yield significantly fewer saleable tiles;[75] (ii) cannot be exported as high value added slabs;[76] and (iii) are more expensive to transport (not only due to lower volume, but additional waste from damage).

96. *Wastage.* Due to the nature of stone extraction and the poor techniques and technology used by industry participants, industrial waste in marble extraction and processing is higher in Pakistan than other major competing countries. Most cutters do not make full use of the excess marble that results from cutting the irregular shaped block into tiles. Such mining methods cause cracks in the blocks and mine, while forcing processors to discard as much as 60 percent of the material they receive. Compared to the world average for quarry wastage of 41 to 50 percent of the gross amount produced, in Pakistan quarry loss regularly exceeds 70 percent and processing losses similarly far exceed international benchmarks. Moreover, without an ecological system for disposing of industrial waste, processors recycle their water and dump the slurry outside their facilities, to rivers, lakes and processors leave the chips and other debris from the cutting of blocks in their yards, deposit them on the sides of the road or dump them into a field.

Table 3.35: Percentage of Waste in Marble Mining and Processing (2003-2004)

	Mining	Processing	Total
Pakistan	61-73	55-65	74-85
India	30-50	15-25	45-75
Egypt	30-55	15-25	45-80
Jordan	25-55	10-20	35-75
Australia	25-50	20-30	45-80
Italy	20-40	5-10	25-50

Sources: GDS, Master Marble (Pvt) Ltd., American University of Cairo, Stone World.

97. *Absence of geologists and geological survey technique.* In addition to the blasting as the predominant extraction technique, miners routinely forgo the use of geologists and geological surveys to determine the optimal approach to opening the mine. [77] The result is that mines are often opened improperly, a pattern causing unsustainable losses and closure.

[73] The new mining rules in NWFP envision a dedicated mining magistrate to fulfill this role.

[74] The new mining rules in NWFP attempt to address the surface rent issues with severe criminal penalties for disruption of mining operations.

[75] The productivity of processing is severely hindered by the upstream blasting techniques. Estimates are that processing would be twice as efficient due to the space taken by boulders as compared to square blocks and the time spent on cutting undesirable portions of the block. Wear and tear on processing machinery is also higher.

[76] Transactions involving slabs fetch a much higher price and profit than do a comparable number of tiles. On a square foot basis, a slab can bring as much as 50 percent more in price and without the extra labor involved in cutting each individual tile.

[77] In addition to the improved quality of the blocks, use of geologists avoids improper blasting and irreparable, long-term damage to their mines and extensive environmental damage.

98. *Quality cutting.* Because there are few well-functioning gang saws in Pakistan, quality control is a major issue for the industry. The prevailing industry variations in tile thickness can be as much as 3 to 4 mm, while international buyers allow variations of 0.5mm-1.00 mm for tiles. Gang saws are machines with multiple blades that make several parallel cuts at once. As an industry standard, competitiveness in the marble industry requires a large increase in the number of operating gang saws.

Table 3.36: Gang Saws

Italy	1,880
Brazil	1,520
India	1,100
Pakistan	136

Source: Milanez & Milanese, GDS

99. *Transportation costs.* Transport costs throughout the value chain are high, constituting around half of the costs of extraction and distribution and almost a quarter of total costs between mines and factories and from the factories to the point of distribution.[78] Pakistan has the highest cost of transportation as a percentage of the total cost of the production of marble and related stones, when compared with four stone-producing countries.

Table 3.37: Percent Share of Transport Costs in Total

Pakistan	23
India	15-21
Lesotho	18
Italy	<10

Sources: GDS, American University of Cairo, Stone World

100. However, when comparing the cost of transport in Pakistan with other countries using cost-per-kilometer ton, Pakistan compares favorably except to India and Indonesia. High transport cost incurred result from: (i) the distance between mines, processors, and the port; (ii) road conditions on these routes; (iii) the condition of the trucks; and (iv) the inefficiency of transporting blocks of irregular shape, in terms of number of blocks and number of tiles per block. The number of payments and fees required to move the block stone from the mining areas to the processors also add costs to the transportation.

Table 3.38: Cost of Inland Transportation

	US$/Km/Ton
India	0.019
Indonesia	0.023
Pakistan	0.024
Ethiopia	0.038
Tanzania	0.057
Kenya	0.059
Mozambique	0.146

Source: GDS, Ethiopian Roads Authority, CIA World Factbook, Cement Manufactures Association of India

Table 3.39: Documented and Undocumented Fees in transporting raw marble from the mines to the processing facility

Description	Rs/ton
DGMines and Minerals of the NWFP. (Documented).	25
Tribal Leader Gunda Tax for security protection (Undocumented).	20
Political Agents in FATA, (Undocumented).	20
Cost of freight within 75 kilometers of Peshawar (Documented).	400
Tribe Tax or surface rent paid to Land Owners.(undocumented)	30
Total	495

Source: Interviews by Global Development Solutions, LLC

[78] Transportation from NWFP to Karachi is handled by a large company and many smaller (1-2 truck) operations.

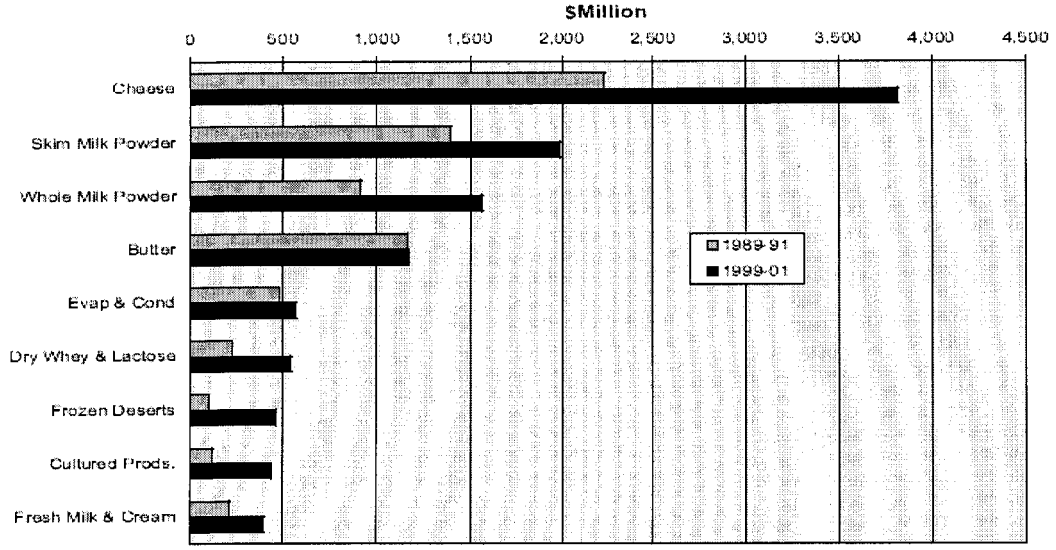
D. AN INTEGRATED VALUE CHAIN ANALYSIS FOR POWDERED MILK

Background

101. International trade in dairy products is only 5 percent of world production and dominated by a few countries. India, the U.S. the European Union, Russia and Pakistan are the world leaders in both milk production and consumption. Australia and New Zealand are the leading exporters with a combined market share of half of the world trade. For Pakistan as the fifth largest producer of milk, the sector has particular national significance as the livestock sector employs 33 million, mostly lower-income people for whom livestock products account for 30-40 percent of income and supply a significant amount of own food. As only a very small share of milk production is exported in raw or processed form, improved value added and competitiveness in the dairy sector represents an important potential driver behind non-farm incomes in rural areas.

102. Cheese and milk powder dominate world trade in processed products with skim and whole powder growing by over 50 percent over the 1990s to become a $3.5 billion export industry. The high rate of growth is expected to continue, fueled in part by the rapid pace of economic growth in Asia, particularly China, where imports grew 24 percent in 2004 and are projected to rise another 28 percent in 2005.

Figure 3.19: Dairy Exports by Sector



103. For Pakistan, key drivers behind the prices and trade of processed dairy products are: (i) domestic market demand with limited exposure to export markets; (ii) domestic supply fluctuations and projected excess capacity in processing; and (iii) policy intervention in international dairy prices. The demand for processed milk, such as UHT (a segment that uses most of the powdered milk for reconstitution) comes from households in urban centers from distributors to balance peaks and troughs in the supply of fresh milk ($10-12 million of powdered milk is imported for this purpose), and from industry, primarily ice-cream makers. Generally, because Pakistani demand for powdered milk is limited, the need to enter growing export markets is rising. On the other hand, domestic supply of milk for processing is characterized by strong seasonality

Table 3.40: UHT Milk Production Capacity and Consumption 1995 -2010

(Million Liters)

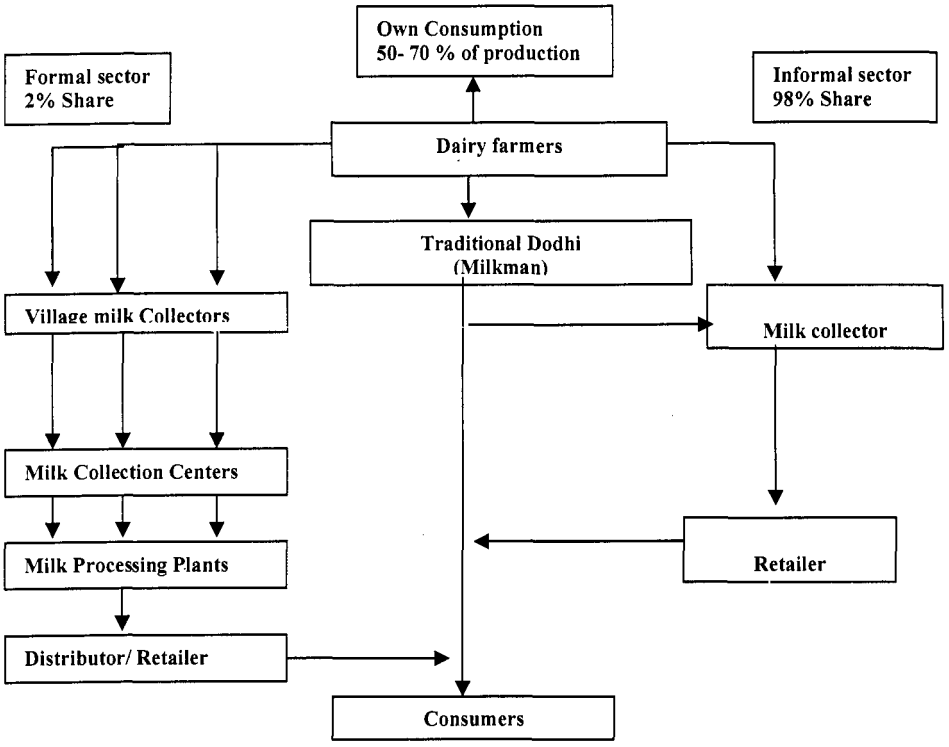
	Production Capacity	Consumption	Surplus
1995-2004	141.2	141.6	-0.4
2005-2010	534.5	326.3	208.3

Source: Lahore University of Management Sciences

and within seasons, volatile supply due to the high dispersal, small size and low productivity of dairy farms as well as inadequate chilling and cold chain facilities in Pakistan. Projecting from current trends, the domestic processing capacity of UHT, on average, is expected to exceed demand by 208 million liters a year over the next six years.

104. While domestic market conditions and growing world demand underscore the great market potential of processed dairy products, international subsidies of dairy products through intervention prices, support policies, and other trade-related incentives, constrain an export orientation strategy for Pakistan and other developing-country, processing companies by depressing world market prices;[79] pushing developing country exporters out of third markets, and undermining domestic markets.

Figure 3.20 : Milk Production-Collection Flow Map



Sector profile

105. *Livestock.* The livestock sector is one of the most important agricultural sub-sectors with a share of total agricultural value-added of 46.8 percent and a contribution of 10.8 percent to the country's GDP. It employs 35 million people and produces almost $500 million of products, more than major crops. Of the total 6.62 million privately owned farms, the vast majority are small farms of less than 2 hectares that maintain herds of 1 to 3 animals. Milch animals of Pakistan in

Table 3.41: Animal Stock and Milk Production 1999 - 2004 (millions)

	1999	2000	2001	2002	2003	2004
Animals	43.6	44.7	45.7	46.8	48.1	49.3
Buffaloes	22.0	22.7	23.3	24.0	24.8	25.5
Cattle	21.6	22.0	22.4	22.8	23.3	23.8
Milk (MT)	24.3	24.9	25.6	26.3	27.1	27.9

Source: FAO Statistics.

[79] For example, a 2001 Australian government study showed that if the volume of subsidized EU and US dairy exports were halved, world dairy prices would be between 17 percent and 35 percent higher. ABARE Report, 'Trade Liberalization in World Dairy Markets', 2001.

2003 numbered 26.3 million -- 14.9 million buffalo and 11.4 million cows.[80] In the same period, 'in-milk', or milk producing livestock totaled 7.2 million cows and 9.5 million buffaloes.

106. *Milk Production.* Pakistan, the fifth largest producer of milk in the world, produced 28 million metric tons in 2004, a volume reflecting increases at an average rate of almost 3 percent since 1992. This growth, however, has been due to an increased number of dairy animals rather than to improvements in technology or in yield per animal.[81] With far the lion's share in both milk production and number of dairy animals, Punjab is responsible for around 80 percent of the country's total milk production.

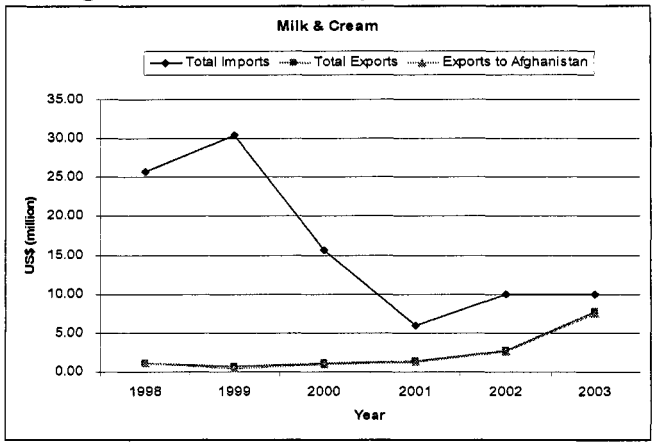
Table 3.42: Milk Production in Selected Countries
(Million Metric Tons)

	1999	2000	2001	2002	2003	2004
India	78.1	81.0	84.8	89.5	91.2	90.4
U.S.A	73.8	76.0	75.0	77.1	77.2	77.5
Russia	32.3	32.2	32.9	33.5	33.3	31.1
Germany	28.3	28.3	28.2	27.8	28.3	28.0
Pakistan	24.2	24.9	25.6	26.3	27.1	27.9
France	25.3	25.4	25.4	25.7	25.1	24.7
Brazil	19.8	20.5	21.2	22.4	23.4	23.4
U.K.	15.0	14.4	14.7	14.8	15.0	14.6
Ukraine	13.3	12.6	13.4	14.1	13.6	13.9
Poland	12.2	11.8	11.8	11.8	11.8	12.4
World	561.1	571.0	580.6	593.7	605.5	605.2

Source: FAOSTAT

107. Rural subsistence farmers, with 27 percent of total buffalo and 36 percent of total cattle stock in Pakistan, consume over three quarters of the milk produced within their own households.[82] Moreover, of milk not consumed within the farm or household, only 2 percent is marketed by the formal, organized sector. The rest is collected by a loosely organized of informal milk-men (gwalla) and collectors (dodi). Not surprisingly, exports of milk have been negligible (over $7 million in 2003) until recently, and 95 percent of the 7-8 million tons exported have gone to Afghanistan with the remainder to Uzbekistan (2 percent), Korea (2 percent) and Mauritius (1 percent).

Figure 3. 21: Pakistan Dairy Trade 1998 - 2003



Source: UN Comtrade, SITC Rev3.

108. *Milk processing.* The majority of the 28 powder and UHT processing facilities of which only 12 are operational, are all located near Lahore, the hub for the industry. After the first UHT plant was set up in 1977, 20 more opened in the subsequent decade. Since then, low demand has kept capacity low and caused some plants to cease operating. Currently, the six functioning powder-milk production and six UHT plants operate at capacities ranging from below 50 percent to 75 percent. Installed capacity today far exceeds the demand, with production levels of 23 and 15 thousand MT in 2002 and 2003, compared to capacity of 59,000 MT. Milk-based imports, mostly from the US, Germany and New Zealand, have decreased from US$30 million in 1999 to around US$10 million in 2002 and 2003.

[80] In other words, wet 'in milk' animals that were not dry and/or not calved yet.
[81] A Review of Milk Production in Pakistan with Emphasis on Small Scale Producers, 2002 FAO Working Papers.
[82] They usually have 1 to 3 animals, and have very little cash, precisely because they subsist on milk and milk processed foods, the main product of their labor. Animals are milked twice a day, and the output is supplied to milkmen (gawallas) who directly supply other consumers with open milk to be consumed at home.

Product profile (Processed Milk)

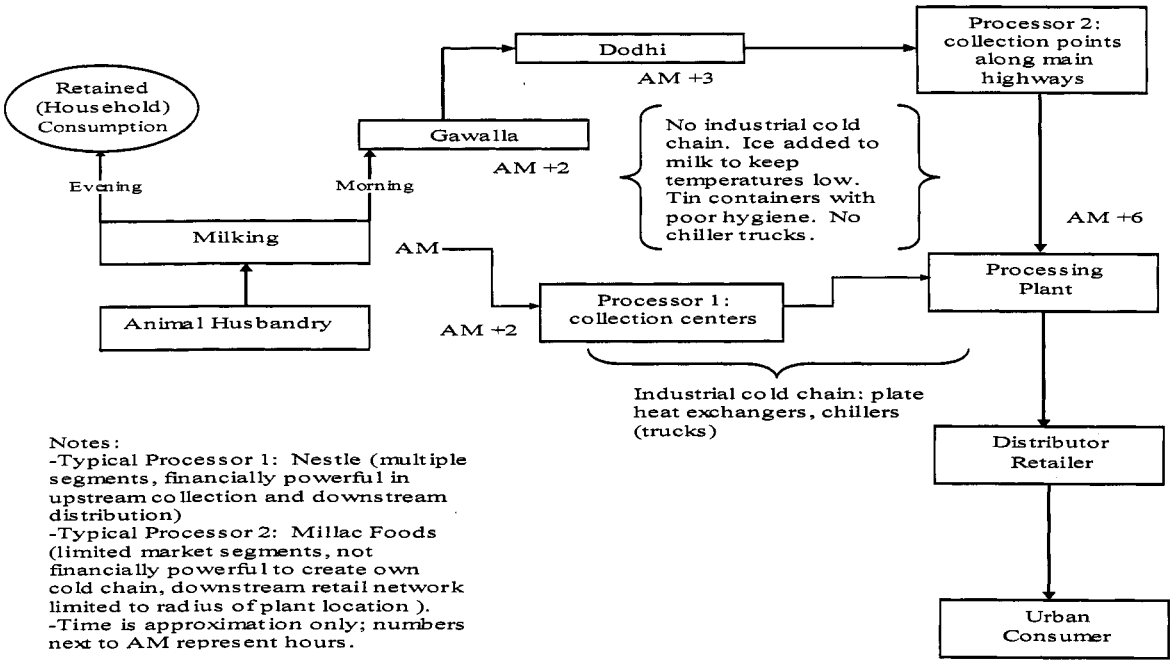
Table 3.43: Market Share and Selling Price of Milk Products

Types of Milk	Market Share (volume)	Sale Price (Rs/Liter)
Open Gawalla (Milkmen)	90.0	12-14
UHT Tetra Pack	5.0	32
Open Pasteurized Milk	3.8	14-15
Open Milk Sold at Milk Shops	1.0	18
Pasteurized Pouch	0.2	20
UHT Poly Pack	0.0	22
Direct to Home	0.0	15-18

Source: SMEDA.

109. Powdered milk is analyzed as a proxy to highlight the farm-to-market value chain. The domestic market for packaged milk is estimated at about 200,000 metric tons a year or a bit more than US$100 million, while the volume of domestically processed milk sold is about 139,000 metric tons a year, or 0.5% of total raw milk produced.[83] Roughly half of the raw milk available for processing is used in Ultra Heat Treated (UHT), 40 percent becomes powdered milk. The remaining raw milk for processing is used for other products including butter, yogurt, ice cream, cheese, cream, and butter oil (ghee).

Figure 3.22: Processed Milk Flow Map



Process Profile

110. The main factor defining milk processing is the time it takes for highly perishable raw milk to go from dairy farm to processing plant. The perishable nature and health/safety aspects of the product combined with the organizational dimensions of the livestock sector, village-based, small and highly dispersed across vast geographic regions – give rise to fragmented collection systems. Informal cooperatives and small processors coexist with vertically integrated, large private companies developing their own exclusive collection systems and associated marketing arrangements. UHT plants largely collect milk from their own centers supplied by aggregated supplies of farmers. Established processors such as Nestle with internally established marketing channels and cold chains have achieved cost and

[83] The market share of industrially processed (*sold*) milk estimated by SMEDA at around 5 percent *of milk processed* should not be confused with that of 0.5 percent of *milk produced* in the country.

quality advantages over smaller processors that rely on external middlemen in the formal system to transmit the milk through the marketing channels. Pilot cooperatives such as the Idara-E-Kissan, marketing products under the Halla name, have shown great promise by building on gains from combining the collection and marketing functions with extension services to farmers to increase yields and to lower costs. Processed milk reaches consumers through retail shops, mostly in urban centers where there is demand for UHT and powder milk.

Value Chain (Fresh Milk to Powder Milk)

111. *Benchmarking.* Global pricing of powdered milk production costs is influenced by government-supported pricing structures in developed countries. As Pakistan's manufacturing costs, in general, are in line with other producing countries such as the US, Canada, and UK, the delivered price of whole milk powder from Pakistan, shown as US$20.12 /100kg, is at par with the US$20.05 FOB price in EU markets. Combined with the fact that, in general, the farm-gate cost of milk is low, at approximately US$10/100kg, Pakistani processors enjoy price competitiveness based on conditions of low raw material and collection costs.

Table 3.44: Manufacturing Costs: Powder Milk

US$/ton	
USA	0.263
Canada	0.292
UK	0.356
Pakistan	0.311

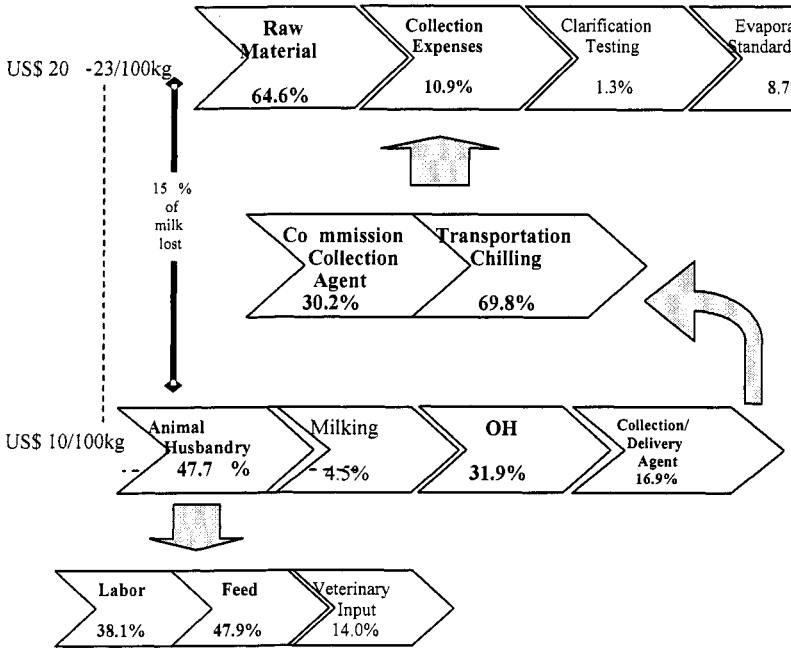
Source: GDS,

Table 3.45: Whole Milk Powder, May 2005

US$/100kg	
EU average	20.05
Australia	10.86
Pakistan	20.12

Source: GDS

Figure 3.23: Powder Milk Value Chain for Pakistan



This flow represents the most pervasive system of milk flow from farm gate to processor: *Smallholders* (majority of dairy farms) *sell to milkmen* (majority of delivery agents) *who in turn sell to commissioned collection agents of pr ocessors* that are without own collection centers (majority of processors).

The farmer value chain integrated in the processors' value chain here is the same as the farmer value chain for smallholder dairy farmer, adjusted for value addition by collection delivery agents.

Commission Collection Agent and Transportation constitute Collection Expenses of the processor and is disconnected from the former.

The mark -up fro m farm to factory gate at 100%, which is rather efficient considering the size of the country and dispersion of farms

The producer collects milk along main roads from agent, who in turn collects from their agents for a etwork of rural areas. The wide dispersion of farms increases collection costs . The losses in the marketing system estimated at 15%, due to chilling with ice and contamination of milk. Milk collecting agents transport the bulk of milk yet their chilling capability is limited

112. *Value chain.* For processors, *milk,* as their raw material, constitutes almost two thirds of total powdered milk production costs. Accordingly, strong backward linkages to an efficient milk industry act as the central driver behind price, quality and delivery dimensions of international competitiveness in processed milk. The markup rate to the factory gate of 2 times is also within the range of 1.5 to 3 times the markups of the developed world where stronger supply linkages operate. Further, because of the large number of small, dispersed producers involved, the process of *milk collection* constitutes the next largest cost of production, 11 percent of processing costs. Collection, in turn is comprised of transportation and chilling charges (70 percent) and the commission paid to collection agents by processors (30 percent). At a cost range of US$2.2-2.5/100kg of powder milk, *collection expenses* are competitive with other comparator countries, such as India, where collection expenses are in the range of US$2.1 - $5.1 /100 kg of powdered milk.[84]

Table 3.46: Powder Milk Manufacturing Cost Structure

	Rs/Kg	Share of Total
Power and Diesel	2.64	14.4
Furnace Oil and gas	2.84	15.5
Caustic Soda & Nitric Acid	0.36	2.0
General Stores	0.78	4.2
Repairs & Maint	0.05	0.3
Freight Inward	0.55	3.0
Production Staff Salaries	2.92	15.9
Insurance	0.06	0.3
Depreciation	1.59	8.7
Condensing Charges	2.95	16.1
Other expenses	0.53	2.9
Packaging	3.06	16.7
Total	18.34	100.0

113. *Capacity utilization.* In Pakistan, seasonality adversely affects capacity utilization currently around 25 percent, as compared to Ireland's 58-61 percent, Denmark's 92 percent, and Netherlands' 93 percent.[85] According to Pakistani milk processors, the tight and inconsistent supply of milk leaves capacity idle during many months, and some of the plants close altogether. Producers also describe milk supply as too volatile, especially in the summer months when consumption of fresh milk in the farming community and urban centers is highest. Addressing this issue will require a *reduction of milk losses,* improved *animal yields*, and other technical interventions discussed below to smooth the peak-trough cycles.

[84] The Punjab State Co-Operative Milk Producers' Federation Limited (MILKFED), accessed on http://punjabgovt.nic.in
[85] Though the exact peak-trough ratio is not available, the summer season is a dead season for milk availability.

Farming Value Chain (Animals to Whole Fresh Milk)

Table 3.47: Milk Production Cost Benchmarks

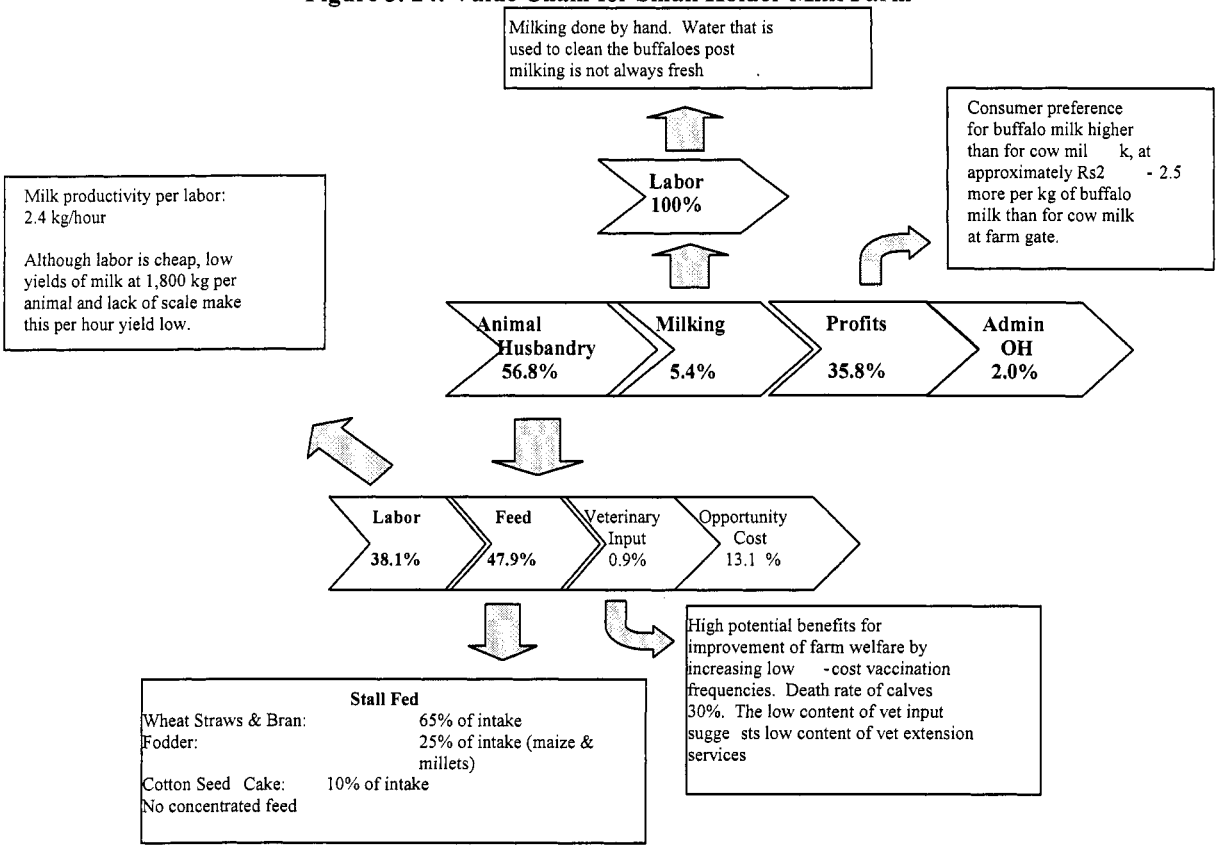
	Cost $/100kg
Argentina	7-11
Pakistan	9-12
Australia	10-14
India	10-11
Austria	57
Switzerland	79
New Zealand	7-13
Brazil	7-13

Source: IFCN, 2003

114. *Business model.* Two farms are analyzed. The smallholder dairy farmer in Punjab with 11 milch buffaloes sells to milkmen at the farm gate at US$16.70/100kg, with costs of $10.76 and profits of $5.93 per 100kg.[86] The larger farm of 30 animals has a farm gate production cost of $11.56/100kg and a delivered price of $14.17/100kg based on higher animal yields.

115. *Benchmarking.* At US$10.8/100kg of milk for the small farmer and $11.6 for the larger farmer, Pakistan is competitive with the world's lowest-cost producers - Argentina, Brazil, and New Zealand, whose costs range from US$7–13 per 100kg. However, these comparisons are based on the majority of farms being small with one to three animals or larger with 30 animals in Pakistan, as compared with countries that operate farms with hundreds or thousands of dairy cattle.

Figure 3. 24: Value Chain for Small Holder Milk Farm



[86] Costs include opportunity cost of land (capitalized at an annuity yielding 3%), own labor, (Rs1,500/month), depreciation of a brick stall/shed and 10 year depreciation of equipment for wheat. The opportunity cost of land is an input function incurred by a farmer even though dairy farming can be done without having land.

116. *Low yields.* The milk yield per animal in Pakistan for this farm type (from 3 to 10 dairy animals), is on the low end compared to other countries, between 1,300 - 2,400 kg of milk per dairy animal per year, [87] due to various reasons including genetics, technology, and management. Only India and Bangladesh have lower yields, at below 1,000 kg/animal/year in some cases. Pakistan's milk yield, at 3,000 liters per dairy animal lactation yield is amongst the lowest of the major producers in the world. Thus low prices, returns, and yields define the broad lines of the farm-to-processed milk value chain in Pakistan. For larger farms, much higher yields are observed.

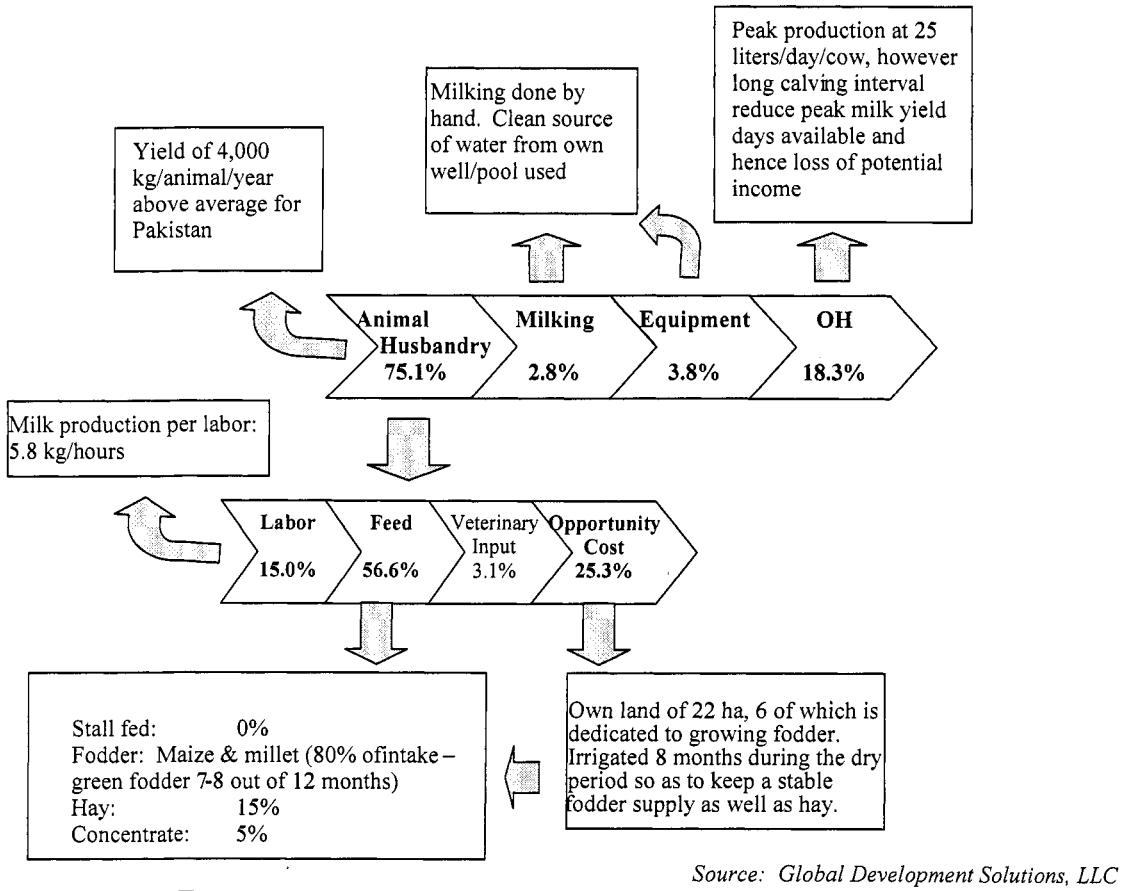
Table 3.48: Lactation Yield Comparison

	Yield (lts/lact.)
Pakistan	3,000
Israel	9,200
U.S.A.	6,300
Sweden	6,880
U.K.	5,506
New Zealand	3,400

Source: Asian Productivity Organization, Sohail Younas Moghal, 2004

117. *Value chain.* Animal husbandry constitutes 57 percent of costs of which feed (47.9 percent) and labor (38.1 percent)[88] are the main costs items. This type of farmer feeds the animals using no concentrated feed, but rather a low protein diet of wheat straws grown himself, as well as bran, maize, and cotton seed cake.[89] With this feed rationing, the yield of milk per lactation is lower than it otherwise would be.

Figure 3.25: Value Chain for a Medium–Sized Market Oriented Farm



Source: Global Development Solutions, LLC

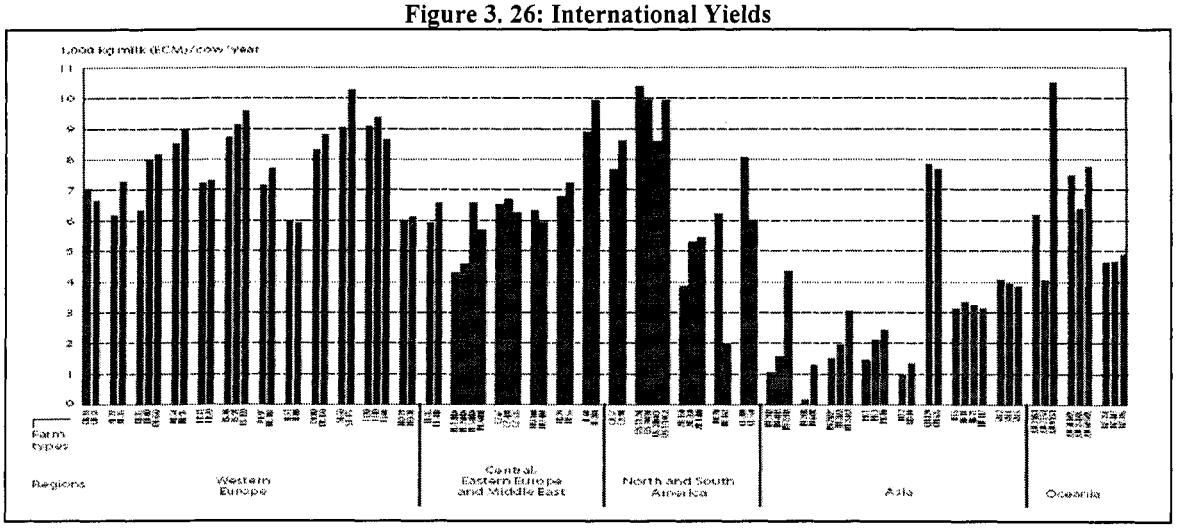
[87] It should be noted that of all milk consumed in Pakistan, some 64 percent comes from buffalo raised solely for the purpose of dairy production, 31 percent from cattle (potentially dual purpose) and the remaining from goats1,500 liters per milch cow and 1,900 liters per buffalo whereas the world average is around 5,000 liters. In the example under analysis, the average yield was 1,800 kg/animal.

[88] The farmer's labor input is approximately 740 hours/animal/year (own and hired labor).

[89] Purchased in the market between Rs300 - Rs350/40 kg.

118. The larger farmer with better farm management skills in terms of diet as well as animal health achieves higher yields with a slightly higher range of production costs. A much higher share of resources is devoted to animal husbandry - accounting for three quarters of total farming costs. Within animal husbandry, feeding constitutes 57 percent (linked to the higher overhead for mechanized irrigation of the feed stock) and a larger share is spent on veterinarian services, two keys to the higher animal yields recorded by larger farms. The cost structure of larger farms demonstrates the potential of yield improvement based on improved husbandry, but also represents the exception in Pakistan. The fact that Pakistani dairy farmers as a whole average the lowest yields in the world reflects the prevalence country-wide, of smaller farms that follow more traditional practices.

Figure 3. 26: International Yields

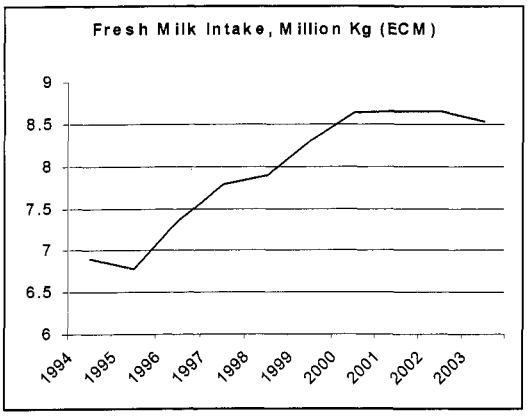


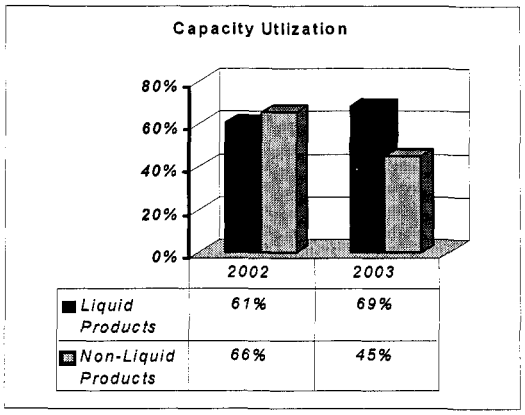
Critical Issues

119. In addition to the demand-side challenge of competing with, and importing from, countries which provide government support to dairy producers, two key supply-side issues face Pakistan's milk processors: First, is the insufficient and unpredictable/volatile supply of milk which stems from farmers' low yield rate and capacity utilization as well as from losses and inefficiency of a fragmented collection and marketing system. Second, even with lessened interventions in international trade condition by developed countries, exporting to these markets would require more demanding safety-and-health standards throughout the supply chain for processed dairy products.

120. *Low yield and capacity utilization of dairy farming.* Despite the growth in world demand for powdered milk, Pakistani processors are limited by low and unpredictable level of raw milk supplies. Only 2–3 percent of milk produced in the country reaches the processors. Even Nestle, which has established the most extensive collection system in the country, has experienced virtually flat growth of milk intake in the five years up to 2003, and capacity utilization for its non-liquid products has fallen to around 45 percent.

Figure 3.27: Nestle Milk Intake, Capacity and Production





Source: Nestle Milkpak, Financial Statement, 2003.

121. *Farming Condition.* Conditions on the dairy farm are the primary reason for the low supply and capacity utilization in processing. Based on Pakistan's advantage as one of the lowest cost producers in the world, coupled with the large proportion of fresh milk consumed internally, a key to upstream improvements in the supply chain will be Pakistan's ability to address the farm management issues that keep yields low.

- *Poor use of veterinarian services.* Pakistan has one of the lowest availability of veterinarians in the world per head of bovine animal, and relies more on technical personnel provided by the 6,000 veterinarian care institutions run by the government. As a result, veterinarian costs are low, at 0.5 percent of animal husbandry costs for the low-cost, low-yield farm. Not surprisingly, however, both smallholder and medium-size, commercial farmers report: (i) significant reproductive problems with low conception and pregnancy rates,[90] resulting in fewer days in peak milk production; (ii) artificial insemination is used in only 6 percent of households raising dairy animals; and (iii) the high number of problem cows needing more curative services by veterinarians resulted in involuntary culling,[91] rather than preventative attention.

Table 3.49: Veterinarians and Technical Personnel Per Bovine Animal (2002)

	Per 100,000 Cow And Buffalo	
	Veterinarians	Technical Staff
USA	56.68	53.84
China	40.31	88.85
Australia	28.40	10.70
Brazil	26.95	4.98
Argentina	25.03	15.25
India	13.30	24.57
Pakistan	8.42	20.35

Source: GDS from FAO and OIE data

- *Inadequate feed.* Another cause of the low yield is poor nutrition stemming from low-protein diets and rationing of foodstuffs. Inadequate nutrition also contributes to low pregnancy rates as animals reach puberty later and reproduce less regularly than healthier animals. The larger farmer spends more on irrigation for better feed, but also has to invest in generators and open wells while spending more on fuel for water pumping.[92] This expense runs to approximately Rs0.13/kg of milk; it would seem that improved availability of water from canals and through irrigation could bring in additional efficiencies for larger holders.

[90] Calving intervals are reported to be 15.5 to 16.5 months.
[91] Involuntary culling rates are generally given at 15 -50 percent by farmers against industry optimal rates of 25-30 percent.
[92] According to interviewees, to date there is no green fodder available all year round in Pakistan.

122. *Collection Systems - Absence of integration of collection systems.* A critical supply-side challenge is the need to reclaim the 5-8 percent of milk lost due to weak marketing systems.[93] Going by the most conservative estimates, each year losses range around US$400 million worth of milk. The scattered smallholder farms make the economics of efficient collection and delivery of milk difficult, requiring minimization of losses through the supply chain. Private sector operations such as Nestle and others provide some degree of market infrastructure, but the industrial giants' strategic choice to build their own cold chain based on establishing collection centers may have reached its limits in terms of increasing intakes. The Halla system of cooperatives has demonstrated the role of collective action. Through the provision of improved feed, private veterinarian and other extension services, members of the Halla system have improved yields, lowered costs, raised quality and achieved higher prices. Various organizational models focusing on collection, cold-chain development, and farm services as well as marketing are being explored in Pakistan with the goal of scaling up the best examples through innovative public-private partnerships.

123. *Hygienic and quality standards.* The mismatch between largely dispersed, informal milk producing sector and the "traceability" requirements of meeting higher health and safety standards through the supply chain constitutes a monumental challenge. Considerable private, public, and cooperative effort is needed to upgrade collection, standards, testing, and enforcement systems to meet the rising safety demands of importing countries. Principal issues are as follows:

- *Regulatory Framework.* There is no federal structure for food safety, and the mix of authorities and powers between provincial and municipal governments is detrimental to enforcement. Pure Food Rules (PFR) of 1965 and Ordinance of 1960 govern the sector and give authority to provincial governments to appoint public analysts, usually District Health and Deputy Health Officers to investigate and enforce the quality and safety of food. The Municipality Corporation may also appoint public servants as food and sanitary inspectors for sampling purposes.
- *Inadequate testing*: Government testing facilities lack the requisite equipment or infrastructure to conduct systematized or random testing. Provincial governments lack the financial and human resources to upgrade their enforcement of milk standards.
- *Fragmented SPS Authority* The food safety infrastructure makes it difficult to establish a functioning single national authority to coordinate SPS queries from importing countries, and comply with transparency requirements (for further details see Chapter 8).

E. AN INTEGRATED VALUE CHAIN ANALYSIS FOR AN AUTOMOBILE RADIATOR

Sector Profile

124. *Engineering.* The industry is generally divided into two sub-categories in Pakistan: (i) heavy engineering, producing products like cement, sugar plants, industrial boilers, construction equipment and transmission towers, and dominated by public sector companies; and (ii) light engineering, encompassing a range of products such as surgical instruments, bicycles, and automobile parts, where a large majority of companies are privately owned and/or operated. Pakistan has a significant labor cost advantage when compared with most similarly situated countries with some type of domestic engineering and manufacturing industry, and has capable management, technical, and administrative resources.

[93] Most interviewed farmers and marketing agents estimate losses at 10-15 percent. Unilever loss estimates are 30 percent.

Table 3.50: Pakistan Auto Industry Production (Historical and Future Estimates)

	Actual ('000)			Projections ('000)				
	2003	2004	2005	2006	2007	2008	2009	2010
Auto	62.9	92.1	115.2	150.0	180.0	215.0	255.0	300.0
Truck/Bus	3,.3	4.1	5.5	7.1	8.9	10.5	12.6	15.1
LCV	12.5	17.8	21.3	25.5	30.6	36.5	43.8	51.0
Tractor	26.5	28.9	30.3	32.3	35.5	38.3	42.0	46.2
Totals	105.5	142.9	172.3	214.9	255.0	300.3	352.4	412.3

Source: PAAPAM Published Statistics.

125. *Automobiles.* Pakistan's low level of car ownership at 9 cars per 1,000 people compares with 120 as the global world average and individual averages for Thailand (180), Malaysia (220) and Korea (25). Having remained virtually the same over the last 20 years, domestic car ownership has recently been growing rapidly. Rising remittances, reduced financing costs/packages newly introduced by the commercial banks have made access to domestically produced automobiles easier and more affordable. Around 40 percent of new car sales are financed through leasing companies or bank loans.[94] As a result, car production and sales rose by 55 and 46 percent, to 62 and 61 thousand units, respectively in 2003 and 2004, and industry is projecting production to rise another 85 percent in 2005

Table 3.51: Capacity Utilization

	2004		2005	
	Produc. (units)	Cap Util (%)	Produc. (units)	Cap Util (%)
Cars	92,149	92	115,200	115
LCVs	17,779	77	21,335	92
Truck/Bus	4,113	73	5,500	98
Tractor	28,864	72	30,300	75

Sources: Global Development Solutions, LLC and industry sources

126. Though passenger cars account for more than 60 percent of vehicle output, production of other types of vehicles also recorded strong initial growth in 2003.[95] Most assembly plants and suppliers quickly began operating at near capacity levels, and investment has begun expanding capacity during the last three years. The domestic industry has, for the most part, developed through indigenous technical resources enhanced by technical and business joint ventures with well-known global companies.

127. *Automobile parts.* The auto parts industry employs more than 180,000 people, and demand for labor is growing rapidly as capacity expands. The 18 automotive manufacturing companies active in assembling operations in Pakistan, all joint ventures with foreign carmakers and private domestic companies import a quarter of their auto parts needs. For the other three quarters, they are supported by 800 companies or other business unit derivatives manufacturing auto parts in the formal sector and by approximately 1,200 manufacturers in the informal sector. Domestic production consists of manufactured parts such as pistons, engine valves, gaskets, camshafts, shock absorbers, struts, steering mechanisms, cylinder heads, wheel hubs, brake drums, wheel bumpers, instruments and instrument panels, gears of all types, radiators, cylinder liners, electrical systems, door locks, and auto air conditioners. Approximately 90 percent of the automotive parts industry is made up of SMEs, of which about 95 percent are self-financed. These units produce a wide range of parts for the replacement market (also known as the after-market).

128. Based on automobiles sales and production trends, consumption of auto parts might have reached approximately $400 million per year in 2005. Imports – typically high-tech engineering parts – cover a

[94] According to a local firm, AKD Securities.

[95] Truck production rose by 56 percent, bus production by 25 percent and light commercial vehicle (LCV) production by 37 percent during 2003; source: International Organization of Motor Vehicle Manufacturers (OICA). Similarly the production of tractors has also significantly increased by around 24 percent.

quarter of this demand; the rest – confined to body and exterior parts – is supplied domestically. Very little of the domestic industry participates in global supply chains, though exports rose from $4 million in 1999 to $12 million in 2003 representing less than 1 percent of the domestically produced parts. With a lack of global orientation in the sector, locally established quality and delivery standards form the basis for competition among domestic Original Equipment Manufacturers (OEM) suppliers,[96] with price competitiveness being the dominant factor in the original and replacement markets (such as filters, tires, radiators, and brake linings).

Product Profile (Radiators)

129. A typical vehicle, whether an automobile, truck, or bus, is made up of about 2,200 sub-assembled components[97] mostly produced by subcontractors who supply as OEMs to the vehicle assembler. This value-chain analysis examines an automobile part as reflective of key competitiveness issues facing light industrial, component producers. As some automobile parts are being exported, it highlights challenges faced by Pakistani producers in integrating locally produced products into the global supply chain, but recognizes that Pakistan's domestic automobile production and consumption industry is far from being integrated in the larger global market of world-class automobile makers.

130. Although radiators do not make up a large percentage of exports or production quantities, the product is representative of others successfully sold in both the domestic and international market. The production of radiators requires complex assembly using semi-skilled and skilled labor combined with technical equipment, an area where it is believed Pakistan could have a comparative advantage in the international marketplace.

131. Four companies produce radiators, all of them tier-1 suppliers for multiple auto, truck, and tractor assemblers in Pakistan which now export have done so recently. One company exports to two different after-market wholesalers for the Ford F-150 Pickup in the USA and UAE and claims to have provided radiators to Land Rover, UK in the past.[98] A second company exports radiators to Sri Lanka, Saudi Arabia, and Bangladesh. There are also approximately 9 informal producers of reasonable size.

132. Although most international markets have shifted to all aluminum radiators, Pakistan continues to produce copper tube/brass fin (copper/brass) radiators for a domestic market which purchases the slightly cheaper, locally manufactured, though increasingly obsolete products. Industry analysts foresee aluminum radiators eventually replacing copper/brass radiators in all automobile and light truck applications primarily because of weight reductions necessary to meet fuel-efficiency requirements, of cost manufacturing, and of environmental concerns over lead-based soldering methods. In comparison to the $68.30 cost for copper/brass radiators, all-aluminum-radiator production costs range from $78.00/unit and up depending on type and function.

Table 3.52: Transition from Copper/Brass to Aluminum

	% of all Autos Manufactured with Aluminum Radiators			
	1980	1984	1988	2000
Ford	0	20	54	95
General Motors	0	17	45	93
Toyota	0	10	40	80
Nissan	0	8	32	84

Source: GDS

[96] The assemblers generally register the vendors on the basis of their capability to produce parts of required quality and to deliver on time the supply of the required quantity of parts. The assemblers on a regular basis evaluate the vendors' performance. In case a vendor is not performing satisfactorily, new sources of supply are developed.

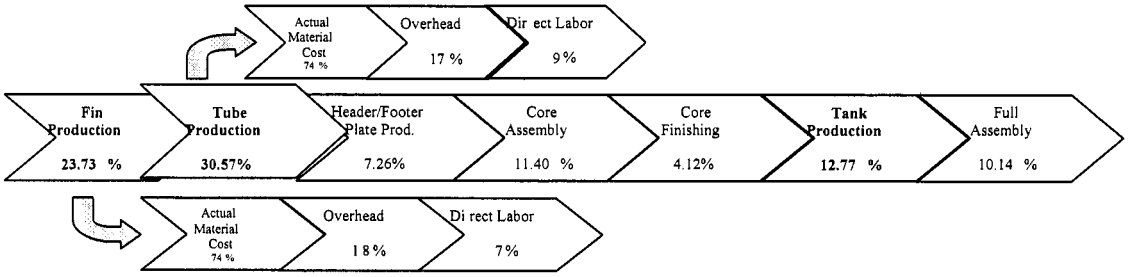
[97] The auto component encompasses a range of products with dramatically different business models. A transmission is constructed of many individual piece parts, while a fender-well is one piece of stamped metal.

[98] The company began exporting in June 2001, supplying the U.S. market for the past 3 years. Its exports are now winding down as it lost contracts to India and China based on better prices.

Process Profile

133. Engineering products generally involve a wide range of skill sets, including: (i) designing; (ii) tool and die manufacturing; (iii) forging; (iv) casting and machining; (v) sheet metal; (vi) fabrication and pressing; (vii) plastic and rubber moldings; (viii) electrical or electronic component production; and (ix) sub-assembly and final-assembly. The production of radiators requires importing raw material not available domestically such as copper and brass ribbon or sheet.

Figure 3.28: Value Chain for Radiator Production



Source: Global Development Solutions, LLC

Value Chain Analysis

134. The analysis revolves around a standard, two-stage production flow for copper/brass automotive radiators. The first stage involves fin, tube, and header/footer plate production for transfer to a core assembly for final finishing. The core is transferred to the final radiator assembly where various parts are assembled, painted, and packaged for shipping. Radiator production emphasis is on sheet metal fabrication, fabrication and assembly, but not forging, casting, or electronics. Its emphasis is more on skilled labor than heavy investment.

135. Production of automotive radiators can be broken down into 7 primary stages: fin production; tube production; header/footer plate production; core assembly; core finish; tank production; and full assembly. The value chain analysis indicates that tube production, fin production, and tank production constitute the largest value added in the production process - Fin and tube production constitute over 54 percent of the total value added, followed by tank production, core assembly, and full assembly, which account for another 34 percent

Table 3.53 : Costs in Fin and Tube Production

	Fin Production		Tube Production	
	Cost ($/unit)	% of Total	Cost ($/unit)	% of Total
Share of Total	*16.21*	*23.7*	*20.88*	*30.6*
Material Cost in $	12.01	74.0	15.48	74.0
Other	0.72	4.0	0.50	2.0
Over Head (15%)	2.32	15.0	3.06	15.0
Direct Labor	1.16	7.0	1.84	9.0

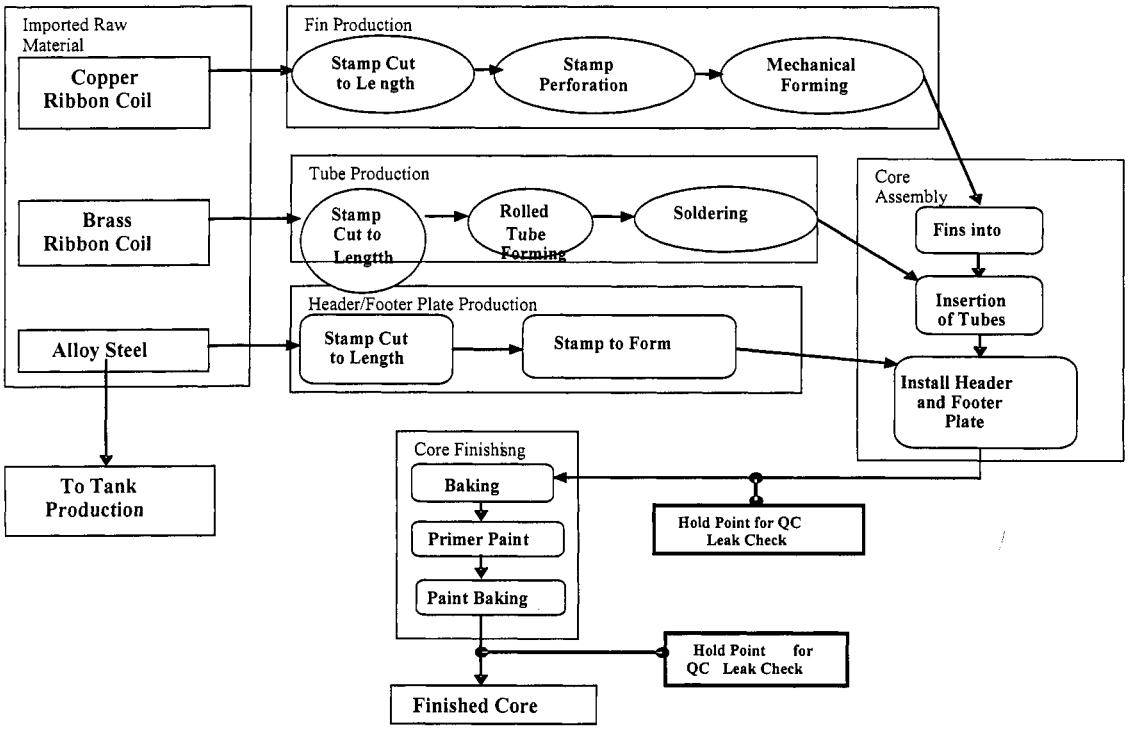
136. Material costs are about three quarters of the total; overhead and labor account for the bulk of the remainder. Broken down to a discrete source, imported raw material --copper, brass and specific alloy steel-- accounts for almost 64 percent of the value of the final product. Domestically purchased raw

material used in the production account for the remaining 11 percent of the value and includes such elements as solder tape, primers and finish paints, production chemicals, and the like.

Critical Issues

137. *Trade policy issues.* The industry's trade policy framework has prevented a long-term view, risk taking, quality enhancement and investment in new technology. In this case, despite using material and production technology obsolete by world standards, domestic demand sustains local producers. The combination of limits on imports of automobiles coupled with policies that facilitate buoyant demand for automobiles with a high level of domestic content has supported increases in capacity by part makers but also discouraged such risk taking as investment in new technology. Specifically, high duty levels (now 50-75 percent) on imported automobiles coupled with the domestic deletion program to ensure that assemblers purchase locally produced parts and materials, have increased local content of automobiles to 50–70 percent. With satisfactory profit margins as an incentive to fulfill assembler's demands and limited need for cost efficiency, auto part manufactures are not induced to make the necessary investments in capital, skills, and manufacturing systems required for the exporting business. (For further details, see Chapter 7).

Figure 3.29: Process Map for Copper/Brass Automobile Radiator
Stage 1: Radiator Core Production



Stage 2: Final Radiator Assembly

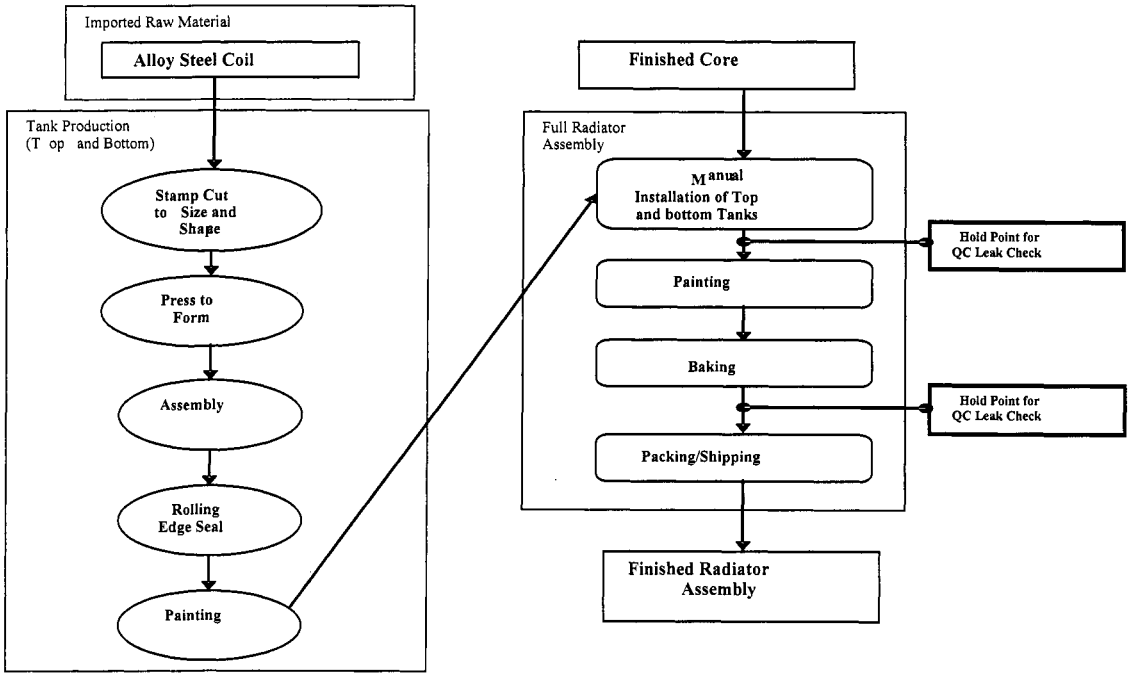


Table 3.54: Percent of Import Value

Customs Duty*	9.16
Sales Tax on Materials	0.68
Sales Tax on Services	0.14
Income Tax	0.05
Warfage	0.09
Demurrage	0.22
Destuffing	0.53
Other Expenses	0.37
Other Taxes	0.03
Infrastructure	0.50
Total	11.77

* *inclusive of revaluation impact.*

138. *Duties and taxes.* In radiator production, base raw materials include copper, brass, and specific alloy steel or, increasingly, aluminum core, in all cases requiring a high import content.[99] Though the official duty rate is 5 percent, effectively, the import of basic metals in this example ends up being taxed at 12 percent as customs duties, revaluation of the declared import value by customs officials, plus ten additional levies/fees add 7 percentage points to the tax rate.[100] With two-thirds of material imported, these taxes contribute to 5 percent production cost increases.

139. *Price and quality of electricity.* A key requirement for a more upgraded plant is competitively priced and reliable power. Auto part producers in Pakistan are currently enjoy neither. Even with current technologies, good electrical supply is critical for processes that rely on such energy-intensive equipment as rolling mills, presses, furnaces, and ovens. However, in Pakistan power outages that occur normally during the hottest part of the day -- in the middle of daytime operations -- cause regular breakdowns of equipment and increased maintenance costs and effectively double labor rates in order to make up lost production time. In the example of radiators, companies experience at least an hour of power loss per day increasing actual realized cost of electric power consumption by 36.25 percent. While own diesel or gasoline powered back-up generators only provide minimum electrical power during outages, these are costly and insufficient for mechanized production.

140. *High overhead costs and low production volume.* Scale economies have a substantial impact on costs in auto parts manufacturing, particularly given high fixed costs of machinery and production lines. For the radiator producer, estimates are that for the 27,000-unit production run, fixed overheads amount to US$5.60, or approximately 8 percent of the final delivered unit cost. By comparison, for a production run of 100,000 radiators, the fixed overheads cost would fall to US$1.51/unit and save over 6 percent in the cost of the product. To reach production levels where economies are realized, more mechanized plant would need to replace manual labor-intensive production facilities currently used.

141. *Competitive direct labor input but low skills.* Direct labor costs equate to about $0.75/hour wage rate, higher than India and China, but equivalent to Vietnam. Despite higher rates than their neighbors, Pakistanis' labor costs and productivity considerations are not relevant constraints to competitiveness under the current domestic orientation and current production technologies. Labor costs account for approximately $5.38/unit of production costs only 8 percent of the total production cost per unit. However, an outward-oriented trade regime would require technical skills to accommodate more mechanized, precision-based

Table 3.55: Monthly Average Wage Rate for Skilled Labor (US$/month)

Pakistan	China	India	Vietnam
$130	$115	$70	$135

[99] Manufacturers in Pakistan import the brass copper sheet foil and ribbon from a Swedish supplier and while having difficulty procuring their small needs of steel alloy from the only one steel producer in Pakistan.

[100] One analysis estimated 1.24 percent revaluation increase over the actual imported value against which duties and taxes/fees are charged.

and even robotic production technologies.

142. *Management Issues*. Modern management would also be needed at the plant level if investment in new production technologies is to enable penetration into global supply chains. Specifically, auto part makers in Pakistan will need to produce according to the tight discipline instilled by global automakers. Two examples are worth noting: (i) investment in management and accounting systems and in tracking high fixed costs of small parts; and (ii) incentives for better quality control.

- *Costs and margin accounting.* Autopart makers, when bidding on long-term international supplier contracts which characterize the global market, require accurate cost tracking and internal efficiencies to base-line against international producers. Instead, Pakistani vendors, oriented to domestic automakers, use a straight percentage of direct materials and labor based on prior-year trends rather than tracking current overhead charges using an Activity Based Costing (ABC) Methodology. In most cases, fixed overhead percentages are used to price orders.

- *Disincentive to reduce in-house rejection rate.* A second management issue to address is the rate of in-house rejection -- the quality control margin negotiated between the radiator manufacturer and the customer as part of the bidding process. Although small in absolute amounts, the across the board 1 percent rejection rate standard used by Pakistan suppliers and automakers does little to provide incentives for increased quality. While some degree of part rejection is needed for quality control checks it typically is far less than 1 percent. For example, Japanese and Western auto manufacturers are pushing for quality reject rates in parts per million rather than parts per hundred that domestic automakers accept.

F. CONCLUSION

143. ***Key constraints to competitiveness***. The findings of VCA identify infrastructure (power, water, ports and transport logistics), burdensome regulation, weak legal and enforcement frameworks, inadequate coordination among government agencies at various levels, inadequate access to finance, food quality and safety standards, and pockets of trade protection as major constraints to competitiveness. These constraints discourage private investment and make domestic production less competitive in relation to many of Pakistan's competitors while disproportionately hindering entry by (and the efficiency of) small and medium enterprises, which are such an integral part of the Pakistan economy.

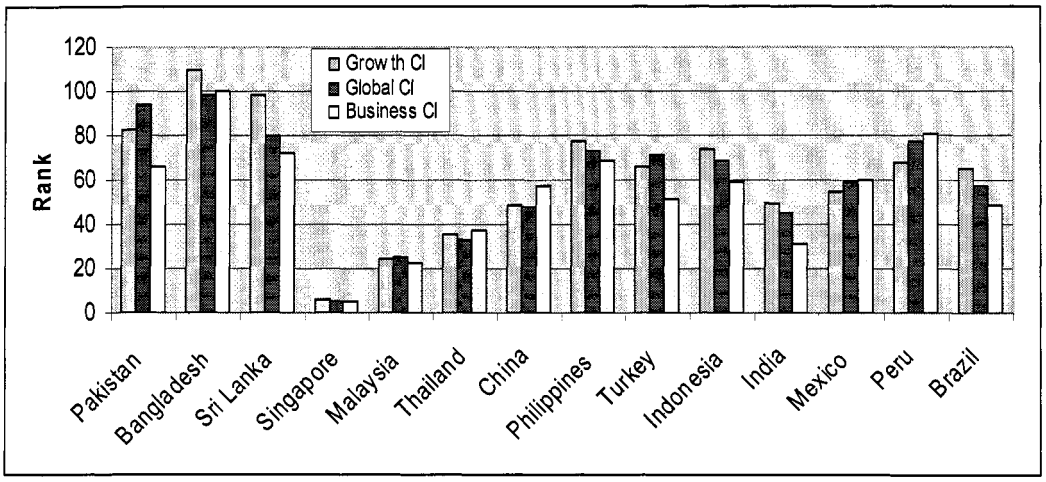
CHAPTER 4: KEY IMPEDIMENTS TO ECONOMIC GROWTH AND COMPETITIVENESS IN PAKISTAN

A. CONSISTENCY OF THE EVIDENCE

1. The findings of the factor productivity and growth analysis summarized in Chapter 2, the results of other firm/micro-level studies mentioned earlier, as well as the findings of the VCA work presented in Chapter 3 all are consistently pointing to the same set of policy and institutional issues as major impediments to economic growth and competitiveness in Pakistan.

2. The evidence from these sources identifies *macroeconomic instability*, *infrastructure bottlenecks* (power, water and transport/trade logistics), *inadequate supply of quality education/skilled manpower*, *weak economic* governance (including burdensome regulation), *pockets of high protection*, and food quality and safety *standards* as major constraints to growth and international competitiveness. These deficiencies in Pakistan's investment environment make raising productivity and competitiveness a significant challenge. Indeed there is ample evidence of competitiveness gap that Pakistan must close to become a competitive player in global trade.

Figure 4.1: Competitiveness Ranking (2005)



B. PAKISTAN'S GLOBAL COMPETITIVENESS RANKING

3. The World Economic Forum's (WEF) *Global Competitiveness Report* provides yearly benchmarks for Pakistan's *growth competitiveness* against other countries. It uses three indices (macroeconomic conditions, public institutions, and technology), which incorporate a variety of influences that shape productivity performance. Taken together, the indices underscore Pakistan's current low position in global and regional rankings. Only Bangladesh and Sri Lanka rank lower in South and East Asia (Figure 4.1 and Table 4.1);[1] (higher figures show weaker competitive standing).

[1] Pakistan's 2005 rankings in Global Competitiveness, Growth Competitiveness, and Business Competitiveness indicators were 94, 83, and 66, respectively, out of 117 countries. For further details on these indicators, see: World Economic Forum, *Global Competitiveness Report 2005-06*; World Economic Forum, *Global Competitiveness Report 2004-05*; and World Economic Forum, *Global Competitiveness Report 2003-04*.

4. Underpinning the indices are components which highlight Pakistan's areas of strengths and weaknesses that affect firm-level competitiveness. On the positive side, the *Macroeconomic Environment* scored better than other areas, reflecting progress made in stabilizing the economy in recent years.

Table 4.1: Global Growth Competitiveness Index

	2005 (117 Countries)					**2004** (104 Countries)			
			GCI Components				GCI Components		
	Global Competitiveness	**Growth Competitiveness Index**	Technology	Public Institutions	Macro Conditions	**Growth Competitiveness Index**	Technology	Public Institutions	Macro Conditions
Pakistan	**94**	**83**	**80**	**103**	**69**	**91**	**87**	**102**	**67**
Bangladesh	98	110	101	117	83	102	100	104	74
Sri Lanka	80	98	88	100	94	73	81	72	73
Singapore	5	6	10	4	1	7	11	10	1
Malaysia	25	24	25	29	19	31	27	38	20
Thailand	33	36	43	41	26	34	43	45	23
China	48	49	64	56	33	46	62	55	24
Philippines	73	77	54	104	71	76	61	99	69
Turkey	71	66	53	61	87	66	52	62	84
Indonesia	69	74	66	89	64	69	73	68	63
India	45	50	55	52	50	55	63	53	52
Mexico	59	55	57	71	43	48	48	59	49
Peru	77	68	75	59	70	67	71	58	68
Brazil	57	65	50	70	79	57	42	50	80

Source: World Economic Forum, *Global Competitiveness Report,* 2005-2006 and 2004-2005

5. Based on the substantial reforms in the banking sector and significant trade liberalization, *financial sector efficiency* and *market openness* ranked above half the countries surveyed in 2004. At the firm level, Pakistan's ranking in *corporate strategy and company operations* showed improvement recently, rising from 81st in 2003 to 67th, (Table 4.2), and remained stable at 68th in 2005.[2] And in 2005, Pakistan ranked 94th in 'global competitiveness' out of 117 countries. The highest ranked component of the three sub-indices included in the global competitiveness index was *business sophistication* which ranked 57th out of 117 countries.[3] However, in other areas Pakistan ranked much lower --for example in higher education and training and in health and education Pakistan ranked 104th and 115th, respectively.

6. Notwithstanding notable policy achievements and company-level strengths, the indices confirm the findings reported earlier and the consensus among policy-makers, academics and the business community that Pakistan's low competitiveness rankings derive from weaknesses in three second-generation areas. First, as an obstacle to productivity growth, *economic governance*[4] poses a particular challenge, encompassing such factors as public institutions, regulation, crime, political uncertainty, corruption and the rule of law. Second, *inefficiency of factor markets* represents a major constraint to efficient resource allocation and ease of entry, particularly in the case of land and labor.[5] A third area covering *physical infrastructure,* ranked 76th in the Global Competitiveness Index, is a particular

[2] *Global Competitiveness Report 2005-06*; *Global Competitiveness Report 2004-05* and *2003-04.*

[3] *Global Competitiveness Report 2005-06.*

[4] Indeed, the fall in the *Public Institutions* component ranking (from 71 in 2003 to 102 in 2004) was the principle driver behind Pakistan's large drop in overall Growth Competitiveness rankings in 2004 - -from 73 in 2003 out of 101 countries to 91 in 2004 out of 104 countries. Source: World Economic Forum, *Global Competitiveness Report 2004-05 and 2003-04.*

[5] In 2004, basic human capital and labor market efficiency were ranked 96 and 100, respectively; source: *Global Competitiveness Report*, ibid.

weakness in South Asia generally and has been an important priority for Pakistan for a long time.[6]

Table 4.2 : Business Competitiveness Indicators (BCI)

	2005 (116 countries)			**2004** (103 countries)		
	BCI Ranking	Company Operations and Strategy	Quality of Business Environment	**BCI Ranking**	Company Operations and Strategy	Quality Business Environment
Pakistan	**66**	**68**	**65**	**73**	**67**	**75**
Bangladesh	100	99	101	95	97	94
Sri Lanka	72	73	73	68	69	67
Singapore	5	14	5	10	13	8
Malaysia	23	24	23	23	28	23
Thailand	37	35	37	37	36	36
China	57	53	58	47	39	47
Philippines	69	44	78	70	50	77
Turkey	51	38	51	52	44	55
Indonesia	59	50	59	44	38	46
India	31	30	31	30	30	32
Mexico	60	55	62	55	46	56
Peru	81	66	82	76	77	74
Brazil	49	32	52	38	29	44

Source: World Economic Forum, *Growth Competitiveness Report* 2005-06, and 2004-05.

7. In the following Chapters in Part II, each of these key drivers of growth and competitiveness will be discussed further to focus on the underlying causes of weaknesses. And a set of recommended actions will be suggested for the way forward. The focus will be on the high priority binding constraints. The next chapter, Chapter 5, covers areas where actions are needed to strengthen macroeconomic framework and stability.

[6] More disaggregated tables on the sub-level components of these cited major competitiveness indices can be found in the World Economic Forum's Global Competitiveness Reports for 2005-06, 2004-05, and 2003-04.

PART II

STRENGTHENING THE KEY DRIVERS OF GROWTH AND COMPETITIVENESS

CHAPTER 5: MACROECONOMIC POLICY MIX FOR GROWTH AND COMPETITIVENESS

A. INTRODUCTION

1. Sustaining rapid growth over an extended period, as Pakistan's own history and international experience suggest, is difficult to achieve. Episodes of rapid growth are relatively common, but translating them into sustained growth is the essence of development[1] For instance, per capita income in Malawi and Nepal in the 1960s was similar to China's. But China has increased its GDP per capita more than sevenfold over the past 40 years by growing 6 percent a year. Malawi and Nepal remain poor countries, with widespread poverty. In the case of Pakistan, while economic recovery is remarkable, it is also fragile, and significant macroeconomic vulnerabilities remain. Today's policymakers can either choose to exacerbate them, or build on the gains of the past few years to reduce them significantly. This chapter highlights Pakistan's remaining macroeconomic vulnerabilities and articulates a macroeconomic policy mix to overcome them. The following section summarizes Pakistan's main sources of competitive disadvantage, and the third and last sections outline the contours of a macroeconomic policy mix to enhance Pakistan's competitiveness and sustain growth over the long-run.

Table 5.1: Pakistan – Economic Indicators, 1980-2004/05

	Annual Average for			
Indicator (%)	1980s	1990-1994/95	1995/96-1999/00	2000/01-2003/04
Compound growth rate of real GDP	6.5	4.9	3.3	4.7
Poverty incidence	46 (1985/86)	27 (1992/93)	31 (1998/99)	32.1(2000/01) 25.4 (04/05)*
Inflation (period average)	7.2	11.5	7.9	5.0
Fiscal deficit/GDP (excl. grants)	7.1	7.2	6.5	4.4
Fiscal deficit/GDP (incl. grants)	6.4	6.7	6.4	2.9
Public debt/GDP	66 (mid-1980)	94 (mid-1990)	101 (mid-2000)	61.7 (mid-2005)*

/a GDP has been revised upward in 1999/00; for comparability purposes, this table uses the old GDP series.
/*: Government's provisional estimate of the poverty incidence in 2004/05 is 25.4 percent.
Source: Government of Pakistan, IMF, and World Bank staff estimates.

B. MACROECONOMIC SOURCES OF COMPETITIVE DISADVANTAGE

2. Two features of Pakistan's economy have hindered businesses in their efforts to compete internationally, create employment, and grow. ***The first is the country's history of macroeconomic instability***. Macroeconomic instability is defined here as a rise in one or more policy-affected indicators, such as the inflation rate, overall deficit to GDP and external debt to GDP ratios.[2] Macroeconomic instability makes the domestic economic environment less predictable, thereby hampering resource

[1] See World Bank, *Economic Growth in the 1990s: Learning from a Decade of Reform*, 2005.
[2] This definition is in line with Fisher's in "Does Macroeconomic Policy Matter? Evidence form Developing Countries", ISEG Occasional Papers, 1993, and "The Role of Macroeconomic Factors in Growth", *Journal of Monetary Economics*, 32(3), pp.485-512.

allocation decisions, investment, and growth.[3] Over the past decade, Pakistan experienced all three symptoms of macroeconomic instability (Table 5.1).

3. Pakistan struggled with high deficits and slow growth throughout the 1990s. The fiscal deficit hovered at around 6.5-7 percent throughout the decade, and peaked in 1997/98 at 7.7 percent of GDP (of which 6.2 percentage points were financed domestically, at very high interest rates). Less than 0.5 of GDP in the early 1990s, grants declined to virtually zero during the latter half of the decade. Combined with slow economic growth, this performance translated into an unsustainable debt burden, and resulted in a default on sovereign debt obligations in 1999.

4. Policymakers attempted to deal with the country's macroeconomic slippages by starting to liberalize external trade, free interest rates, privatize state enterprises, reform the banking system, and even address the large social and gender gaps. In terms of growth, poverty reduction, and social indicators, however, the outcomes were disappointing, in part because the reforms were incomplete. As noted in earlier chapters, one of the reasons for these disappointing outcomes was that reforms were partial. In particular, successive governments failed to address Pakistan's fiscal imbalances. Fiscal deficits in Pakistan have historically been large. Only after 2000 was a significant dent made in the deficit, which fell to 4 percent of GDP (after grants) in FY01. Monetary policy was kept tight enough to prevent the fiscal deficit from exploding into high inflation, but one consequence of this was a relatively strong exchange rate. Interest rate liberalization raised the cost of servicing the debt, and thus contributed to the emergence of unsustainable debt dynamics.

5. At the root of Pakistan's fiscal imbalances has been the inability to raise the government's tax-to-GDP ratio, among the lowest in the world. Below 14 percent of GDP for much of the 1990s, it has now declined to only 10 percent of GDP. One the reason behind this worrisome trend was the needed reduction in import duties, a consequence of the trade liberalization that started in the mid-1990s. A sound policy action, the reform has contributed to improving the production efficiency in Pakistan. However, only limited, simultaneously efforts were made to offset the projected fall in revenue collections by improving tax policy and administration.[4] Another causal factor is the limited share of revenue collections by provincial governments. In the past five years, provincial tax collections have remained stagnant at 0.5 percent of GDP. In coming years, interest costs are likely to rise and non-tax revenues may not continue to increase at the same pace as in the past few years. Hence broadening the tax base will be crucial to meet the rising demand for social and development spending, while continuing to reduce the debt burden.[5]

6. While tax collections are small relative to total output, the burden of taxation currently falls disproportionately on large-scale manufacturing. Agriculture and large landholders remain largely untaxed, and few services are taxed to any significant degree. Trying to lighten the heavy burden of this distortion, the Government provides tax concessions and exemptions for particular activities or firms, an expedient that further undermines tax revenues without addressing the root cause of the problem. To reduce fiscal imbalances significantly while sustaining increases in critical public investment and social expenditures, federal and provincial governments will need to move decisively toward broadening the tax base, in particular by expanding the tax net to all services and agriculture. *Indeed, a comprehensive strategy to increase tax revenues and the implementation of actions to increase tax collections, not only at the federal level, but also at the provincial and local levels are urgently needed.*

7. Theoretical and empirical evidence from a number of countries also suggests that macroeconomic instability reduces investment, especially in infrastructure. The documented complementarity between

[3] Other things being equal, high aggregate volatility and inflation would also tend to worsen the incomes of the poor. The inflation tax tends to fall disproportionately on poorer households, which hold few or no financial assets to shelter them against rising prices, and whose wage earnings typically are not fully indexed to inflation. Throughout this and other channels, high aggregate volatility is empirically associated with worsening income distribution.

[4] Efforts to improve tax administration have now been launched, but they are focused on the Central Board of Revenue and leaving out provincial tax administration departments. Improvements in tax policy have lagged.

[5] There are prospects of large costs from the maturing zero-coupon NSS instruments.

public and private investment in the long run suggests that underinvestment by the public sector in essential infrastructure also tends to reduce growth.[6] During the 1990s interest and defense spending increased in Pakistan, crowding out development spending. By FY01, interest spending reached 7 percent of GDP and defense about 4 percent of GDP (or 70 percent of revenues). Development spending shrank below 3 percent of GDP, from close to 10 percent in 1980-81. This squeeze on development expenditures, especially on roads, power, and water supply and irrigation, perpetuated infrastructure bottlenecks and not only kept the cost of doing business high but also discouraged private investment.

8. ***The second characteristic of Pakistan's economy that undermines its growth prospects is the low national savings rate***, which stands at only around 17 percent of GDP. The national savings rate is

Table 5.2: Pakistan and Comparator Countries– Investment 1990-91 to 1999-00

Country	Investment as a share of GDP		
	Private	Public	Total
Pakistan	9	8	17
India	15	9	24
Malaysia	27	12	39
Philippines	18	4	22
Thailand	27	9	36
China	14	24	38
Bangladesh	12	7	19

Source: World Bank, World Development Indicators.

basically the share of output dedicated to building up the country.[7] *In the rapidly-growing economies of East Asia, the savings rate averaged over 35 percent in the 1990s. It averaged 42 percent of GDP in China over the same period.* While there is a debate on whether these economies required such a high level of saving, there is no question that it has contributed to high investment and economic growth rates.

9. In Pakistan, however, this rate has been lower than would be required to sustain rapid (7-8 percent a year) growth over the next decade.[8] Total investment as a share of GDP fell throughout the 1990s, from around 18 percent of GDP in the early 1990s, to only about 13 percent in 1998-99 as a result of declines in both public and private investment. FDI bucked the trend for a time (because of investment in the power sector), but then fell too. After 1993-94, manufacturing investment declined steadily throughout the decade.

10. Recent trends fail to suggest a sustained increase in national savings. After rising from 15.6 percent of GDP in 2000-01 to 22 percent in 2002-03, national savings have declined in 2003-04. In 2004-05, with negative interest rates and when the current account surplus (excluding official transfers) of 1.4 percent of GDP turned into a 1.8 deficit, the savings rate declined again. And after several years of primary surpluses, the 2005-06 Budget announces the return to primary deficits.

11. While there is nothing wrong with having some of Pakistan's investments financed from abroad, that practice points to an important short-run, long-run dichotomy. In the short-run, international borrowing can rise or decline depending on cyclical movements, exchange rates, and a host of other factors. Very few countries do without any international borrowing or lending in a particular year, and

[6] See, for instance, Ismihan, Metin-Ozcan and Tansel, A. "Macroeconomic Instability, Capital Accumulation and Growth: The Case of Turkey 1963-1999", ERC Working Papers in Economics, November 2002; and Chan and Gemayel, "Macroeconomic Instability and the Pattern of FDI in the MENA Region", Mimeo.

[7] This share can be defined either as the share of Pakistan's output not consumed either by households or by the government, or as the share of output devoted to capital investment less the share represented by borrowing from foreigners. This last clause is important -- high investment is a good thing, but if much of this investment is financed by borrowing from foreigners rather than by Pakistan's own saving, there could be difficulties ahead.

[8] Pakistan's economy has reacted well to the macroeconomic stabilization and structural reform program. Growth accelerated in 2002-03, initially led by external demand, but increasingly by domestic factors. This supply response has come mostly from increased utilization of production capacity in large-scale manufacturing.

Pakistan should be no exception. But over a longer term, international borrowing kept close to zero stabilizes a country's ratio of international obligations to GDP.[9] When this liability ratio is stable, national savings are implicitly financing most domestic investment. Persistent borrowing, keeping investment above national savings, may be possible, but it is not common. And in any case it automatically implies a buildup of international liabilities relative to national output. Hence, in the long run, if Pakistan wants to increase its investment and not pay increasing shares of income in interest or dividends, it has to finance this investment by raising its own national savings.[10]

C. A MACROECONOMIC POLICY MIX FOR SUSTAINING RAPID GROWTH

12. There is sufficient momentum in the economy to maintain growth in the short run. For 2005-06, growth is projected at 6-7 percent, an excellent performance by any measure. Sustaining this performance growth performance in the long run, would require, however, a change in the current policy mix. In the long run, the international competitiveness of Pakistan's products will be determined mostly by domestic structural factors that enhance total factor productivity (as discussed earlier) and by factor accumulation (physical and human capital accumulation). While Pakistan's government is doing well by devoting a larger (although still small) share of public expenditure to human capital accumulation and with the 2005-06 budget to physical infrastructure, the current macroeconomic policy mix appears to be geared towards generating growth mostly in the short term.

13. Along with considerable monetary overhang, credit expansion remains rapid, and more recently fiscal policy has switched into a clearly expansionary (though pro-cyclical) stance. Private sector credit growth accelerated from 2.5 percent of initial broad money stock in 2002-03 to 14.3 percent in 2003-04. In an attempt to continue to support growth, interest rates have remained negative throughout 2004-05, thus encouraging resource allocation to projects with lower returns and to consumption. In 2004-05, Net Domestic Assets (NDA) became the main source of monetary expansion, as the central bank began financing the budget when commercial banks became unwilling to roll-over treasury bills, as real interest rates were held negative. On the fiscal side, the 2004-05 and 2005-06 Budgets included several tax-relief measures to foster growth, which may translate into lower tax revenues. An increase in the fiscal deficit is projected along with a return to primary deficits for 2005-06, the first time since 1999-00.

14. However, the growth momentum in the Pakistani economy does not appear to require such a strong push from either monetary or fiscal policy, which may prove detrimental to long term growth. On the monetary side, there are ample signs of overheating in the economy, with core and non-core inflation accelerating. Capacity utilization is reportedly at or close to 100 percent in a number of industries. In spite of an excellent agricultural year, inflation has reached 10 percent, raising in many investors questions about the strength of Pakistan's stabilization. Although some monetary tightening started in 2005, monetary policy has remained expansionary.

15. On the fiscal side, the stabilizing power of fiscal policy depends largely on its ability to mitigate cyclical fluctuations. But in many developing countries fiscal policy tends to be pro-cyclical, expanding in booms and contracting in recessions --a pattern that makes it a major source of macroeconomic instability. Pro-cyclical fiscal policy played a key role in some recent macroeconomic crises, notably in Argentina. In sum, the combination of a relatively loose monetary stance with an expansionary fiscal policy may lead observers of Pakistan's economy and potential investors to conclude that such a policy stance is not sustainable, and hence sooner or later the Government and the central bank will be forced to

[9] The precise proposition is that the primary, or non-interest, component of both budget and current account deficits must remain close to zero to stabilize the ratio of debt to national output. For a more detailed discussion, see E. M. Gramlich (2004) "Budget and Trade Deficits: Linked, Both Worrisome in the Long Run, but Not Twins", speech delivered at the Euromoney Bond Investors Congress, February 2005.

[10] Without s significant increase in domestic and national savings, productivity gains alone will be unable to fuel rapid growth over the long-run (as analyzed in Chapter 2).

tighten both policies abruptly. This judgment would erode some of the Government's hard-earned credibility as a reformer and sound manager of Pakistan's economy. *Sustaining growth in the long run (as opposed to stretching a growth episode by a year or two) will require a change in the macroeconomic policy mix.* The following section focuses on the elements of such a policy mix.

16. ***Maintaining macroeconomic stability and increasing savings.*** A stable macroeconomic policy environment features fiscal solvency, a low and stable rate of inflation, and a robust exchange rate regime that avoids both systematic currency misalignment and excessive volatility in the exchange rate. Taking these principles into account, reducing the chances of an increase in macroeconomic instability will require actions on five fronts:

Fiscal Policy

(i) Maintain a low (3.3-3.5 percent of GDP) fiscal deficit, consistent with a continued reduction in the debt-to-GDP ratio and increased expenditures in public investment and the social sectors. In order to achieve the necessary increase in public savings, the Government will need to focus efforts on increasing the tax-to-GDP ratio much more rapidly than it has done so far;

(ii) continue to reduce the debt burden, which remains high as a share of revenues. While the debt-to-GDP ratio has declined significantly, from a peak of nearly 90 percent in 2000-01 to 50 percent in 2004-05, the ratio of public debt to revenues remains high, at over 400 percent in 2004-05; and

(iii) increase the level and quality of the *public investment program*, focusing it on public goods and those activities that can translate into lower costs of doing business and crowd in private investment; this requires leaving for the private sector those activities it can do best.

Monetary Policy

(iv) The central bank needs to make price stability its primary goal and to pursue it consistently; and

(v) maintain positive real interest rates, so as to encourage saving and discourage low-quality lending, which could jeopardize the stability of the banking system

17. ***Maintaining an Appropriate Exchange Rate Policy.*** A key element of a macroeconomic policy mix that preserves the competitiveness of an economy is the maintenance of a competitive exchange rate. Pakistan follows a managed float regime. While, as discussed above, the rupee appreciated considerably over the 1990s, in the past few years Pakistan's macroeconomic managers and the central bank, in particular, have maintained a competitive exchange rate (see Figure 5.1). Indeed, this has been an explicit concern of the monetary authorities. The sustained nominal and real depreciation of the effective exchange rate, which took place between 2002 and 2004, contributed to sustaining strong export growth and much needed export diversification.

18. While exchange-rate management remained appropriate until 2004, the rupee has since appreciated. With excess demand for goods translating into increased demand for imported goods and inflation, the higher inflation differentials with Pakistan's trading partners required depreciation in the nominal exchange rate. However, the SBP has slowed the depreciation of the rupee, resulting in an appreciation of the real exchange rate and a relative loss in competitiveness of Pakistan's exports;[11] the Rs/$ nominal exchange rate has remained at around Rs59.50/$ since late 2004, leading to a 6 percent appreciation in the real effective exchange rate. These actions may have been taken to avoid further inflationary pressures. But, further appreciation of the real effective exchange rate would definitely hurt Pakistan's competitiveness and export diversification. Furthermore, it is useful to remember that in view

[11] While export performance in 2004-05 was good, with exports expanding at about 15 percent compared to the previous year, exports of textile manufactures increased only 2 percent.

of the significant trade liberalization since the late 1990s, it is to be expected that the underlying longer-term equilibrium exchange rate must have risen (depreciated) on account of merchandise trade.

19. It is important to note that the most important pitfall that can develop from inappropriate exchange-rate management is an overvaluation of the currency. Overvaluation is damaging to competitiveness because it artificially alters the price ratio between tradables and nontradables. So the producers of tradable goods find that they are less able to compete either with imported goods in their own country, or with other countries' exports in the international marketplace. Economies that would have otherwise enjoyed a cost advantage in labor and domestically produced inputs begin altering their production processes and substituting for capital equipment and imported inputs. And the greater the overvaluation, the more difficult it becomes for the existing drivers of competitiveness to maintain their competitive edge. In sum, it would be critical to avoid sustained appreciation of the real effective exchange rate. In this regard, close monitoring export performance will be useful.

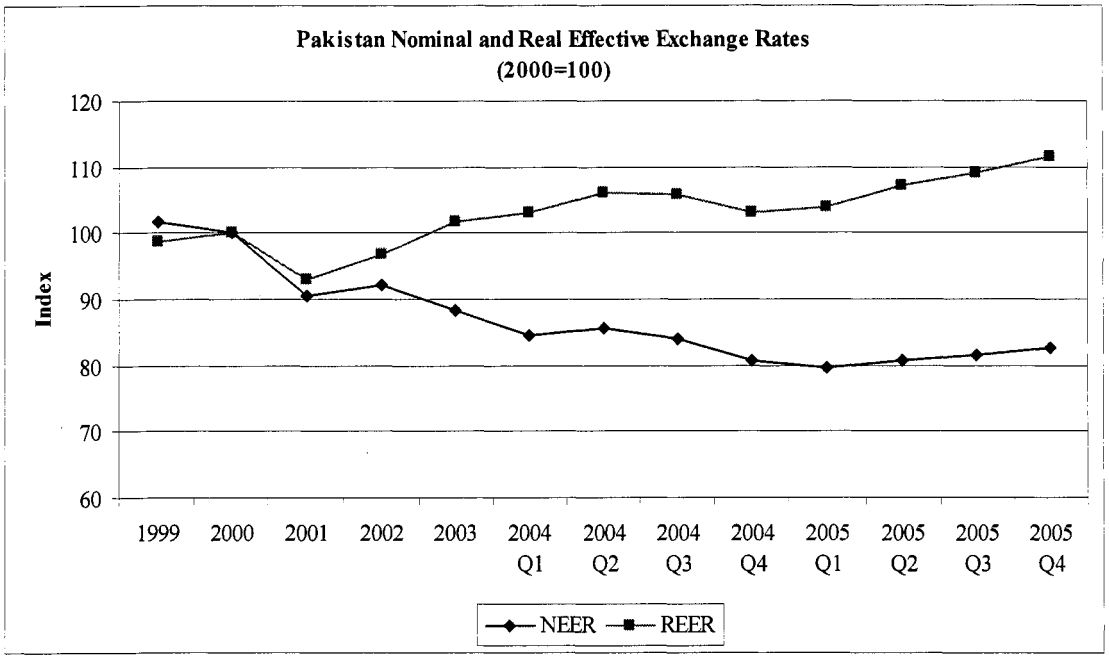
Public Expenditure Management and Investing in Education

20. Earlier assessments and analyses document the extent to which Pakistan underperforms other countries at similar stages of development in almost all of the social indicators --in education, health and nutrition, and population growth. Impacts of this social gap, further reinforced by an even sharper gender gap, on the lives of those groups who remain particularly affected are also well documented.[12] One of the critical impacts of Pakistan's lagging human development performance is the scarcity of skilled labor. As elaborated in Chapter 6 below, *Pakistan's skills gap is a critical constraint on productivity, competitiveness, and growth.*

21. Because other studies[13] have already covered the development challenges pertaining to the social sectors and the critical role of the level, composition, and quality of public expenditure in meeting the needs in education, the key objective of this report with respect to human capital is simply to emphasize how important it is for Pakistan's growth prospects to invest more in education and skills development. The findings of both the growth analysis and product/firm-level investigation show that faster progress in educational achievements and in expanding an educated work force will be critical in the medium- and longer-term to raising productivity and competitiveness of Pakistan's firms and accelerate economic growth. Staying competitive in an integrated global economy will require an increasing supply of skilled manpower to make the most of rapidly changing technologies.

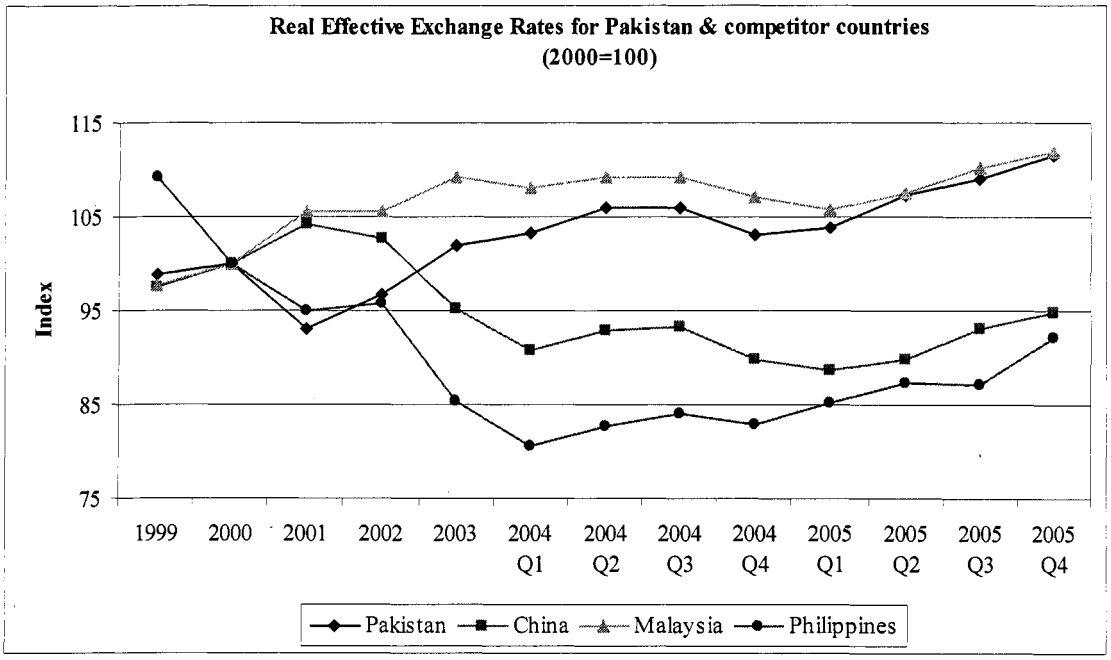
[12] Including: World Bank (2002), *Pakistan: Development Policy Review- A new Down*? South Asia Region, Report no. 23916-PAK; World Bank (2004), *Pakistan: Public Expenditure Management-Strategic Issues and Reform Agenda*, South Asia Region, Report no. 25665-PK.
[13] Ibid.

Figure 5. 1 : Pakistan Nominal and Real Effective Exchange Rates (1999-2005)



Source: IMF International Financial Statistics. (An increase implies appreciation).

Figure 5.2: Real Effective Exchange Rates for Pakistan and competitor countries (1999-2005)



Source: IMF International Financial Statistics. (An increase implies appreciation).

22. *The way forward*:

- Based on the successes and disappointments of the Social Action Program developed in the 1990s, the Government has given a higher priority -- reflected in the PRS-- to the spending levels and quality of programs in the social sectors, including in all levels of education. The national-level education sector reform program, led by the Federal Ministry of Education, is being implemented. Its key objectives include: (i) improving access to and equity for "quality universal primary education" through improvements in infrastructure and teaching material; (ii) increasing access through public-private partnerships; (iii) improving the quality of secondary education; (iv) enhancing quality through strengthening teacher training, revising national curriculum and textbooks, and establishing a National Education Assessment System; (v) increasing adult literacy; (vi) supporting technical education in secondary schools; [14] and (vii) mainstreaming madrassah education through the introduction of general education subjects.

- To achieve sustained progress, there is a need to continue: (i) improving *governance in the education* sector by further strengthening the existing mechanisms aimed at more effective management and performance of teachers and by monitoring teachers' competencies and absenteeism; (ii) implementing transparent procedures for teacher training and recruitment; and (iii) instituting effective mechanisms for monitoring outcomes/impacts (drop-outs, completion rates etc.).

- It is also expected that the effectiveness of service delivery will improve with the completion of the devolution program, which, if successful, may improve delivery of social services in general and education in particular. In the meantime, expanding the coverage of successful public-private partnership initiatives could also improve access to and quality of service delivery in education.[15]

23. The next chapter, Chapter 6, covers the key microeconomic dimensions of Pakistan's investment environment. It focuses on the major issues related to economic governance (including government regulation), Pakistan's skills infrastructure, and factor markets. It recommends appropriate measures to address these issues. Some of the key issues pertaining to trade policy, transport/trade facilitation, and food quality and safety standards will be covered in separate chapters (Chapter 7 and 8, respectively).

[14] Source: *Towards A Prosperous Pakistan: A Strategy for Rapid Industrial Growth*, (draft), Chapter 7 --a draft report under review by Ministry of Industries, Production and Special Initiatives (2005).

[15] Critical importance of strengthening 'basic schooling', technical education and vocational training in addressing Pakistan's skills shortage is detailed and emphasized in: World Bank (2006), *Pakistan: Labor Market Study*, (draft), South Asia Region, Finance and Private Sector Unit; the background paper for the latter study, Fretwell, D. (2005), "Pakistan: The Challenge for Vocational and Technical Education: Creating Human Capital to Support Economic and Social Development", (draft) World Bank; and *Towards A Prosperous Pakistan: A Strategy for Rapid Industrial Growth*, (draft), op.cit.

CHAPTER 6: IMPROVING BUSINESS ENVIRONMENT FOR STRONGER GROWTH AND COMPETITIVENESS

A. INTRODUCTION

1. Pakistan has taken on the enormous challenge of fundamentally transforming the state's role from owner-operator to facilitator-regulator across most economic activities. Privatization of state-owned finance, utilities and of industrial enterprise is being accompanied by the opening of previously controlled markets in telecommunications, media and ICT. Accordingly, the Government is revising legal and regulatory frameworks, establishing independent regulatory oversight for utilities, financial markets, procurement and competition,[1] strengthening the judiciary and building capacity in the public sector to carry out its retained responsibilities for regulation in labor, tax, and customs.

Table 6.1:Governance Indicators 2004
(percentile)

	Voice and Accountability	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
Pakistan	**11.7**	**6.3**	**32.7**	**15.8**	**26.1**	**20.2**
Bangladesh	28.6	11.7	26.4	13.3	22.2	10.3
Sri Lanka	41.3	14.1	45.7	59.6	53.1	52.2
Singapore	43.2	96.6	99.5	99.0	95.7	99.5
Malaysia	37.4	58.7	81.3	64.5	64.7	64.5
Thailand	52.4	41.7	65.4	51.2	51.7	49.3
China	7.3	46.6	60.1	35.0	40.6	39.9
Philippines	47.6	15.0	46.2	49.8	32.4	36.5
Turkey	41.7	30.6	57.2	48.8	54.6	50.7
Indonesia	35.9	9.2	40.9	36.9	20.8	17.7
India	53.9	24.3	55.8	26.6	50.7	47.3
Mexico	56.8	43.7	56.7	68.0	45.9	48.8
Peru	44.7	27.2	32.2	57.1	31.9	44.3
Brazil	55.8	43.7	58.2	58.1	46.9	53.2

Source: Kaufmann, Kraay, Mastruzzi, Governance Matters IV: Governance Indicators for 1996 – 2004, World Bank Policy Research Paper 3630, June 2005.

2. Institution building is proving to be a long and difficult process for the executive, judiciary and among independent regulators. As result, the consistency, certainty, and predictability of the economic governance framework --including the laws and regulations, the adjudication mechanisms and their enforcement agencies, and the public agencies involved in government-business interface-- still fall short of minimal standards. The deterioration of governance indicators is a strong signal that sustained effort and continuous diligence is required to build institutions capable of carrying out regulatory oversight. In

[1] The key independent regulators include The State Bank of Pakistan (SBP), The Securities and Exchange Commission of Pakistan (SECP), National Electricity Power Regulatory Authority (NEPRA), Oil and Gas Regulatory Authority (OGRA), Public Procurement Regulatory Authority (PPRA).

2004, Pakistan ranked in the bottom 20 percent in four of six indicators with the other two in the bottom third. (Table 6.1).[2]

3. In addition to the gaps in the economic governance area, there are still important constraints in infrastructure and factor markets, particularly for land and labor. In the following sections these impediments to productivity growth and competitiveness of firms in Pakistan will be highlighted, within a cross-country comparative framework (wherever possible), and appropriate actions to address these priority issues be suggested.

B. STRENGTHENING ECONOMIC GOVERNANCE

4. ***Regulatory environment.*** Of particular concern is Pakistan's deteriorating rating on quality of regulation and the perception that corruption is on the rise in Pakistan.[3] The regulatory environment includes many antiquated laws enforced by autonomous and government institutions at federal, provincial and local levels. Increasingly, the openness of the economy, the rapid pace of globalization and the sophistication of firms operating in Pakistan are exposing inadequacies in the regulatory framework. As a result, enforcement brings arbitrary discretion by government officials, causes high official and unofficial compliance costs on formal firms and forces others to operate informally.[4] An indication of the regulatory impact on formal firms' cost of doing business is that Pakistani managers, on average, spend 10 percent of their time dealing with Government regulation; higher than other comparator countries apart from China and India (Table 6.2).

Table 6.2: Investment Climate Economic Governance Indicators 2002 – 2004

	Days per year spent with tax officials	Percent of manager's time spent on government regulation	Percent of Firms who agree with Consistency in interpretations of regulations	Percent of sales spent on unofficial payments	Percent of firms with confidence in the judiciary system
Pakistan	**4.2**	**10.1**	**35.2**	**2.0**	**37.4**
Bangladesh	3.4	4.2	78.6	2.5	17.0
Brazil	..	7.8	34.0	..	60.4
China	14.4	19.6	66.3	1.9	82.5
India	..	14.4	35.9	..	70.6
Indonesia	2.0	5.5	44.0	1.8	59.2
Peru	..	..	21.3	..	65.3
Philippines	3.9	8.8	50.9	1.9	66.2
Sri Lanka	5.1	3.8	71.1	0.2	68.8
Turkey	..	4.6	59.4	0.3	66.9
Global Average	9.1	12.2	47.3	1.7	60.3

5. *Post- entry regulation*. A significant source of government-business interface stems from compliance processes involved with tax, customs, and labor regulation. Tax administration has in the past been considered a major constraint. Almost half of firms surveyed in 2002 considered it a major problem.

[2]During the 2000 - 2004, the ratings fell for three of the six indicators and did not change for two others. Notably, after showing gains in the early part of the decade, the corruption indicator fell to the 5th quintile of countries analyzed. At the same time Pakistan's rankings for in Transparency International's Corruption Perception Index, fell to 129 out of 145 in 2004, showing improvement in the earlier part of the decade. Corruption is not only perceived as an issue by external sources. In 2002, 40 percent of Pakistani businessmen surveyed considered corruption a major constraint to investment.

[3] The 2004 Kaufman-Kraay governance index of *regulatory quality* ranked Pakistan better than only 16 percent of the 156 countries analyzed, as compared with 40 percent in 1998.

[4] The World Bank's 2005 *Doing Business* report estimates that more than a third of GDP comes from the informal economy.

Customs and labor regulation were considered to be less important as 25 and 15 percent of firms, respectively, reported these to be major constraints. In all of these areas, the Government is undertaking comprehensive programs with explicit objectives to lower the compliance burden from government regulation while improving the effectiveness of the government service. For example, as detailed in the 'trade facilitation' section in Chapter 8, clearing imports from customs has improved substantially. Legislated efforts are being driven at the federal level and a range of implementing agencies are undergoing capacity building and process engineering to ensure better government --business interface, focusing initially on tax administration, customs facilitation, and labor protection.[5]

6. *Business entry and exit.* The driving force behind firm-level productivity is an environment of open competition where firms must strive for low costs, efficiency, and innovation to survive.[6] This implies that in addition to an open, neutral trade and foreign investment regime, speed and ease of entry, orderly and expedient exit and institutional protections for fair and open competition, are key components of a policy regime which fosters rising firm-level productivity. Many factors affect the ease of entry by domestic firms, including the regulatory burden involved in organizing a new business and the contestability of markets.[7] Starting a business in Pakistan has become easier in recent years due to concerted effort to reduce the number of steps and cost required associated with registration. The days to start a business fell from 53 to 24 byn 2003 and efforts have continued to streamlining procedures and introducing on-line systems for tracking and reporting. The lack of minimum capital requirements is also one of Pakistan's key strengths.

Table 6.3 : Doing Business in Pakistan (Entry and Exit)

	Starting a Business				Closing a Business		
	No. of Steps	Days	Cost As %of GNI per capita	Min. Capital As % of per capita income	Years	Cost As % of estate	Recovery Rate
Pakistan	**11**	**24**	**24.4**	**0.0**	**2.8**	**4**	**44.3**
Bangladesh	8	35	81.4	0.0	4.0	8	24.3
Brazil	17	152	10.1	0.0	10.0	9	0.5
China	13	48	13.6	946.7	2.4	22	31.5
India	11	71	61.7	0.0	10.0	9	12.8
Indonesia	12	151	101.7	97.8	5.5	18	13.1
Malaysia	9	30	20.9	0.0	2.2	14	38.8
Mexico	9	58	15.6	13.9	1.8	18	64.1
Peru	10	102	38.0	0.0	3.1	7	31.4
Philippines	11	48	20.3	2.0	5.7	38	4.1
Singapore	6	6	1.1	0.0	0.8	1	91.4
Sri Lanka	8	50	10.4	0.0	2.2	18	33.9
Thailand	8	33	6.1	0.0	2.7	36	44.0
Turkey	8	9	27.7	20.9	5.9	7	7.2
Vietnam	11	50	50.6	0.0	5.0	14	19.3
Global Average	**10**	**48**	**77.7**	**193.6**	**3.2**	**16.4**	**31.4**

Source: World Bank, Doing Business Database.

7. The achievements have made registering a business easier in Pakistan than in other South and East Asian countries (Table 6.3), but the actual start-up of operation, including land acquisition, site development, construction licensing, utility hook up carries a high degree of administrative burden, much

[5] For example, federal tax and customs authorities are undergoing institutional restructuring and process reform. For labor inspections, provincial governments are experimenting with different approaches, including combining visits and pre-announcing (Sindh), self-regulation (Punjab), and exemptions for low risk firms (NWFP).

[6]. See for example, Bastos and Nasir, *Productivity and the Investment Climate: What Matters Most?* 2004 World Bank Policy Research Working paper 3335.

[7] Other key barriers to entry, including access to land, labor, and capital as well as the quality and ease of obtaining infrastructure services are discussed below.

of which are governed by provincial and local authorities. Recent surveys detail the process of business start-up, demonstrating that the process to initiating business operations can take more than a year.[8] Accordingly, the World Economic Forum's indicator, "Administrative Burden for Startup," fell from 72nd in the world in 2003 to 92nd in 2004.

8. The winding down process for companies, as provided in the Company Law, is cumbersome and inadequate. Standardized indicators, comparing the average time (2.8 years) and cost (4 percent of the estate) to close a firm, are not excessive by international standards, rivaling that of China and Malaysia and better than India and Bangladesh (Table 6.3), but firm exit is far from easy. Together with legislated restrictions in the labor law, the company law and its associated insolvency procedures have led to a large number operating sick units receiving government support under various ad hoc amnesty and revival schemes.

Figure 6.1a
Steps and Time to Enforce a Contract

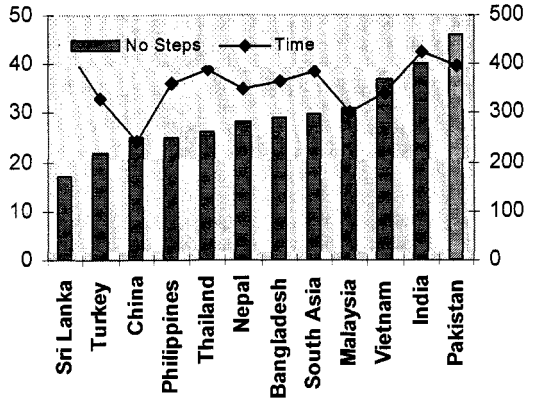
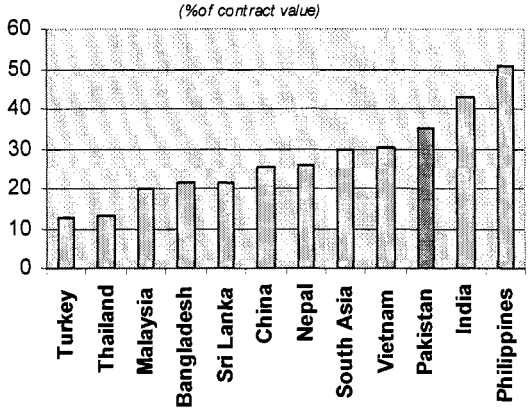


Figure 6.1b
Cost to Enforce a Contract
(%of contract value)



Source: The World Bank, Doing Business Database.

9. *Court efficiency*. Without the credible threat of an efficient and effective adjudication and dispute resolution mechanism, risk taking by businesses is suppressed and innovation forgone. Court processes, judicial capacity, and supporting institutions (advocates, registries, accountancy and related professions) have been notoriously ineffective in enforcing contracts and protecting property rights in Pakistan. Just over a third of businesses surveyed expressed confidence in the judiciary (Table 6.2) and commercial parties have increasingly used the judiciary as a way to delay and stop transactions through stays and continuances. As a result, case backlog - around half of which concern cases of commercial nature --in the High Courts of Sindh and the Punjab number over a hundred thousand, and for the lower courts, in the millions.[9] Most cases will never be heard in a relevant time frame or at all. When cases do go forward, it takes, on average, more than 46 steps, more than a year and a third of the contract value to enforce a contract (Figures 6.1a and 6.1b).[10] Under current conditions, inadequate adjudication for commercial cases, already a lower priority in the courts, will be even more severe as new legal frameworks are being introduced in complex areas such as foreign investment, insolvency, monopoly regulation, anti-money laundering, insider trading, and corporate governance.

[8] The World Bank/IFC, op.cit.
[9] About 40 percent of commercial cases involve land disputes and another third stem from suits against government actions. The rest are dominated by banking disputes and employer disputes
[10] The high number of steps to enforce a contract may be a contributor to the perception that the judiciary is one of the most corrupt institutions in the country.

10. *Security, law and order and political stability.* Issues outside the normal parameters of economic management have been shown to significantly affect investment climates around the world,[11] but are perhaps more important for Pakistan than for other economies. Perceptions of security risks as well as local crime, though hard to quantify, have clearly had an adverse impact on investment and growth. In 2002, a fifth of domestic firms surveyed indicated that crime was a major impediment in the investment climate in 2002, less than in Bangladesh, Brazil or Peru but higher than other South Asian countries. Though views vary regarding developments since 2002, statistics in the province of Sindh show that both violent and non-violent crimes have been rising since then.[12] Perception of instability in national and regional political arena has also been a clear deterrent on investment climate in Pakistan as well. Together this body of uncertainty has contributed to a short term view and suppressed investment by the business community.

11. *Regional differences*. As a highly diverse country with a federation form of government, significant differences in Pakistan's investment climate are seen across provinces.[13] Though intra-provincial competition can be a healthy force for economic reform, as vertical integration and inter-firm linkages become increasingly important in the global marketplace, regional differences become issues of national competitiveness. Economic management, political and security issues play a significant role in provincial differences in the investment climate. Provincial governments and increasingly local authorities are responsible for much of the business interface with regard to labor and other type of business inspections, tax administration, license approval, and judicial enforcement. Differences amongst provinces in these areas bring policy based location advantages which can be harmful to efficient resource allocation. At the same time perceptions of security, crime and political instability and its impact on an open, business friendly environment should be a national concern even if its origins are at sub-national levels.

12. *The Way Forward.* Following the gains being realized from opening the economy to international trade and investment, attention has turned to domestic issues of regulatory and institutional reform to create a more certain and predicable environment for commercial transactions. Tax, customs, financial, labor and utility regulation have been the first areas tackled by the Government and significant progress is being made. Risk based approaches emphasizing self-assessment are being introduced in tax and customs and are being planned for labor inspections and prudential regulation in the financial sector.[14] The next round of high priority business deregulation involves the following areas:

- *Modernization of labor legislation* (see below) to improve compliance monitoring, dispute adjudication and administration of labor welfare levies. As a first step, implementation of risk-based labor inspections regimes with strict limits on abuse and rent seeking will need to be implemented at the provincial level while a more rational labor levies scheme is developed.
- Business laws need their own program of modernization, particularly in areas covering insolvency, corporate governance, and competition law. The insolvency and corporate governance initiatives have begun while the authorities consider options to inject a competition authority into the market system.
- An effective judiciary dedicated to expeditious resolution of commercial cases needs to be urgently pursued. The pending legal reform bill will help limit procedural delays (stays, continuances, etc.) and introduce formalized alternative dispute resolution but needs broader attention to the system of commercial adjudication. Areas being considered include commercial

[11] For example, Ayyagari, Demirgüç-Kunt and Maksimovic, *How Important Are Financing Constraints? The Role of Finance in the Business Environment, (Forthcoming)* shows that "maintaining political stability, keeping crime under control, and undertaking financial sector reforms are likely to be the most effective routes to firm growth."

[12] Statistics for the Sindh province include the First Information Reports (FIRs) for Murder, Attempted Murder, Robbery, and Car/Motorcycle theft.

[13] Pakistan ranks 81st in the world according to the WEF indicator "Regional Disparities in the Business Environment".

[14] A more risk based approach according to Basil II compliant prudential regulation will be gradually introduced over the next 4 years.

court, commercial benches, streamlined and summary procedures, systems of registries, accountancy, and other required professions and backed by swift and effective enforcement.

- Process reengineering would be a central part of capacity building efforts with an expansion of existing pilot e-government initiatives to improve business-government interface. As a first step, a process review organized by SECP is needed to assess streamlining possibilities for site acquisition and development.

- To encourage provincial governments to implement reforms in a *unified* and active manner, implementing regulations, federal policy and active consultation can encourage a unified and competitive approach to implementation of provincial regulations.

  - ***Time frame***: short to medium-term. ***Key responsible entities*** include: Ministry of Industries, Production, and Special Initiatives; Ministry of Law, Justice, and Human Rights; Ministry of Labor, Manpower, and Overseas Pakistanis; relevant Provincial Government Departments; the private sector through the chambers of industries and commerce; and the labor unions.

Table 6.4: Doing Business Indicators: Factor Markets

	Hiring & Firing				*Registering Property*			*Getting Credit*		
	Hiring	Firing	Rigidity	Firing Costs	No. Steps	Days	Cost[2]	Cost to Create Security /*	Legal Rights Index	Credit Bureau
	Index (1–100 w/ 100 most rigid)			*No. of weeks pay*			*percent of property value*	*Percent of loan contract*	*Index (1-10 w/ 10 most rights)*	*Index (1-6 with 6 most coverage)*
Pakistan	**67**	**30**	**46**	**90**	**5**	**49**	**3.2**	**11.5**	**4**	**4**
Bangladesh	11	20	24	47	11	36	11.0	21.3	7	2
Brazil	67	20	56	165	15	47	4.0	21.4	2	5
China	11	40	30	90	3	32	3.1	0.0	2	3
India	56	90	62	79	6	67	7.9	11.3	5	2
Indonesia	61	70	57	145	7	42	11.0	2.5	5	3
Malaysia	0	10	10	65	4	143	2.3	3.2	8	6
Mexico	33	60	51	75	5	74	5.3	25.7	2	6
Peru	44	40	48	56	5	33	3.2	16.0	2	6
Philippines	56	40	45	90	8	33	5.7	8.3	3	2
Singapore	0	0	0	4	3	9	2.8	0.3	10	4
Sri Lanka	0	80	40	176	8	63	5.1	0.7	3	3
Thailand	33	0	18	47	2	2	6.3	1.1	5	4
Turkey	44	40	55	112	8	9	3.2	19.9	1	5
Vietnam	44	70	51	98	5	67	1.2	2.0	3	3
Global Average	**36.7**	**35.9**	**41.2**	**49.3**	**6.1**	**85.6**	**6.6**	**9.7**	**4.9**	**2.7**

Source: World Bank, Doing Business Database (2006). /*: *Doing Business* 2005.

C. IMPROVING FACTOR MARKET CONDITIONS

13. Well functioning markets for labor, land, and capital enable optimal resource allocation and maximum factor productivity growth. In 2002, domestic firms reported that access to finance was a more of a major concern, (considered a severe or major constraint by 38 percent of respondents) than access to

land and skilled labor (considered a major problem by 21 and 13 percent, respectively). Since then Pakistani authorities have taken bold steps to improve the banking sector, but deficient labor and land markets continue to be viewed as major constraints to private economic activity.

14. *Addressing skills gap and low labor productivity*. Human development, basic education and workers' skills indicators (Table 6.5) show Pakistan, along with Bangladesh, consistently at the lower end of the rankings. Worse, Pakistan's normalized scores on Human Development Index, literacy and enrollment rates (Secondary and Tertiary) fell between 1995 and 2004, indicating that gains made in basic education were less than those achieved in other developing countries of the world. Therefore, not surprisingly, most of the firms interviewed in the early stages of this work repeatedly stated that the lack of skilled workers is a key bottleneck for their business. The findings of the value-chain analysis presented in Chapter 3 above also highlight the same problem. Similar observations were made in a 2004 World Bank study, which reported that 70 percent of the firms contacted identified the shortage of skilled workers as an important constraint to their operations.[15]

Table 6.5: Education and Workers Skills

	Barro-Lee Education Indicators						Harbison - Myers Skills Index			
	Average Years of Schooling			Percent of Population without Schooling			1998		1985	
	2000	1985	1960	2000	1985	1960	*Rank of 98*	*score*	*Rank if 98*	*score*
Pakistan	**3.88**	**2.14**	**0.74**	**51.0**	**72.8**	**83.1**	**77**	**4.10**	**69**	**4.40**
Bangladesh	2.58	2.06	0.61	50.1	63.0	87.0	76	4.30	72	3.95
Sri Lanka	6.87	5.88	3.94	14.0	11.9	37.1	58	10.15	52	9.10
Singapore	7.05	6.10	4.30	16.4	28.2	46.2	29	23.05	37	14.08
Malaysia	6.80	5.48	2.88	16.2	23.0	49.7	55	11.10	51	9.20
Thailand	6.50	5.18	4.30	12.6	15.7	36.9	45	14.70	48	10.75
China	6.35	4.94	-	18.0	31.5	-	59	9.75	67	5.15
Philippines	8.21	6.65	4.24	31.0	8.3	25.6	32	21.60	23	21.25
Turkey	5.29	3.69	1.92	20.8	39.1	59.2	49	14.70	50	9.80
Indonesia	4.99	4.00	1.55	32.1	23.6	68.0	56	10.35	57	8.30
India	5.06	3.64	1.68	43.9	61.6	72.2	69	8.10	60	7.10
Mexico	7.23	5.20	2.76	9.7	22.2	40.1	51	12.95	40	13.15
Peru	7.58	6.02	7.58	11.9	17.5	37.6	30	22.55	30	18.40
Brazil	4.88	3.48	4.88	16.0	26.1	47.5	57	10.15	52	9.10

Source: Barro-Lee indicators Barro, Robert J. and Jong-Wha Lee, International Data on Educational Attainment: Updates and Implications, Harvard Center for International Development Working Paper No. 42, Harbison-Meyers skills index from UNIDO, Industrial Development Report 2002/2003.

15. Years of schooling received by an average worker in Pakistan is about 50-60 percent of what an average worker receives in East Asia and about 77 percent of schooling received by an average worker in India. Moreover, due to the poor quality of education, infrastructure, low enrollments, and the consequent teacher/student absenteeism, educational achievements are low. UNICEF's estimates show that only 7 percent of the primary school graduates are literate and only 18 percent are numerate.[16] And at the secondary level, net enrollment is about 16 percent, and only about half of these end up enrolling for the matriculation level classes (grades 9 and 10).[17]

[15] Wilson, J. S. and T. Otsuki (2004). *Standards and Technical Regulations and Firms in Developing Countries: New Evidence from A World Bank Technical Barriers to Trade Survey*, World Bank (Washington).

[16] *Towards a Prosperous Pakistan: A Strategy for Rapid Industrial Growth*, (draft), Chapter 7, pages 76-78 (January, 2005); the latter is a draft report under review by the Ministry of Industries, Production and Special Initiatives.

[17] Ibid., 77.

16. One outcome of such weak educational base is that 'the share of factory workers with secondary education or higher in Pakistan is one of the lowest in the developing world'.[18] With such poor level of basic schooling, it becomes difficult to train the new entrants to the labor force to meet the needs of manufacturing industries.[19] The resulting lower labor productivity relative to the comparator countries with stronger educational base adversely affects Pakistan's competitiveness and will inhibit Pakistan's growth prospects (specific cases of lower labor productivity are cited in the value-chain analysis presented in Chapter 3).

17. *Improving labor market flexibility*. Pakistan's labor market efficiency ranks low by international standards, with statutory requirements causing "hiring inflexibility" (Table 6.4). Antiquated and restrictive regulations governing maximum hours, overtime conditions, length of temporary contracts, remuneration rates, and welfare contributions[20] impact bilateral market relationships and cause real wages to diverge from productivity levels, preventing efficient resource allocation and harming competitiveness. The discretionary approach of provincial inspectors, labor tribunals, and wage authorities in enforcing requirements and adjudicating disputes adds considerable uncertainty to labor market outcomes. The result is that many, if not most, firms circumvent labor laws to some degree, most often by using contracted or piece rate labor on a very short-term basis and often hired through intermediaries. Such practice, while avoiding costs of complying with labor regulations, suppresses labor productivity and sustains Pakistan's concentration on low value-added activities. *Moreover, the informal nature of the labor market stifles incentives and retards investment in workers' skills, both by the employer and the worker himself.*

18. *Land Market*. Land market issues are complex, involving a multitude of public agencies at the federal, provincial, and state levels which own, manage tax, and regulate commercial land. In addition, most land is held by the public sector.[21] For transactions which do occur in the private sector, the inherent weaknesses of the system of registering prevent certainty of property rights. These include the multiple agencies involved in land registration, complex and opaque records keeping, and sale transactions taking place without valid conveyance documents. These legal inadequacies and procedural deficiencies prevent indisputable land title and is one of the primary causes of the case backlog in the courts. Moreover, without clear property rights, lenders will not consider collateral as loan security without an original sale deed in the bank's possession. The resulting "dead capital" and lack of site access, hinders leveraged investment, firm level entry, and efficient resource allocation.

19. *Financial markets*. The past five years witnessed considerable deregulation, liberalization and privatization in the financial sector. Starting with three quarters of banking assets controlled by public sector banks in the late 1990s, almost 80 percent of assets are now under private control. Reforms were initiated to strengthen the regulations and the regulator, reform the National Savings Scheme (NSS) to rationalize interest rates, enable efficient enforcement of financial contract, rationalize the tax structure; and foster greater disclosure and transparency.

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[18] World Bank (2006), *Pakistan: Labor Market Study*, (draft), South Asia Region, Finance and Private Sector Unit.

[19] For further details, see: the background paper for the Labor Market study (ibid.) by Fretwell, D. (2005), "Pakistan: The Challenge for Vocational and Technical Education: Creating Human Capital to Support Economic and Social Development", (draft) World Bank; and *Towards A Prosperous Pakistan: A Strategy for Rapid Industrial Growth*, op.cit., Chapter 7.

[20] For example, currently labor legislation limits temporary contracts, prescribes 48 working and 12 weekly overtime hours, double wage for overtimes, a month bonus per year, 40 days of paid leave, requires 5 different "labor welfare" taxes and enables various types of inspectors to harass establishments on a regular basis.

[21] The federal and provincial governments have countered the limited access to land and the problems with site development by making available plots on government owned land in industrial estates across the country. A survey of the 35 principal industrial estates across the country reveals a stock of more than 17,000 plots, two thirds of which have been allotted. The survey also reveals the low occupancy rate for most estates apart from 100 percent occupancy in SITE in Sindh, and Raiwind and Kot Lakhpat in Punjab. Reasons for the mixed success of industrial estates in Pakistan are cited as: (i) inappropriate selection of location; (ii) poor quality of infrastructure and support services; (iii) insufficient land in prime business locations; (iv) rigid government rules regarding eligibility of investment; and (v) inadequate stakeholder participation in estate management. Source: *A Prosperous Pakistan*, 2005, op.cit.

20. Despite the significant reforms in the banking system and the excess liquidity position in the country, access to finance continues to be an important constraint. A large proportion of the financial sector still remains under government control, including the National Bank of Pakistan (NBP), the largest commercial bank in the country accounting for nearly a fifth of the banking system and the State Life Insurance Company (SLIC) accounting for nearly 85 percent of the system. Life insurance and pension sectors are small, dominated by public institutions (SLIC, Employees Old-age Benefits Institution (EOBI) and Social Security Institution (SSI), are restricted to investments in government assets and are taxed higher than the corporate sector. The legal system for enforcement of financial contracts is partly untested and is faced with problems at the execution level,[22] and credit bureaus are at a nascent stage of development. These issues are reflected in the Doing Business indices (Table 6.4), where the "legal rights index" is rated 4 out of 10 --better than selected Latin American countries, average for South Asia, and less than in East Asia.

21. *The way forward*. In *education*, Pakistan needs to:[23]

- Focus a considerable portion of the limited education resources to upgrade quality of and access to primary and intermediate general education to better prepare students for the subsequent levels of education, to reduce drop-outs, and to meet the 'trainability' requirement of various industries. This level of education forms the base for all future levels of education, including for *vocational and technical training* (VTT), and provides the necessary skills for labor market entry in an economy that is rapidly becoming a knowledge economy.
- Take steps to make intermediate and secondary education more purposeful and linked to the economy and changing needs in the labor market, and careers.
- Upgrade and expand her overall vocational and technical education capacity to train individuals who are completing matriculation and those who have dropped out earlier and the unemployed.

    - ***Time frame***: sustained, continuous effort. ***Key responsible entities*** include: Ministry of Education; Government Vocational Institutes administered by Provincial Education Departments; Technical Training Centers; Vocational Training Centers); Apprenticeship Training Centers administered by Provincial Labor Departments; and the private sector through the chambers of industries and commerce.

22. Efforts to improve the functioning of factor markets have been a central pillar of Pakistan's drive for modernization. Financial markets have received most attention in the past while the first efforts at labor market reform in decades are underway. Some effort at improving land market functioning is just beginning at the provincial levels, but in a limited way.

- The first round of *labor market reform* represents a good start by codifying antiquated legislation and starting the process of liberalizing the market.[24] The agenda for the next round includes:
    - Preparation of regulations for the new Employment Services Act, which implements increased labor flexibility particularly in the use of temporary labor contracts.
    - Completion of the legislative reform agenda focusing first on reforming the 14 laws governing labor welfare and rationalizing the labor levies system.

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[22] The Financial Recoveries Ordinance 2001 has been effective for several years but has been used sparingly due to recent judicial challenges. It will only become fully effective once it is upheld by the supreme court of the country.

[23] This section on education is based on based on the findings and analyses of the background paper for the Labor Market study, "Pakistan: The Challenge for Vocational and Technical Education: Creating Human Capital to Support Economic and Social Development", (draft), the World Bank (2005), op. cit.

[24] Laws are being redrafted to replace 30 - 40 federal and provincial laws and regulations covering employment conditions, labor welfare, health and safety and human resource development. The first act, Services and Employment, recognizes piece-rate contract workers in the legislation, expands the weekly hours and overtime hours, particularly for women and reduces the compliance cost on business.

- ➢ ***Time frame***: short- to medium-term. ***Key responsible entities*** include: Ministry of Labor, Manpower, and Overseas Pakistanis; labors unions; and the private sector through the chambers of industries and commerce.

- *Land market development* has proven to be difficult, in part due to the numerous agencies, multiple levels of government and entrenched traditions involved. A comprehensive program would require two tracks: one for new transactions with clear title and a delicate and complex parallel activity to establish property rights in the face of ownership disputes based on a range of ways to convey and transfer ownership rights. Therefore, the way forward would involve:
  - o A consistent legal framework, registry, and property tax system, which defines and protects the land use rights associated with both owning and lease holding, should be guaranteed with the backing of the state, with development rights and sufficient length in the case of lease holding.
  - o Transferability with full confidence, minimum costs,[25] and in an adequate time including the elimination of transfers using dubious or traditional techniques, such as oral gifts under Sharia inheritance law, power of attorney, and rights conveyed under the patwani system for land in rural areas.
  - o To feed and provide credibility to the new land titling system, federal and provincial authorities could develop an inventory of underutilized land to be auctioned with clear title and registered according to the newly introduced system.
    - ➢ ***Time frame***: short- to medium-term. ***Key responsible entities*** include: Federal and provincial governments; Ministry of Law, Justice, and Human Rights.
- The challenge in the *financial sector* is to consolidate and expand the significant gains in soundness and governance to improve access to finance and availability of services, including:
  - o Completing privatization of public sector commercial banks, specialized financial institutions, and increasing the private sector's role in insurance --including the removal of regulatory constraints on investments by insurance and pension/ provident funds.
  - o Improvements in the legal framework and judicial processes for enforcement of financial contracts (such as with a modern secured transactions regime for movable collateral) and an expansion of credit registry coverage, particularly for private credit registries.
    - ➢ ***Time frame***: short- to medium-term. ***Key responsible entities*** include: Ministry of Finance and Revenue; Ministry of Privatization.

D. INFRASTRUCTURE DEVELOPMENT

23. Pakistan's infrastructure indicators show a low proportion of the population with access to electricity, paved roads, and municipal services as well as fixed and mobile telecommunications (Table 6.6). In addition to the low penetration density, the performance of the services has been relatively poor, particularly in the area of electricity. The conditions of the roads, railways, and ports hinder Pakistan's competitiveness by preventing adequate supply chain logistical linkages amongst firms and their customers. The findings of the productivity and competitiveness analysis highlighted electricity utility and transport logistics/trade facilitation as the key areas to focus. The remainder of this chapter focuses on electricity related bottlenecks. The challenges faced in transport/trade facilitation are addressed in Chapter 8.

[25] As an initial step, the Stamp tax was recently reduced from 3 to 2 for property registration.

Table 6.6: Infrastructure Indicators: 2002

	kwh of electricity production per capita		kwh of electricity consumption per capita		% of losses in electricity generation and transmission		% of pop with access to elec.	paved roads as % of total	% of pop with access to sanitation	% of pop with access to water	Tele-phone. per 1000	Mobile phones per 1000
	1995	2002	1995	2002	1995	2002	2000	1999	2002	2002	2002	2002
Pakistan	**465**	**522**	**343**	**363**	**22.8**	**26.5**	**52.9**	**55.0**	**54.0**	**90.0**	**25.0**	**8.5**
Bangladesh	90	136	70	100	16.6	20.6	20.4	9.5	48.0	75.0	5.1	8.1
India	448	569	332	380	19.1	26.2	43.0	57.4	30.0	86.0	39.8	12.2
Sri Lanka	278	366	218	297	18.0	18.1	62.0	95.0	91.0	78.0	46.6	49.2
Brazil	1,728	1,975	1,608	1,776	16.7	17.3	94.9	5.6	75.0	89.0	223.2	200.6
Mexico	1,674	2,134	1,311	1,660	14.3	14.6	-	32.8	77.0	91.0	146.7	254.5
Peru	677	822	539	723	18.6	10.4	73.0	13.0	62.0	81.0	66.0	86.2
Turkey	1,397	1,859	1,055	1,458	16.0	18.5	-	34.0	83.0	93.0	281.2	347.5
China	836	1,281	636	987	7.4	7.1	98.6	22.4	44.0	77.0	166.9	160.9
Malaysia	2,204	3,053	1,903	2,832	9.0	5.6	96.9	75.3	-	95.0	190.4	376.8
Philippines	491	606	389	459	17.1	16.3	87.4	20.0	73.0	85.0	41.7	191.3
Singapore	6,309	8,502	5,187	7,039	3.8	8.5	100.0	100.0	-	-	462.9	795.6
Thailand	1,366	1,769	1,215	1,626	8.1	7.3	82.1	97.5	99.0	85.0	105.0	260.4
Indonesia	305	511	258	411	11.7	16.2	53.4	57.1	52.0	78.0	36.5	55.2
Vietnam	201	445	153	374	21.7	14.0	75.8	25.1	41.0	73.0	48.4	23.4

Source: The World Bank, World Development Indicators Database

24. *Power utility*. The principal infrastructure issue facing the business community, particularly the larger established firm, is access to reliable power. Electricity concerns were considered a severe major constraint by almost half of surveyed firms in 2002, without distinction to size and location. The level of electricity consumption per capita is high by South Asian standards, but low compared to East Asia and Latin America. Even so, difficulty in getting electricity connections [26] and unreliable supply with frequent outages have traditionally been an enormous burden on business, causing 40 percent of surveyed firms to back up operations with their own generation and costing 5.4 percent of sales, higher than most countries apart from India and Philippines (Table 6.7). In addition, the sector's inadequate pricing and subsidy structure causes the burden to fall particularly hard on the manufacturing industry, further harming price competitiveness. As a universal issue, requiring considerable political and financial resources to resolve, the power sector remains an enormous challenge in efforts to improve the business environment. The Government's Sector Recovery Plan aims at: (i) accelerated privatization in generation and distribution; (ii) aggressive cost and loss reducing measures throughout the system; (iii) improved tariffs and subsidies; and (iv) fully-funded investments in the sector. However, delays in implementing the plan are causing increasing losses in the system and further complicating the challenge.[27]

[26] The 33 days to obtain an electricity connection is not high by South Asian standards as it takes India, Bangladesh and Sri Lanka 82, 80 and 65 days, respectively, but it is much higher than countries in East Asia. (Table 3.10)

[27] Losses in electricity generation and transmission have been higher than its neighbors and competitors, increasing from 23 to 27 percent of total output between 1995 and 2002 (Table 3.10).

Table 6. 7: Infrastructure Performance Indicators

	Electricity				Water	Telecommunications		
	Days for electrical connection	Days of Electrical Outages	% of sales Lost due to Electrical Outages	% Firms that own generator	Days of Water System Failures	Days for Phone Connection	Days of telephone outages	Telephone faults per 100 lines (1998)
Pakistan	**32.9**	**14.5**	**5.4**	**41.8**	**4.5**	**25.8**	**2.7**	98.6
Bangladesh	79.6	249.0	3.3	71.5	31.6	150.4	..	207.6
Brazil	25.6	4.6	2.5	17.0	1.5	18.2	2.1	4.6
China	18.5	..	1.9	17.5	..	7.1	..	..
India	81.6	..	9.0	63.6	..	86.7	..	202.8
Indonesia	14.6	4.4	4.2	39.1	2.9	26.6	1.8	13.2
Peru	22.5	8.8	3.2	27.6	13.7	9.9	6.7	23.8
Philippines	8.2	6.0	7.1	36.6	9.9	13.2	1.9	..
Sri Lanka	64.8	..	..	75.1	12.0	62.5	15.9	180.0
Turkey	0.9	2.7	..	..	0.9	1.5	0.8	56.1
Global Average	48.5	46.2	4.1	36.7	8.1	33.8	3.1	..

Source: The World Bank, Investment Climate Database, World Development Indicators

25. *The way forward.* Government efforts to provide better infrastructure has been intensive in recent years and characterized by successes in telecommunication and oil/gas and slow progress in power sector reform. Therefore, the near-term agenda in the power sector includes:

- In the short-term, a priority action is to introduce and implement an appropriate pricing structure for distribution companies to support the sector restructuring, enable better targeting of subsides, and enhance operational performance by reducing theft and losses; then
- completing the unbundling of Water and Power Development Authority (WAPDA) into separate transmission and distribution companies; and
- continuing with privatization of generation companies.
    - ***Time frame***: short- to long-term. ***Key responsible entities*** include: The Federal Government; WAPDA; Ministry of Privatization.

CHAPTER 7: TRADE LIBERALIZATION AND EXPORT COMPETITIVENESS

A. BACKGROUND

1. There is widespread agreement that in the long run economies with liberal trade policies and greater openness show stronger economic growth and overall development performance. Many cross-country studies and country case studies (that have assessed the impacts of trade liberalization episodes in sub-periods in a given country) have found this positive relationship between trade liberalization and economic performance.[28] Trade liberalization (accompanied by complementary policies and structural reforms aimed at improving business environment) increases trade openness, brings domestic prices into closer alignment with international prices, fosters market competition, and facilitates technology diffusion and upgrading. These developments strengthen productivity growth and efficiency in resource use and allocation, thus also boosting export performance and economic growth. This section presents a brief review of Pakistan's trade liberalization experience in recent years, highlighting the remaining trade policy-related barriers to stronger export competitiveness and economic growth. Specific recommendations on future actions are made to reduce the remaining anti-export bias of Pakistan's trade regime within the context of unilateral, multilateral, and regional tracks to trade liberalization.

2. 'Trade openness', as measured by the ratio of total trade (exports plus imports) to GDP, is one of the key indicators of global integration. In the medium and longer term, trade openness is affected to a large measure by how liberal the trade policy has been and is, as well by economic growth and competitiveness of the real effective exchange rates. During the 1990s, most countries in South Asia liberalized their trade policies significantly, while Pakistan postponed broader and deeper tariff rationalization until end of the decade (Figure 7.1). Pakistan's simple average tariff (i.e., customs duty) rate fell from about 61.1 percent in FY92 to 51 percent in FY95 and to 47.1 percent in FY98, while India's fell from 94 percent in 1991/92 to 40.2 percent by 1997/98, Bangladesh's from 73.6 percent to 33.2 percent over the same period. In line with these fairly high tariff levels (and also reflecting generally weak growth performance), Pakistan's trade openness, based on her merchandise trade, remained *stable* at around 25 percent of GDP in the 1990s.[29] Whereas, India's and Bangladesh's trade openness increased, respectively, from 14.6 percent and 17.6 percent in 1990 to over 21.0 and 30.0 percent by the late 1990s, as a result of faster trade liberalization as well as stronger growth performance (which in turns was partly spurred by reductions in protection rates and structural reforms in the domestic economy).

3. The fact that trade liberalization was much too slow in the 1990s, when other developing countries both in South Asia and in other regions pressed ahead with significant trade liberalization and the complementary structural reforms, was one of the factors why Pakistan's trade openness did not change much during the last decade and why Pakistan performed below her potential in raising factor productivity and overall economic growth. *Of course, the other key problems of large macroeconomic*

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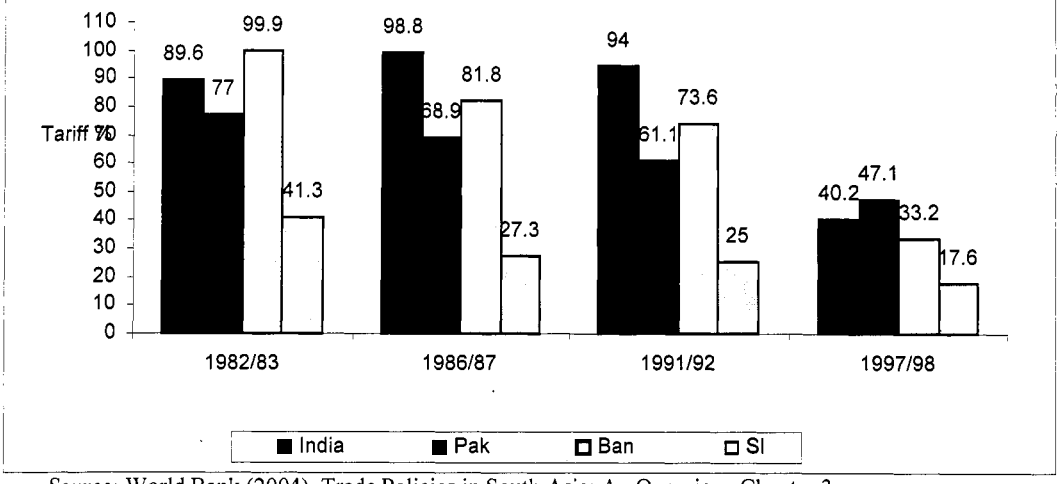
[28] Dollar, D. and A. Kraay (2004). "Trade, Growth, and Poverty", *Economic Journal* (2004); Dollar, D. and A. Kraay (2002). "Growth is Good for the Poor", *Journal of Economic Growth*; Michaely, M., D. Papageorgiou, and A. Choksi (1991). *Liberalizing Foreign Trade: Lessons of Experience in the Developing World* (Oxford: Basil Blackwell); Winters, L. Alan, N. McCulloch, and A. McKay (2004). "Trade Liberalization and Poverty: The Evidence So Far", *Journal of Economic Literature*, Vol, XLII (March). There are also studies reflecting skepticism over the findings of cross-country studies on the grounds of inappropriate measurement of 'trade policy-induced openness', weaknesses in the methodologies used, and failure to establish the direction of causality: Rodriguez, F. and Rodrik, D. (2000). "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence", NBER Macroeconomics Annual (Cambridge, MA; MIT Press). However, the latter is in turn criticized for ignoring the findings of the country case studies: Srinivasan. T.N. and J. Bhagwati (2001). "Outward Orientation and Development: Are Revisionists Right?" in. D. Lal and R.H.Snape (eds.) *Trade, Development and Political Economy: Essays* in Honor of A.O. Krueger (New York: Palgrave).

[29] Note that for consistency and comparability with similar ratios of the recent years based on the new National Account (NA) series (rebased to 1999/2000), the trade openness figures for the 1990s are derived first by adjusting the nominal GDP figures of the 1990s upward by 25 percent as an approximation.

imbalances, domestic political instability and the security concerns, the regional tensions, and very slow improvement in the investment climate significantly limited any gains in efficiency and productivity that could have been realized from whatever trade liberalization took place.

4. It is important to stress that even if Pakistan had displayed a far better macroeconomic management and improved the quality business environment in the 1990s, the very high protection levels would have still constrained the economy's performance, particularly export growth. This is because until recently Pakistan's high protection levels continued to create significant anti-export bias and barrier to export competitiveness thus also limiting export diversification. It is therefore not surprising why Pakistan's export base has remained rather narrow, with significant reliance on textile and clothing exports. *Tariffs and other protective instruments act as 'taxes' on existing and potential export activities by shifting price incentives in favor of import-substituting production and by raising costs of imported inputs, thus raising the profitability of production for domestic markets. Yet, exporters have to compete at international prices, regardless of how much their profit margins are squeezed.* Given this background, in the remainder of this chapter we will turn to an assessment of these trade policy factors that have a major impact on factor productivity growth, export competitiveness and diversification. In the following sub-section, we analyze the Government's recent trade liberalization program that has introduced major improvements in the structure of import tariffs, serving as a significant step towards Pakistan's effective global integration.

Figure 7. 1:Tariff Trends, 1983-1998



Source: World Bank (2004), Trade Policies in South Asia: An Overview, Chapter 3.

B. TRADE POLICY REFORMS SINCE 1997/8[30]

5. *With a major departure from the strongly protectionist, inward-oriented import substitution policies of the previous decades, the Government has embarked on a substantial trade liberalization program since 1998.* The objectives include: enhancing domestic competition; boosting trade integration with an increasing emphasis on export diversification and outward-orientation; and gradual alignment of domestic relative prices of traded goods with international prices. This major round of trade liberalization will help promote efficiency in resource allocation, stimulate productivity growth, foster technological progress, and encourage potential export activities. Improvements in the trade policy regime have been

[30] For a detailed account of recent changes in Pakistan's trade policy regime since 1998/97, see: World Bank (2004), **Trade Policies in South Asia: an Overview**, (in three volumes), Rep. No. 299949; World Bank (2004), "Pakistan: Tariff Rationalization Study".

implemented through tariff cuts and rationalization, as well through the removal of import quotas, import surcharges, and the regulatory duties. State enterprises that used to have control over imports and exports of certain products were also eliminated.

6. ***'Tops down' reductions in customs duties.***[31] The Government started a steady program of tariff reduction by adopting a 'tops down' approach, thus bringing down the top rate (i.e., the 'general' or 'normal' maximum tariff rate) and, occasionally, also reducing tariffs on imports of intermediate inputs and raw materials. The maximum rate was reduced from 65 percent in 1996/97 to 45 percent in 1997/98 and to 25 percent in 2002/03 through 5 percentage point cuts (Table 7.1). At the same time, the number of (standard) tariff slabs has been reduced gradually from 14 in 1996/97 to 4 in 2001/02. At present, these

Table 7. 1: Pakistan: Trends in Customs Duties – 1989/90-2005/06[32]

	1989/90	1996/97	1997/98	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Simple Average Rate: /a									
All products	**64.8**	n.a	**47.1**	**24.8**	**20.4**	**17.3**	**17.1**	**16.8**	**14.4**
Industrial Products	66.0	n.a.		24.3	20.2	16.9	16.7	16.6	10.4
Agricultural Products /b	57.2	n.a.		28.0	21.8	19.6	19.5	18.1	15.6
Normal Maximum /c	n.a.	65.0	45.0	35.0	30.0	25.0	25.0	25.0	25.0
Minimum Rate	0.0	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0
Number of Standard Slabs	n.a.	14	6	5	4	4	4	4	4
Coefficient of Variation	n.a.	n.a.	**45.3**	**78.6**	**65.5**	**65.8**	**64.7**	**71.8**	**76.5**

/a: This refers to 'unweighted' average customs duty (CD) rate. /b: Includes Harmonized System (HS) Chapters 1-24. The latter coverage reflects WTO's definition. /c: This is the 'general' maximum statutory customs duty rate. However, there are also statutory CD rates that are well above the general maximum rate in Pakistan. Such 'tariff peaks' are observed particularly in the highly protected motor vehicle and edible oils sectors. In addition, alcoholic beverages are also subject to very high customs duty rates, though their commercial/private importation is not allowed.
Sources; World Bank (1992), *Pakistan: Changes in Trade and Domestic Taxation for Reform of the Incentive Regime and Fiscal Adjustment*, Rep. no. 9828-Pak; World Bank (2004) - *Trade Policies in South Asia: An Overview*, Chapter 3. Volume I; World Bank (2004), *Pakistan: Tariff Rationalization Study*.

4 slabs --at rates of 5 percent, 10 percent, 20 percent, and 25 percent-- continue to exist. The other important change was the removal of the zero tariff slab and the introduction of 5 percent minimum tariff rate in 2001/02. *The latter was an important positive step in that it contributes towards reducing tariff dispersion and constitutes a move towards the desirable ultimate policy target of establishing a low, uniform tariff rate.* Another major welcome move by the Government has been a steady reduction of average tariffs on imports of agricultural imports. The result is that today Pakistan has the lowest average protection in agriculture (together with Nepal) in South Asia (Table 7.2). Furthermore, with the FY05 and FY06 Budgets, the extremely high customs duty rates on built up motor vehicles have been reduced from the 75-150 percent range in FY04 to the 50-75 percent range in FY06, with the lower rates applying to cars with smaller engines. These latter changes have certainly cut the levels of Pakistan's very high 'tariff peaks' above the 25 percent 'normal' maximum tariff rate, while reducing the average level and dispersion of extremely high customs duties applied to cars. For example, for cars up to 1000 cc the tariff rate was reduced from 75 percent in FY04 to 50 percent in FY06, while for cars with above 1800 cc the rate fell from 150 percent to 75 percent. Note however that for the domestic automotive assembly industry 35 percent tariffs rates apply to imports of 'completely knockdown' (CKD) units --as set by a Statutory Regulatory Order (SRO).

[31] In the report 'customs duties' and 'tariffs' are used interchangeably.

[32] The customs duty (or tariff) averages and other results are based on Pakistan's 'statutory' tariffs. The calculations do not reflect the 'preferential' tariffs agreed under the various regional/bilateral trading agreements. Also, tariff exemptions and concessionary tariffs are excluded from the calculations; their inclusion would have reduced simple average tariffs. Finally, specific tariffs (about 49 8-digit tariff line items recently) are also excluded from calculations, simply because of the difficulty of estimating their ad valorem equivalents. Their inclusion would have raised the average tariffs since the ad valorem equivalents of these specific rates, say, e.g., those of edibles oils, have reportedly remained much above the 'normal' maximum customs duty rate of 25 percent.

7. In addition, with a view to supporting the textile and garment sector in the aftermath of the removal of the elimination of the ATC (Agreement on Textiles and Clothing) export quotas at end-December 2004, customs duties have been reduced on imports of synthetic, woolen and cotton raw materials and products with the FY06 Budget changes. *However, five new tariff slabs have been introduced (3.0, 6.5, 7, 14, and 15 percent) applying mostly to inputs for the textile/apparel sector. (This measure constitutes a backsliding away from the much simpler system of the previous four tariff slabs --5, 10, 20, and 25 percent).*

8. These tariff rationalization measures --the gradual reduction of the normal maximum tariff rate as well as the number of standard tariff slabs, and the introduction of a non-zero minimum tariff-- all aimed at lowering the overall average tariff level, with the result that more and more tariff lines were being pushed down to lower tariff slabs. At the same time, the Government has also followed a policy of occasional tariff cuts on imports of intermediate inputs. Here, it is worth noting that the *tariff cuts on intermediate inputs, of course, have meant that the existing tariff escalation --rising tariff levels with the stages of processing --has been maintained and that the 'effective protection rates' for the final consumer goods have not necessarily come down with the falling average nominal protection.*

Table 7. 2: Pakistan's Simple Average Tariff Rate in a Cross-Country Comparative Ranking

All products (134 countries)				Agriculture (134 countries)			
	Average Tariff (%)	Rank	Data Year		Average Tariff (%)	Rank	Data year
Morocco	33.4	1	2002	Morocco	53.6	1	2002
Tunisia	30.2	3	2002	Turkey	51.6	2	2001
Bangladesh	**26.5**	**5**	2004-05	Tunisia	44.7	4	2002
Iran	23.9	7	2002	Korea	43.5	5	2002
Nigeria	23.4	8	2002	**India**	**40.1**	**7**	2004-05
India	**22.2**	**10**	2004-05	Iran	35.7	9	2002
Pakistan	**18.5**	**19**	2004-05	**Bangladesh**	**32.1**	**10**	2004-05
Egypt	18.4	20	2002	**Sri Lanka**	**28.1**	**12**	2003-04
Nepal	**18.0**	**22**	2003-04	Mexico	25.7	14	2002
Mexico	16.2	30	2002	Nigeria	23.0	25	2002
Vietnam	15.0	32	2001	Ghana	20.2	37	2000
Ghana	14.7	34	2000	**Pakistan**	**19.9**	**39**	**2004-05**
Thailand	14.7	35	2002	Vietnam	19.7	40	2001
Sri Lanka	**13.4**	**42**	2003-04	**Nepal**	**19.6**	**42**	2003-04
Turkey	12.6	47	2001	Egypt	18.2	46	2002
Korea	12.6	48	2002	China	17.9	50	2002
Brazil	12.3	51	2002	Thailand	16.2	56	2002
China	12.3	52	2002	Colombia	15.9	59	2003
Argentina	11.8	62	2001	**Median**	**15.1**		
Colombia	11.7	63	2003	Argentina	12.3	85	2001
Median	**11.2**			Brazil	11.7	90	2002
Malaysia	8.8	86	2002	Philippines	10.5	101	2003
Indonesia	7.2	99	2002	South Africa	10.2	104	2001
Chile	7.0	101	2002	Indonesia	8.4	115	2002
South Africa	6.4	106	2001	Chile	7.0	119	2002
Philippines	5.1	120	2003	Iran	3.1	128	2000
				Malaysia	3.0	129	2002
Mean	**11.7**			**Mean**	**16.7**		

/*: Tariff rates are inclusive of customs duties and other general and selective protective levies (para-tariffs).
Source: World Bank (2004), *Trade Policies in South Asia: An Overview*, page 35; (the table is updated on the basis of Pakistan's 2004-05 trade policy information).

9. ***Substantial trade liberalization and positive impacts***. By any standard, Pakistan's trade liberalization since 1997/98 has been *significant*. The unweighted (i.e., simple) average statutory tariff has fallen from 47.1 percent in 1997/98 to 14.4 percent in 2005/06 with the most recent changes announced under the FY06 Budget. Considerable progress has been achieved in simplifying the tariff structure as well as in compressing tariffs. And compared to the second half of the 1990s when Pakistan had one of the most highly protectionist trade regimes in South Asian and in the world, the current trade policy regime is one the most open in South Asia and is on the way to becoming relatively more liberal globally (Figure 7.1 and Table 7.2). This does not mean, as we elaborate below, that the trade regime that has emerged as a result of these commendable trade policy reforms in recent years is adequate yet to support efficient resource allocation, export diversification and growth, and stronger overall economic growth. There is still considerable scope for further improvements in the trade policy regime to foster a more diversified export base and stronger global trade integration.

10. It is nevertheless important to emphasize that in recent years Pakistan's trade policy regime has gone through significant improvements and rationalization compared to the mid-1990s, and the Government's trade policy reform actions since the late 1990s deserve credit for contributing to the strong turnaround of the economy in the last four-five years. *While rigorous analysis is awaited on Pakistan, comparable data on economic performance from the 1990s and the more recent period suggest a positive stimulus to growth emanating from trade liberalization and trade openness, in addition to the other complementary structural reforms.* Without claiming full attribution and causality, it appears reasonable to argue that Pakistan's trade reforms since the late 1990s most likely contributed to the recent pickup in the GDP growth rate by facilitating greater trade openness, which jumped (in terms of merchandize trade alone) from about 25 percent in 1999/00 to almost 30 percent in 2004/05. Export growth and the capacity to increase imports, including more capital goods, must have contributed to higher GDP growth which is, after rising to over 6 percent in 2003/04 for the first time since the early 1990s, estimated to have reached 8.4 percent in 2004/05, a record since the early 1990s.

11. It is also worth noting that Pakistan's textiles and clothing (T&C) exports to the USA appear to have performed fairly well during the first few months following the elimination of the ATC export quotas, despite the enormous growth of Chinese T&C exports. Federal Bureau of Statistics' data for July-November 2005 indicate a 28 percent increase in textile exports, with cotton cloth exports registering a 33 percent increase over the corresponding period in 2004. This is an encouraging performance in view of the intensified competition in the global T&C market, some credit also goes to the Government's recent tariff reforms that have reduced the anti-export bias of the trade regime.

12. ***However, recent tariff changes have increased dispersion***. One negative outcome of the recent changes in the tariff structure is that while the average rate has fallen significantly and some tariff compression took place, tariff dispersion has increased. As shown in Table 7.1, tariff dispersion[33] rose from about 45 percent of the simple average tariff in 1997/98 to over 76 percent following the 2005/06 changes. This is simply because lower tariff rates have been cut at proportionately higher rates than the high tariffs have been. Indeed, there are still significant tariffs peaks well above the 'general' maximum CD rate of 25 percent, and these do contribute to the continued high tariff dispersion. Despite the recent cuts in tariffs on cars, their duty rates are still twice-to-three times higher than the normal maximum customs duty rate, and the rates on motorbikes are almost four-times higher at 90 percent. While still subject to 'specific' duties, the ad valorem equivalents of tariffs on edible oils appear to be much above the normal maximum --for example, depending on its corresponding unit c.i.f. price, the ad valorem tariff rate for on palm oil floated around 46-66 percent in recent years.[34]

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[33] As measured by the coefficient of variation, which expresses tariff dispersion as a percent of the average tariff (i.e., standard deviation as a percent of the mean).

[34] "*Tariff Rationalization*" Study, op. cit. Similarly, while they present a special case, it is worth noting that duties on imports of alcoholic beverages are at 100 percent.

13. ***Tariff escalation, tariff dispersion and tariff peaks.*** It is clear that, while undertaking a major tariff reform in recent years, the Government has for now decided to maintain the principle of tariff escalation by stages of processing, as also observed in the rest of the South Asian countries and in other developing countries. Generally, imports of final consumer goods are subject to the normal maximum tariff rate of 25 percent and even higher rates as described above (tariff peaks). Whereas, imports of raw materials and intermediates are generally subject to 5 and 10 percent customs duty, respectively. This general picture of tariff escalation is reflected in Table 7.3, which presents an incidence distribution of various tariff slabs, including those that are much higher than the normal maximum --note that higher rates apply generally to final consumer products. And, Table 7.4 provides a more specific example of tariff escalation by stages of processing in the manufacturing sector in 2004/05 and 2005/06.

TABLE 7. 3 Pakistan: Tariff Incidence Distribution (based on 8-digit tariff lines)

	2003/04		2004/05		2005/06	
	Tariff Lines	% of all Tariff Lines	Tariff Lines	% of all Tariff Lines	Tariff Lines	% of all Tariff Lines
Tariff Rates						
5%	1505	24.3	1822	29.4	2462	39.2
3%, 6.5%, 7% /*					72	1.1
10%	1448	23.4	1229	19.9	867	13.8
14%, 15% /*					344	5.5
20%	909	14.7	934	15.1	814	13.0
25%	**2150**	**34.7**	**1950**	**31.5**	**1553**	**24.7**
>25%	**178**	**2.9**	**255**	**4.1**	**167**	**2.7**
Total	6190	100.0	6190	100.0	6279	100.0

Source: Calculations based on Harmonized System (HS) tariff schedule information provide by CBR.

/*: These are the new customs duty rates introduced with the FY06 Budget..

14. Tariff escalation appears to have been aggravated with the increased dispersion, with the result that final consumer goods continue to be protected at relatively higher nominal protection rates and that effective protection rates (ERPs) are probably even more skewed in favor of domestic production of final consumer goods.

TABLE 7.4: PAKISTAN: TARIFF ESCALATION BY STAGES OF PROCESSING IN THE MANUFACTURING SECTOR –FY05 & FY06

	Simple Average Tariff by Stages of Processing (in %)					
	2004/05			2005/06		
	First Stage	Semi-finished	Final	First Stage	Semi-finished	Final
Manufactured Food, Beverages and Tobacco	11.8	20.2	25.6	8.9	13.1	16.4
Textile, Apparel, and Leather	9.8	19.7	24.0	7.9	14.5	23.6
Manufactured Wood Products		17.1	23.7		14.2	30.9
Paper, Printing, Publishing	6.7	21.2	19.3	7.5	19.5	18.5
Manufactured Chemicals, Petroleum, Coal, Rubber, Plastics	10.7	11.8	17.9	7.5	8.7	15.5
Manufactured Non-metallic Minerals (except Petroleum)	5.0	21.7	21.9	5.0	22.3	21.3
Basic Metal Industries, Manufactured Metal Products	18.1	12.8	17.0	11.2	10.7	16.6
Machinery and Equipment		10.5	16.5		13.5	14.0
Other Manufacturing	5.0	**5.0**	19.6	5.0	8.8	18.7
Simple Average Tariff by Stages of Processing (%)	**11.4**	**14.5**	**19.2**	**9.0**	**11.3**	**17.3**

Source: Calculations using the tariff schedule information provided by CBR

15. ***Why sustained tariff escalation is a problem.*** Traditionally most developing countries have adopted escalating tariff structures which are sometimes further cascaded with the imposition of other levies --for example non-neutral surcharges and other import taxes (i.e., para-tariffs) and protection-neutral taxes such as VAT or GST. While generally the intention is to promote the domestic production of final, higher value-added products, in practice the resource allocation costs of such high protection through tariff escalation tend to be very high as demonstrated by wide-spread failures of prolonged import

substitution policies. There are several interrelated reasons why prolonged tariff escalation is harmful to efficient resource allocation and to the development of competitive and dynamic production patterns with an expanding export base:

- An escalating tariff structure, with the resulting high EPRs for finished/final products, encourages low 'value-added' pattern of production in the economy, contrary to the intended objective. This is because the resulting lower EPRs discourage the production of intermediate and other inputs, as high protection on final products block foreign competition and lower tariffs on raw material and intermediates create disincentives for their domestic production. Such an unfavorable incentive structure discourages the development of efficient backward linkage production, thereby limiting potential increase in value-added creation through economically efficient backward linkages in the economy.[35]
- Consequently, an escalating tariff structure also aggravates anti-export bias of the trade regime. For example, Pakistan's 'light engineering' is often mentioned as a sub-sector with significant export potential, but its limited export-orientation until now could be explained by the sustained reliance on the principle of escalating tariffs far too long.
- Other very common and high cost aspect of a non-uniform, escalating tariff structure is its administration. It is very vulnerable to rent-seeking activities and has been widely abused wherever it has been applied.

16. ***Extremely high protection may slow down the development of efficient and competitive industries***. Also related to the problem of tariff escalation and 'tariff peaks', there is the issue of the extremely high protection provided to specific manufacturing sectors, such as the *motor vehicles* and *edible oils* industries. The motor vehicle industry has been protected by prohibitively high tariffs on imports of built-up cars and by the local content requirements ('deletion' programs) applied to both motor vehicle assemblers as well as component producers (vendors). The latter programs do provide non-tariff protection (of varying rates that are difficult to trace) and market power to the assemblers and domestic producers of components. Deletion programs, which are not WTO complaint under the Trade Related Investment Measures (TRIMS), discourage competition by the existing firms and from potential entrants by serving as 'barriers-to-entry'. Under such a setting where foreign competition is blocked and 'tariff jumping' foreign investment comes in for low level (but profitable) production, developing an efficient and competitive automotive industry where both assemblers and component producers are induced to operate at least at 'minimum efficient scales' will be difficult, given the limited effective domestic demand at low per capita income levels.[36] The result is that many firms with very low production volumes exist in the market, enjoying high profits, thanks to very high protection, with little pressure to become more efficient and competitive. Those that have the capacity to expand their scale of production to more economic levels are constrained because of the deletion programs.

17. To support a strategy of developing a competitive auto industry which could also have an export potential in motor vehicles and/or in auto parts, it is critical that the industry is encouraged and induced to become increasingly more efficient and productive. This would require the removal of policy induced direct or indirect 'barriers to entry' and to expansion of efficient firms, and an increasing exposure of the sector to foreign and domestic competition. To this end, it would be in the interest of Pakistan's economy

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[35] There is a huge literature on the economic merits of uniform tariffs. Indeed, drawing on the lessons of failed import-substituting policies of the past, most developing countries have been reforming their tariff structures with a view to moving towards low and uniform rates. Arnold Harberger (1988) provides an excellent economic rationale why a uniform tariff rate structure is superior to a non-uniform tariff system: Harberger, A. (1988), "Reflections on Uniform Taxation", Paper Presented at the 44th Congress of the International Institute of Public Finance, Istanbul (August, 1988), University of Chicago and University of California, Los Angeles. Also see: Tarr, David (2002), 'Arguments for and Against Uniform Tariffs', in World Bank's *Development, Trade, and the WTO: A Handbook*, pages 526-34.

[36] A detailed assessment of the trade policy regime as it applies to Pakistan auto industry and specific recommendations for its reform are included in: World Bank (2004), *Aide-Memoire: Study on the Auto Industry in Pakistan: Trade Policies and Performance*" (a memo submitted to the Government).

as well as of the country's auto industry to *gradually* lower the level of protection by phasing out the deletion programs in stages and continuing to reduce the very high auto industry tariffs in a manner that all automotive-related tariffs (for completely built units, CKD units, as well as for auto parts) are unified over a period time (more on this below).

18. Within the broad category of motorized vehicles, tariffs on imports of *motor bikes* are extraordinarily high at 90 percent. While this appears to have been intended to completely stop imports of motor bikes given their prohibitively high rates, it is a policy that seems to the critical importance of this cheaper source of transportation for low income workers/families. Clearly, the cost of such policy in terms of adverse welfare impact (i.e., lost 'consumer surplus') must be significant.

19. Regarding the 'edible oils' sector, the existing specific rates continue to provide very high protection to this industry, for which low income consumers end up paying dearly in terms of high domestic prices. Moving to an ad valorem tariff system and then gradually lowering tariff rates could create significant benefits in terms of increased consumer welfare and by inducing both the edible oil sector and the upstream oil seeds production to become more efficient.

20. ***Other import taxes and their protective effects.***[37] Imports are also subject to Pakistan's VAT-like generalized *sales tax* (GST) and the *income 'withholding tax'*, which are the two other key levies. Also, a limited number of imports are subject to the *Central Excise Tax*:

- The *sales tax* is levied at 15 percent both on imports and domestically produced products. Its tax base the customs duty inclusive value of imports, therefore it has a significant cascading impact, raising the landed costs of imports more than 15 percent of c.i.f. costs of imports. For example, when the tariff rate is 25 percent, the 15 percent sales tax rate jumps to an 18.8 percent tax relative to the c.i.f. price. In principle, the GST is supposed to be a protection-neutral tax in that it is not intended to provide additional protection by raising nominal protection rate above what is provided by customs duties. However, there seems to be some ambiguity as to whether or not, for example, fresh fruits and other agricultural foodstuff items are being provided extra protection because they are exempt from the GST when domestically produced, but are subject to the sales tax when imported. In this regard, the *Sixth Schedule of the Sales Tax Act* appears to lack clarity as to whether the GST exemption allowed for domestically produced agricultural products and foodstuff is also extended to these products when they are imported.
- The '*income withholding tax*' (IWHT) is levied at 6 percent on imports and at 3.5 percent on the sales of domestic taxpayers. On imports, it is levied on the tariff and sales tax inclusive value of imports, thus creating a substantial cascading effect on the 'landed' costs of imports (e.g., when tariff rate is 25 percent, the rate of IWHT increases to 8.6 percent of the c.i.f. price). The withholding tax is a presumptive tax in lieu of the corporate profit taxes. But it has a protective effect in that it is applied at a higher rate on imports and that the tax collected is not adjusted against the income/profit tax liability based on 'actual' profits in the case of commercial imports. However, it is difficult to estimate the protective impacts of the IWHT, given that the additional tax burdens resulting from the withholding tax on importers must be compared with the corresponding tax burden on domestic producers.[38]
- *Central excise taxes* are levied on imports and on their domestic substitutes at the same rates, therefore they are trade neutral. (Excise taxes collected on ten petroleum distillates, six edible oils and ten other items).[39]

21. ***Tariff exemptions and concessions --another remaining weakness of the tariff structure.*** Despite the efforts in recent years to reduce the large number of tariff exemptions and concessionary

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[37] For a detailed coverage of other import taxes and assessment of their protective effects, see: *Trade Policies in South Asia: An Overview* op. cit., and "*Tariff Rationalization Study*", op. cit.

[38] For further discussion, see: *Trade Policies in South Asia: an Overview*, op. cit.

[39] Details are available at CBR's web-site.

rates, which are managed through the issuance of SROs (Statutory Regulatory Orders), Pakistan's tariff system still has considerable tariff exemptions and concessions. Some of the concessionary rates have been linked to the 'deletion' programs in the auto industry, and others are end-user exemptions or concessions on imports of raw materials, machinery and equipment, and in some cases on imports of final goods. There are even examples of tariff exemptions granted to the specific companies mentioned by name.[40] Such a plethora of tariff exemptions and concessions complicate the tariff system significantly, making it very difficult to trace the likely changes in effective protection rates and also creating an element of uncertainty as to the principal direction of the ongoing tariff reforms. Furthermore, the existence of such an option that can be used so liberally through SROs keep the trade policy regime vulnerable to the interest group pressures, undermining the tariff reform efforts. The Government has stated its intention to eliminate these SROs, thereby also phasing out the existing end-user tariff exemptions/concessions. Indeed, the future round of tariff reforms over the next couple of years should include the elimination of tariff exemptions, with the exception of those that are in line with the international conventions.

C. NEED TO FURTHER REDUCE ANTI-EXPORT BIAS

22. ***Reducing the remaining anti-export bias of the trade regime is also critical for strengthening Pakistan's export competitiveness and diversification***. This is critical for Pakistan's growth performance since strong export performance will remain a very crucial driver of economic growth in Pakistan. The Government's commendable efforts of the recent years to liberalize the trade policy will need to continue with future follow up actions to further rationalize the tariff structure towards a longer-term target of a lower, uniform tariff rate. This would entail, as done in recent years, cutting the normal maximum tariff rate further and, more importantly, gradually phasing out 'tariff peaks' through successive steps. *High and escalating tariffs and other protective instruments that provide substantial protection to domestic industries create strong disincentives to exports and export activities through several channels, thus causing significant anti-export bias*:

- Duties levied on imports of final goods raise their domestic relative prices, thereby increasing the profitability of import substitutes relative to exports, which have to be exported at world prices. This diverts resources towards inefficient production for the domestic market, away from the production of exports. For example, the very high protection afforded to the auto industry appears to have encouraged productions of cars by several manufacturers at well below economic scales under policy-induced barriers to entry through deletion programs. This environment needs to change towards a more open and competitive setting if Pakistan wants to exploit whatever export potential it may have in exporting motor vehicles and/or auto parts.
- With import demand being curtailed under high protection, import-related (ex ante) demand for foreign exchange is being curtailed, thus perhaps enabling the country to maintain a lower exchange rate (i.e., a lower domestic currency price for foreign currency) than otherwise. This would mean that export proceeds, expressed in domestic currency, would be lower than what the exporter would receive had the protection levels provided by import duties and other instruments been lower.
- An escalating tariff structure, with lower tariffs on imports of raw materials and intermediates and higher tariffs on more processed products, raises the *effective protection* for an import substitute above the nominal protection that the same import substitute receives from import duties and other protection. This means that the value-added (processing margins) involved in production for the domestic market will exceed the value-added that would have existed in the absence of any

[40] For more details are available in: '*Tariff Rationalization Study*", op. cit.

protection, by proportionately more than the nominal protection of the final product. This further increases the anti-export bias.

- Exporters sell in competitive world markets and cannot pass on increases in their costs of production to their buyers. Thus, import duties paid on imported inputs increase their production costs and reduce their profit margins. Similarly, if they buy their inputs from local producers who are competing with lower-priced imports, again there may be cost raising effects due to protection/local taxes and/or lack of local competition.
    - Even if there is a duty/tax rebate system, as is the case in Pakistan, these drawback schemes generally lack efficiency needed to reimburse exporters quickly. Nevertheless, as long as there are non-zero tariffs and other import levies, these duty/tax rebate schemes are needed to put the direct and indirect exporters on a duty/tax free basis in accessing inputs used in exports. These are not subsidy schemes, but rather they are intended to put the country's exporters on an equal, competitive footing with other competitors in international markets. However, when the protection regime is complex due to highly escalating and dispersed tariff structure, it becomes even more difficult to establish an efficient duty drawback system (DDS) that is free from abuse and 'speed money' payments.
    - Enclave arrangements, such as the bonded-warehouse system and export processing zones (EPZs), provide speedy duty-free access to imported inputs, but they serve only specific/limited activities and, as such, in the longer-term they are not substitute for broader and deeper trade liberalization.

23. ***Falling but still high anti-export bias.*** Pakistan's recent trade liberalization efforts since the late 1990s have undoubtedly reduced the anti-export bias of the trade regime compared to the mid-1990s.[41] But as shown in Table 7.5 below, the trade regime still has considerable anti-export bias. The ratio of (average) *effective exchange rate* for imports (EERm) to that of exports (EERx) is used as an indicator of the trade regime's anti export bias[42] --the higher the ratio above 1.00, the higher the bias against export activities.[43]

24. The results indicate that the extent of the remaining (average) anti-export bias is around the 18-19 percentage point range. This constitutes a significant reduction in the anti-export bias compared to the 1990s when the bias appeared to have hovered around 37-44 percentage points, based on the simple average most-favored-nation (MFN) customs duties (51 percent in FY95 and 47.1 percent in FY98) and assuming a generous (net) export subsidy rate of 5-10 percent of f.o.b. prices. *However, with the average bias remaining just below 20 percent, the structure of incentives created by the trade policy still favors the production of import substitutes. It also constitutes a significant barrier to the emergence of new areas of exports and to the expansion of exports that are being compensated effectively for the duties/taxes paid on imported and domestically acquired inputs.* The remaining anti-export bias is inconsistent with the objectives of export-diversification and export-led growth. It is important to note that these calculations are based on the protection levels made 'available' by the statutory import duties. Of course, the latter may not reflect the actual price differences between domestic and international prices due to illegal border trade and smuggling through official channels. However, such informal trade is

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[41] For a set of estimates of the anti-export bias of Pakistan's trade regime until the mid-1990s, based on the import and export effective exchange rate calculations, see: Khan, Ashfaque (1999), "*The Experience of Trade Liberalization in Pakistan*", Pakistan Society of Development Economists, Fourteenth Annual General Meeting, Jan. 31, 1999.

[42] In the current context, EERs for imports refer to nominal exchange rates adjusted for (protective) import levies and any scarcity premium that exchange controls may generate. As such, the EERm indicates the domestic currency cost of one unit of foreign currency (US$1, in this case) worth of imports. For exports, EERx represents the exchange rate after adjustment for the existing export promotion schemes, such as subsidized export credits and freight subsidy. Thus, EERx represents domestic currency equivalent of proceeds from exports worth one unit of foreign currency.

[43] If the ratio EERm/EERx is unity, this would imply that the trade regime is, on average, neutral towards imports substituting production and export production and exporting.

induced by high protection rates, and it is the structure of 'intended' protection shaped and made available by the statutory duties that is going to affect medium- and longer-term production decisions.[44]

25. Because of the excessive data requirements, no attempt was made to look at the changes in the pattern of 'effective protection' provided to domestic value-added in the production of import substitutes as opposed to the production of exportables. However, given the extent of tariff escalation and incidence of 'tariff peaks' discussed earlier, it could be inferred that the ratio of EPRs for domestic production vs. for exports would most likely show similar, if not higher, anti-export bias.

TABLE 7. 5: Pakistan: Estimates of Anti-Export Bias Based on the Ratio of Effective Exchange Rates for Imports and Exports

Fiscal Year	Average Total Nominal Protection Rate (%) /a	Average Total Nominal Export Subsidy Rate (%) /b	Nominal Exchange Rate (Rp/US$) /c	EERm	EERx	Anti-Export Bias (EERm/EERx)
2003-04 /*	18.9	0.09	57.50	68.37	57.55	1.19
2004-05 /*	18.5	0.08	59.29	70.26	59.34	1.18

/a: Average (unweighted) total nominal protection based on Statutory MFN customs duty rates, and adjusted for the protective element of the income withholding tax. These rates therefore exclude preferential tariff rates, and they are not adjusted for tariff exemptions/concessions. As such incorporate 'available' or 'intended' nominal protection as reflected in the MFN rates.
/b: Export subsidy rates (as a % of f.o.b. prices) reflect the subsidy elements of export credits provided below market interest rates plus the impact of freight subsidy introduced recently. /c: Period average.
/*: *Source*: Staff calculations.

26. ***Continuing trade policy reforms to further reduce the remaining anti-export bias.*** The schemes such as bonded warehouses and EPZs are sometimes used as 'enclave' arrangements to insulate certain export activities from the anti-export bias of the trade regime and from business environment constraints, as done in Pakistan. But these schemes have limited coverage and are certainly not substitute for broader and deeper trade reforms, or for addressing the key business environment bottlenecks. In today's increasingly more competitive and integrated global economy, to strengthen Pakistan's strategically important export activities such as the T&C sector and to foster broader export diversification, what is needed is to continue reducing the remaining anti-export bias of the trade regime through follow-up tariff reforms (discussed below), and to address the major behind-the-border investment environment constraints to private activity (covered in Chapters 5 and 6 above, and 8 and 9 below).

D. OPTIONS FOR GROWTH SUPPORTING TRADE POLICY STRATEGY

27. ***Unilateral, multilateral, and regional tracks to trade liberalization.*** Many countries have been pursuing unilateral, multilateral, and regional tracks, with differing intensities and success, to liberalize their trade policies and to strengthen their global and regional trade integration. For Pakistan *unilateral approach* has been the principal avenue to liberalize her foreign trade policy since the 1980s. With respect to the multilateral route, Pakistan has remained active in the ongoing WTO *multilateral trade negotiations* under the Doha Development Round in the areas of agricultural trade and non-agricultural market access (NAMA). However, in the area of 'offers' in agricultural and non-agricultural trade, Pakistan has opted for a strategy of keeping the coverage of her 'tariff bindings' on the conservative side (at about 45 percent of all tariff lines in 2004). Furthermore, the bound rates have also been kept significantly above the applied rates for both agricultural as well as for manufactured products.[45] In any

[44] In this regard, it needs to be pointed out that the existing tariff exemptions and concessions are not reflected in the calculations in that the simple average total nominal protection rate used in the calculations are based on the statutory (i.e., non-discriminatory MFN) customs duties. This is because the objective is to reflect the 'available'/intended protection in the anti-export bias estimates.

[45] At about 52 percent simple average rate (vs. 17.1 percent simple average statutory), as opposed to India's 74 percent coverage rate of bindings and 46 percent simple average bound rate; source: World Bank, *2005 World Development Indicators*, Part 6, Table 6.6.

case, in view of Pakistan's very high protection rates even by late 1990s, trade liberalization through unilateral actions (of course, in a manner that is consistent with the multilateral system of the GATT principles) and not waiting for the multilateral trade negotiations as a key instrument of Pakistan's own tariff rationalization efforts has been the right strategy.

28. As for the 'regionalism' route to strengthen regional trade integration and to liberalize trade, Pakistan, as with other South Asian countries, has been actively involved in the negotiations of various regional 'preferential trade agreements' (PTAs) and in discussions of potential bilateral free trade agreements (FTAs). Indeed, quite apart from general opening up through unilateral trade liberalization particularly since the early 1990s, the countries in South Asia had began to see increased cooperation and trade among themselves as a key objective. This was reflected in the signing by the member nations of the South Asian Association of Regional Cooperation (SAARC) --Bangladesh, Bhutan, India, The Maldives, Nepal, Pakistan, and Sri Lanka-- of the South Asian Preferential Trade Area (SAPTA) Agreement in 1993, which became operational in December 1995. Though the actual exchange of preferences remained extremely limited, partly due to the disputes between India and Pakistan, the process of negotiation kept the dialogue among the member countries of the SAPTA alive. The impact of this initiative on Pakistan's trade liberalization and trade openness, as in the case of other members, has been minimal.

29. More recently, the worldwide proliferation of PTAs has led to a change in thinking in the region, also among the South Asian countries, which have all begun to negotiate a series of preferential free trade agreements of their own. These efforts, as in other regions, have particularly intensified in the aftermath of the failed September 2003 Cancun Ministerial. Within South Asia, these developments have led to the signing of the South Asian Free Trade Area (SAFTA) Agreement in January 2004, with the ultimate objective of turning South Asia into a full-fledged FTA with the internal liberalization beginning in January 2006. This agreement has come in the wake of a bilateral FTA agreement between India and Sri Lanka in 1998 that became operational on March 1, 2000.

30. Pakistan has also intensified discussions with other trading partners on possibilities of bilateral FTAs. An FTA was signed with Sri Lanka in March 2005. Recently, a limited trade ('Early Harvest') pact has been signed with China, which will be in effect from January 2006. The objective is to move to a full FTA in three years. Another 'Early Harvest' agreement has been signed with Malaysia. A trade and investment framework agreement (TIFA) has been signed with the United States to explore ways of expanding trade between the two countries, with the expectation of an eventual FTA. There are also ongoing FTA discussions with Indonesia, Laos, Singapore, and Thailand, and these FTAs are expected to be negotiated in 2006.[46]

31. ***Paying attention to potential costs of PTAs***. Given that South Asia is one of the least integrated and highly protected regions of the world, there are considerable risks of adverse 'trade diversion' effects from regional FTA agreements. This is because such (multilateral and bilateral) preferential trading arrangements may lead to shifting of the source of imports away from least cost/most efficient third countries to higher cost members countries. In addition, a loss of customs revenues could also result.[47] It is therefore critical that Pakistan continues to reduce the high protection levels with unilateral trade policy reforms by reducing the average level and dispersion of import tariffs, with a particular effort to reduce tariff peaks. The strategy of continuing with unilateral trade liberalization, regardless of the ongoing PTA negotiations and new initiatives, will also allow Pakistan to better manage her 'regional integration' objectives by helping to minimize the likely adverse 'trade diversion' effects of the existing and new regional FTAs. Below, specific recommendations are made, first with respect to the future unilateral

[46] Further details and analysis on PTAs are available in: Baysan, T., A. Panagariya, and N. Pitigala (2004), "*Preferential Trading in South Asia*", (mimeo; World Bank, South Asia Region); *Trade Policies in South Asia: An Overview*, op. cit., Chapter 5 (Volume II); World Bank (2005), *Global Economic Prospects: Trade, Regionalism, and Development*; World Bank (2000), *Trade Blocks*.

[47] For details, see: "*Preferential Trading in South Asia*", ibid.

trade liberalization strategy, and then on the key elements of a strategy to increase the net economic benefits expected from the already agreed FTAs.

32. ***Recommendations for the future unilateral trade liberalization program.*** Regardless of the pace of multilateral and regional trade negotiations, it is in the interest of Pakistan to continue with trade reforms to reduce the exiting anti-export bias by pushing ahead with unilateral trade liberalization. Specifically:

- Setting a target of a **low and uniform tariff** rate in not so distant future as the longer–term objective is desirable in support of the pursued export-led growth. Towards this ultimate target, in the meantime, the key interim reform steps will need to aim at reducing the average level and, particularly, the dispersion of nominal (and thus effective) protection. Obviously, it is preferable to pre-announce the schedule of future tariff reductions (as done recently by India).

- The key components of this pre-announced tariff rationalization program would need to include: (i) gradual reduction of tariffs peaks towards the normal maximum tariff rate, and further reduction of the normal maximum tariff rate; (ii) the elimination of the existing deletion programs in the automotive industry; and (iii) gradual, but speedy elimination of tariff exemptions/concessions. Accordingly, the following measures are put forward as a policy reform package for the Government's consideration for the near future:

  - Reducing the ***normal maximum tariff*** in phased stages, first to 20 percent in FY07 (or in FY08); (India has already lowered her normal maximum tariff rate to 15 percent with the latest Budget, and there are plans to further reduce it to 10 percent soon).

  - Eliminating the existing tariff exemptions and concessions in the near term, say over a period of 2-3 years, with a firm announcement in advance.

  - For the ***auto industry*** --cars. In order to promote an efficient and competitive auto industry in Pakistan that could be integrated with world markets, we suggest that the Government consider the following measures, as a policy package, for the near future:[48]

    - The removal of the present deletion programs, including the assembler deletion programs and the subcomponent deletion programs (within six months to a year);

    - reduction of the present customs duties to a *lower uniform single rate* that would be the same *for all models*, e.g., to a uniform rate of 50 percent in the near future (in one or two years);

    - announcing a phased tariff reduction program: for example, starting at 50 percent, with reductions of 5 percentage points a year, over say 5 years, to 25 percent (which is the current normal maximum rate) by 2011 or 2012;

    - general permission for the import of second hand cars, but subject to more rigorous valuation rules at customs than the present rules;

    - unification of tariffs on CKD kits, original equipment components, and replacement parts at a single rate (for example at 25 percent, the current normal maximum rate); and

    - the imposition of excise taxes on expensive and luxury cars could be considered in order to compensate for revenue losses from customs duty reductions on these cars.[49] Obviously, these excise taxes should be levied at the same rate for given classes of both

[48] This section draws on the initial assessments and findings of the World Bank auto industry study: World Bank (2004), "Study on the Auto Industry in Pakistan: Trade Policies and Performance", Aide Memoire, March 2004 mission.

[49] The economic rationale for such an excise tax is justified on the grounds of external diseconomies caused by, e.g., wear and tear damages on the roads, air pollution, etc.

imported and domestically produced cars --otherwise the excise tax will turn into a protective tax.

- For ***motorcycles***. The current tariff rate of 90 percent on imports of motorcycles is very high, probably depriving many consumers from a cheaper mode of transportation and severely limiting import competition which is needed for promoting an efficient and competitive motor bike sub-sector. The fact that Chinese motor makes are being imported over such high tariffs suggests that there is little or no 'water-in-the tariff' for these reportedly cheaper and lower quality models. However, this also implies that the domestic producers are enjoying extremely high 'effective protection rates'. Therefore, there would be considerable economic benefits for consumers and for the economy in substantially reducing the CBU tariffs on motorcycles and increasing the pressure on domestic producers to reduce their costs and prices. Eventually, tariffs on CBUs, CKD units, and parts/components should be unified. Accordingly, the following measures are recommended for the Government's consideration:
  - Gradually reducing (through a pre-announced program) the extremely high tariff rate on imports of motorcycles towards the current normal maximum tariff rate of 25 percent. To this end, the tariff on build up units could be reduced to 50 percent initially, say in two years, and subsequently it could be reduced by 5 percentage points each year to bring it down to around 25 percent in seven years time --by 2012; and
  - at the same time, establishing a uniform tariff rate of 25 percent on imports of CKD units as well as of replacement parts.
- For ***edible oils***:
  - First, converting the specific tariffs to equivalent ad valorem rates immediately, and then reducing the ad valorem rate towards the maximum rate gradually in the near future through yearly reductions of, say, 5 percentage points. This will benefit consumers, especially the poor, and also induce the domestic industry (upstream and downstream) to improve production efficiency and cut costs and prices. Lowering the tariff rate towards the normal maximum over the medium-term will still leave significant protection in near future for further adjustment.
    - ***Time frame***: short- to medium-term. ***Responsible entities***: Ministry of Finance; Ministry of Commerce; Ministry of Industry, Production, and Special Initiatives; Central Board of Revenue; should also involve the relevant private sector groups/chambers through consultations.

33. ***Recommendations for the <u>Regional</u> track to trade liberalization through free trade area (FTA) agreements***. Treating the signed SAFTA agreement as given, we recommend that the following conditions/steps are taken into account in these PTAs:[50]

- First, as noted above, to minimize the likely adverse trade diversion effects, it is important that Pakistan continues with unilateral trade liberalization efforts as elaborated above.
- ***Bilateral FTAs***. Economic costs and benefits of engaging in too many bilateral Free Trade Area (FTA) negotiations, particularly with small countries, will need to be taken into account. While showing interest in a potential FTA with a very large trading partner, such the US, may have an economic rationale, FTAs with small economies will simply end up in costly complications in the tariff system without much gain to show.
- For the ***SAFTA***:
  - minimize sectoral and/or product exceptions;

[50] For an analysis of economic arguments on the topic, see: World Bank (2005), *Global Economic Prospects: Trade, Regionalism, and Development*; Baysan, T. , A. Panagariya, and N. Pitigala (2004), "*Preferential Trading in South Asia*", op. cit.

- have clear rules against tariff-rate quotas;
- have 'rules of origin' that are very liberal, simple, transparent, and remain the same for all products;
- India and Pakistan need to move to MFN-based trade immediately, and this would require Pakistan extending MFN status to India; and
- extend such agreements to services trade and investment;
- it is desirable that the members use the instrumentality of SAARC to promote economic cooperation in a variety of areas rather than the SAFTA agreement itself. Using the SAFTA instrumentality to promote both trade as well as other agendas could face the risk of each being held hostage to the progress in the other. Some of the specific areas of regional economic cooperation include: infrastructure; trade facilitation; and harmonization of technical and sanitary and phytosanitary (SPS) standards --in line with the standards of the major export markets.

  - ***Time frame***: short- to medium-term. ***Responsible entities***: Federal Government; should involve the private sector through consultations.

34. ***Further enhancing the efficiency of the duty drawback schemes***. As long as there are non-zero import tariffs and/or other indirect taxes on imported and domestically produced inputs, it is highly critical that exporters are reimbursed very rapidly on any duties/other taxes paid on such inputs used in the production of exports. This is a common practice to ensure that exporters do have access to inputs at international prices. Any failure in the efficiency of duty-tax drawback (or rebate) schemes will hurt export competitiveness of that country. This is one of the reasons why, for example, most countries adopt zero-rating in the case of their VAT or GST. And, in practice, it is common to observe well functioning duty/tax drawback systems in the case of strategically important exports and for large exporters of such products. This is expected and understandable. However, *a well-functioning duty/tax rebate system is vitally important also to promote export-diversification and to encourage new and small exporters.* Indeed, for new/potential export items and for new/small exporters, duty drawback (DDB) and tax rebate schemes could be the only avenue to having duty-tax free access to inputs, as they may not benefit from the existing bonded-warehouse programs or from EPZs. Finally, it is also worth emphasizing that having a tariff structure with low and less dispersed rates will be more conducive to having an efficient duty-tax drawback system facilitates, since

35. In Pakistan, there are a number duty/tax rebate schemes that are being implemented to facilitate exporters' access to inputs at duty-tax free prices. And over time, the Government, through CBR's involvement, has been undertaking steps to improve functioning of these schemes, and additional changes are planned to further improve their efficiency. These specific schemes include: the *Duty Drawback* (DDB) scheme aimed at rebating customs duties; a *drawback scheme to refund the GST*; and the recently introduced *Duty and Tax Remission for Exports* (DTRE) scheme. Annex to Chapter 7 presents a more detailed review and assessment of these programs, *together with some recommended actions aimed at further enhancing their efficiency and their access by new and small exporters.* Here, some of the key recommended measures are listed for the Government's consideration:

- One important objective of various duty/tax rebate schemes is (as it should) to ensure that these schemes work particularly efficiently for new and/or small exporters. This is critical for export diversification. (The feedback from the small exporters interviewed indicate that these rebate schemes are not yet efficient when it comes to small/new exporters).

Recommendations with respect to the duty drawback (DDB) scheme:

- The Government should continue with measures to provide easy-to-use information, rules and notifications related to DDBs and improve the administration of the system. In the FY06 Budget, the CBR has reduced the DDB notifications from 110 to only 4 standard notifications and has also clubbed 723 DDB rates into 465 rates. This measure is expected to help the smaller

exporters who are less able to make through the maze of complicated DDB notifications. [Over the past year, administrative measures have been taken to reduce the number of overdue claims from 35,000-40,000 (in December 2004) worth approximately Rs 2 billion to around 3,500-4,000 pending claims (by early FY06) worth Rs 0.5 billion)]. See Annex to Chapter 7 for more details.

- It is important to introduce new approaches that may help speed up the processing of DDB claims. Such methods could be tried on a pilot basis and then introduced for full implementation. In this regard, it is worth trying CBR's new proposal aimed at refining the system further by proposing an on-line DDB system, which is likely to benefit a range of exporters. Under this new system the Goods Declaration (GD) document would be treated as the refund claim and there would be no need to file a separate refund claim as is the current practice. This will imply that the proof of sale proceeds will not be required in the future and there would be automatic calculation and appraisement of the exports at the time of shipment. CBR will merely check to ensure that the calculations are correct. As part of the on-line system, it is proposed that commercial banks would get on-line advice to issue checks for refund claims. (The modalities of these proposals are being worked out. There is some resistance from commercial banks, because not all are fully automated or have systems that would be compatible for the on-line refund system to work. The current view is the advice for refund claims would be sent to the State Bank of Pakistan, and it would send it onward to the headquarters of the commercial banks for onward disbursement to exporters).

Recommendations for improving the refund scheme for the Sales tax:

- It is desirable to continue and improve the recent initiative for zero-rating of sales tax (ST) for exports by expanding the list of inputs of non-traditional exports as well. This is going to benefit the smaller and the newer exporters who have had more difficulties in claiming the ST refunds compared to the better-established and larger exporters who are qualified for the Gold/Silver or Green/Yellow channels and get priority in claiming refunds (see Annex to Chapter 7 for details).
- However, the FY06 decision to extent the zero-rating to all *domestic sales* of products of five major sectors (textiles, leather, carpets, sports and surgical products) raises concern. The underlying objective is to support exports of these products by eliminating the waiting period for the sales tax rebates. It is argued that since around 60 percent of the output of these sectors are being exported and that a 3 percent *'retail' tax* introduced on such domestic sales to compensate potential revenue losses, the impact on sales tax revenues should be negligible. But, still this is a change that is likely to undermine the integrity of the GST system.
    - It is preferable to rely on the enhanced efficiency of the sales tax rebate system, rather than on zero-rating of GST for domestic sales.[51]
- Delays in processing refund claims due to wrong or incorrect documentation, particularly in electronic format, is a major reason for the delay in processing the refund claims of smaller and newer exporter. CBR has conducted a number of 2-3 day training sessions on electronic filing of Refund Claims Processing (RCP) in various cities (e.g., Karachi, Lahore, Islamabad, Faisalabad, and Multan). The trader/exporter associations have been involved in these sessions and have been periodically provided support and training by CBR so that they can help their members. However, the issue of limited IT skills/capacity for correctly filing the electronic claims remains. It is recommended that CBR continue with IT training sessions and awareness-building in smaller towns and involving associations dealing with non-traditional exports.
- Expanding the list of registered sales tax payers would also help in easing the current problems facing the SMEs whose refund claims are blocked if the vendor is non-registered. The CBR has conducted campaigns for expanding the net of registered tax-payers. The problem of non-

[51] What is needed is greater efficiency in rebating GST paid on domestic sales of goods used in the production of exports.

registered tax payers is partly due to high failure rate of small businesses, seasonal nature of a variety of export-related vendors, and a large unregulated private sector in Pakistan. The CBR has provided an incentive for expanding ST registration in the FY06 Budget by waiving off the earlier liabilities. The Universal Assessment Scheme also provides incentives for sales tax registration where there would be no audit for lump-sum payment. There is a need to continue with initiatives to document the economy, and provide incentives for the SMEs to become registered tax payers. *These steps will particularly benefit new and small exporters.*

Recommendations for further improving the DTRE:

- The revised DTRE rules have incorporated changes to address a number of problems faced by exporters in the old DTRE scheme. The new DTRE rules allow DDB on locally-produced goods that are often purchased by exporters in emergency situations. The changes also include refunds on inputs of services used in exports, surcharges that were imposed on the use of imported inputs not used within 1 year has been amended to 18 months, etc. This process of continuous improvement in the DTRE rules to facilitate exporters has been quite healthy and should continue.
- The government should take stock of a number of alternative schemes (e.g., SRO 410) and streamline or eliminate them to avoid duplication (see Annex to Chapter 7 for details).
- CBR should raise awareness about the revised DTRE rules among exporters so that they are better understood and better utilized.
    - ***Time frame***: short- to medium-term. ***Responsible entities***: Central Board of Revenue.

CHAPTER 8: IMPROVING TRANSPORT AND TRADE LOGISTICS AND FOOD SAFETY STANDARDS

A. TRANSPORT AND TRADE LOGISTICS

1. The findings of the value-chain work (and of the background studies) indicate that there is considerable scope for improving Pakistan's competitiveness in inland transport as well as in trade logistics. The results also highlight that significant gains in export competitiveness and diversification would come from improvements in the food quality and safety standards capacity. This chapter covers these two important areas.

I. Transport Logistics

2. ***Introduction***. Pakistan's export competitiveness position is highly dependent on the quality and cost of its internal and external trade facilitation, specifically transport systems and trade logistics. However, in transport, there are pockets of inefficiencies and so far the sector has not been able to overcome cost disadvantages of both long sea and land transport links. Major markets are located at considerable distances from Pakistan and the location of its main production center is over 1,000km from the sea. There are further cost disadvantages in terms of scale, since total import/export flows are relatively small. Some of the key trade logistics issues which affect transport costs/time and the cost of logistics services include[1]:

- Age and condition of the transport fleet, and serious overloading of trucks;
- congestion in urban area[2] and in the Lahore-Karachi corridor, and poor rural mobility;[3]
- ineffective state railways monopoly carrying only 3 percent of the total cargo traffic;
- efficient terminal operators, but costly port systems; and
- limitations on the range of logistics services available; and
- restrictions on the provision of bonded transport.

3. The findings of value chain analyses underscored the importance of efficiency improvements in Pakistan's transport and logistics sectors in order to compensate the cost disadvantage faced in external transport costs to the main export destinations U.S. and EU. For example, this is highlighted in the case of textiles/apparel exports. The same would apply to other export items as well. Long distance and the old trucks used affect cost of transporting marble blocks from NWFP to Karachi. Increased cargo transport by Pakistan Railway would help ease the congestion in the Lahore-Karachi corridor and also increase competition and options of transport mode for exporters and imported. While customs clearances imports and exports have improved significantly, at ports, congestion is a problem. Noteing As the specific example of the shrimp case showed, high port costs for loading /unloading due to high port fees and informal 'speed' money payments are also raising transport costs of exports (and of imported inputs). We now turn to these issues.

4. ***Trucking***. Road transport carries about 95 percent of all freight in Pakistan. Despite this, the sector has been slow to develop because there has been limited demand for movement of goods between provinces. Most of the demand continues to come from transport of agricultural products within the provinces. As a result, there is significant peaking in demand and trips are relatively short distances. *The demand for long distance trucking is concentrated on the Lahore-Karachi corridor for carriage of goods between the production areas in Punjab and the ports and markets in Sindh.*

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[1] Some of these problems are the same ones as those identified in a logistics study that was carried out 10 years: Logistic Consulting Group, *Pakistan: Logistics Cost Study*, (May 1996).

[2] Particularly in Karachi and Lahore, which support close to a third of Pakistan's GDP

[3] Forty five percent of unpaved roads are mostly in rural areas (Table 6.6 in Chapter 6).

5. The quality of road infrastructure in the Lahore-Karachi corridor is sufficient to allow trucks to move between factory and port in less than two days. And the current use of independent brokers ensures reasonable levels of utilization for trucks operating in this corridor. Though the trucking industry provides relatively low-cost transport, the difficulty is that low cost is achieved through significant overloading --the average load is estimated to be 50 percent above the official axel limit. The truck fleet is predominantly 6 wheel trucks, averaging more than 20 years old. The combination of old trucks and overloading appears not a sustainable position to meet the challenge of likely increase in demand for freight transport in this corridor and provide the service at internationally competitive rates. Since most of the trucks operate with limited insurance and do not provide insurance coverage for their cargo, there is not much market pressure to encourage the replacement of trucks and/or conformance with axle load limits.

6. It is unlikely that the trucking industry will modernize without some stimulus. This push would be in the form of regulations regarding pollution and road safety. If enforced, they would eventually cause a large portion of the truck fleet to be replaced and larger trucks to be introduced to carry *containers* while conforming to the axle load limits. The pace of this transformation would depend on the speed at which the government introduces these regulations and the vigor of their enforcement. It will also depend on the cost of new equipment and financing available to purchase it. While the introduction of truck leasing schemes has helped in reducing the financing needs, the availability of credit to purchase new trucks will increase the options.

7. The transformation would also lead to consolidation in the industry, but independents and small companies would continue to provide a majority of the transport services. The larger companies can invest in staff and systems to improve fleet management. Software for small-medium size trucking companies is available in the PC environment and includes modules for accounting, work order processing, and preventative maintenance scheduling. The price for GPS tracking systems is falling and when used in combination with cellular-phone technology can provide improved tracking for medium-scale truck operations. For the independent operators, it is necessary to rely on trucking associations to introduce Internet-based systems for connecting shippers and truck operators, thus replacing brokers or using them in a more effective way.

8. *The way forward*. Strengthening transport logistics on the ***road*** could be facilitated by:

- Getting newer, safer, less-polluting trucks --an upgrade that could be hastened by both reduced duties on imported trucks and parts (as elaborated in Chapter 7) and tougher safety and axle-limit enforcement;
- improved availability of medium-term credits for the purchase of new trucks through increased flexibility in acceptable collateral (and requiring truck owners to have full insurance coverage for the new truck) could not only be a stimulus to modernizing fleets but also to a needed measure of consolidation in the industry.
- (*Longer term actions*: as trucks modernize and shipping volume grows, there will be a need to upgrade the trunk road. This implies not only construction of additional lanes but also the introduction of a limited access highway connecting Karachi and Lahore. It will also be important to introduce bypass roads, exclusive port access roads and peripheral truck terminals as part of the urban planning process).

    - ***Time frame***: Short to longer-term. ***Responsible entity***: Ministry of Commerce, and CBR; Ministry of Communications; the private sector.

9. ***Rail***. Rail transport is an especially attractive option for distances over 500 km because of its lower fuel consumption. This advantage has increased in recent years with the rise in fuel prices. Rail transport is also attractive because it diverts trucks from the highway thereby reducing congestion and safety risks. In the past, Pakistan Railways has given priority to the carriage of passengers. However, with the transfer of oil shipments from rail to pipeline, there is additional track capacity available that can be used to develop an efficient container shuttle service.

10. There are two hurdles to be overcome before freight service can be improved and expanded. *The first is to provide a business orientation to the provision of services*. This would include the ability to set prices on a commercial basis, to differentiate levels of service, to utilize assets and labor efficiently, and to procure equipment as and when required. This can be accomplished by offering a concession for the container train operations between the industrial areas in Punjab and Karachi/Qasim to a qualified private operator through a competitive bid.

11. *The second is to establish an efficient door-to-door service to serve the shippers*. This implies direct delivery to/from the port and a combination of storage and trucking services at the inland rail terminal to provide an efficient transfer of cargo to/from the factories. There is sufficient capacity in the trucking industry to provide safe and reliable service at competitive rates, but the terminal operations would have to be managed directly by the concessionaire or through subcontract to the concessionaire. Given the low market share of the current rail operation, it should be possible through better operation to at least double the traffic. However, this would require additional fleet capacity and might also argue for improvement in locomotives. In this case, it would also be necessary to provide financial support for the additional fleet, or, preferably, to incorporate the procurement of wagons as part of the concession and to have the Pakistan Railways procure the locomotives.

12. *The way forward*:

- ***Rail*** transport, especially for containers moving between Karachi and Lahore, should be encouraged, not least to lighten the burden on highways. Creating an efficient rail-freight service requires granting a concession to a private operator through competitive bidding. Such a concessionaire or another should carry the responsibility of managing goods terminals so that future shippers can count on the efficient door-to-door service now lacking.

    - ***Time frame***: Short- and medium-term. ***Responsible entity***: Ministry of Railways.

The Pakistan Railways (PR) has recently taken some initiatives to improve its operations, including: the introduction of 'super parcel express' between Lahore and Karachi in collaboration with 12 private freight forwarders/cargo handlers; and a move toward corporatization of the PR is being actively considered.

13. ***Ports***. The major challenges currently facing the port container terminals are the traditional ones of expanding capacity to meet growth in demand, pricing services to encourage efficient use of facilities, reducing operating costs, and increasing the capacity of land and water access to the terminals. While the conversion of the Karachi Port Trust KPT) and Qasim Port Authority (QPA) to landlord status has reduced their role in meeting these challenges, their residual responsibility includes several challenges, including reducing overhead costs and developing basic infrastructure.

14. The KPT needs to eliminate excessive costs created by continuation of the Port Labor Board. Both KPT and QPA need to reduce their staff to levels commensurate with the role of a landlord port. More important, they need to coordinate plans for future infrastructure investment. This would not eliminate but, at least, reduce duplication, and focus port investment where it will be the greatest net benefit to the users. This benefit should be based on potential savings in door-to-door costs in the Lahore-Karachi corridor. For Karachi, it is necessary to examine the impact of future growth on urban congestion, as this will add to the door-to-door transport costs. The trade-off between acquiring additional land for expansion of the port and for other urban purposes must also be considered. For Qasim, it is necessary to determine the additional cost and time of vessel sailing to the port as well as the incremental cost for inland movement of goods with origins and destinations in the Karachi metropolitan area.

15. The principal problem in the terminals is the high levels of occupancy in the storage yards, which causes congestion. The source of this is the long dwell times for import containers. Whereas the dwell time for export cargo is only one to two days, import boxes average about 10 days. This can be reduced by eliminating cumbersome customs clearance procedures that require processing of the container both before and after it enters the terminal. This reduction should occur once the new customs clearance

system is on-line (discussed below). However, customs procedures are only one of the causes. The other, pricing, is more important. The data on dwell times indicate that cargo clearance takes several days on average, but that importers can remove their cargo within a few days if they wish to do so. There is also significant storage of cargoes after they have been cleared. These facts suggest that the importers are willing to pay for the ports' bonded storage rather than having to pay their duties and taxes and hire trucking to transfer the goods to another warehouse. The generous free time provided by the port adds to this problem.

16. *The way forward*:

- Establishing efficient terminal operations would also address the congestion that is the principal problem at Pakistan's ports. Their excessive overhead costs, associated with continuing Port Labor Board, need to be reduced.
- Also, congestion at parking yards can be eliminated through a combination of increasing storage tariffs, reducing free time, and simplifying the procedures for movement of containers in bond to inland container depots. A final step to reduce dwell time is the development of a port-community information system to track the status of cargo. This would integrate information from the port, terminal operators, customs, banks, and other participants in the movement of goods.
    - ***Time frame***: Short- and medium-term. ***Responsible entity***: Ministry of Ports and Shipping; Karachi Port Trust and Qasim Port Authority; and Port Labor Board.

The Ministry of Ports and Shipping has been continuously trying to reduce the dwell time at Pakistan's ports as an integral part of a broader strategy of enhancing competitiveness of Pakistan's ports. It is expected that these efforts will continue. The Karachi Port Trust is in the process of formulating a scheme for rationalizing the size of port staff.

II. Trade Facilitation

17. There are a number of ancillary logistics activities required to facilitate trade. Critical among these are *customs clearance and forwarding*. While each of these activities has experienced significant improvements over the last decade, most of the effort has been to improve the efficiency of the existing activities. In order to improve trade competitiveness, it is necessary to focus on adding value in order to increase the competitiveness of exports.

18. ***Forwarding***. The logistics industry in Pakistan includes a large number of *forwarders* and *clearance agents* offering individual services and a combination of services through subcontracting. This system is highly competitive and extremely flexible and has provided a reasonable level of service for the relatively simple supply-chain required for Pakistan's major trades. As there are few barriers to entry for freight forwarders and limited qualifications required for cargo clearing agents, there is a large number of each and the quality varies significantly. In the first tier are international 4PLs (4^{th} party logistics) and one or two of the larger domestic freight forwarders. The second tier consists of other large freight forwarders and clearing agents who also provide warehousing and transport. Below this there are 3PLs providing individual services. The latter range in size from offices serving a few customers to large enterprises serving a few large clients or a larger number of medium sized clients. *In order to improve the industry, it is necessary to increase the number in the first-tier providers by attracting international companies and upgrading the skill levels of domestic companies.*

19. *Two other challenges facing the local logistics industry are to develop efficient less-than-truck-load and less-than-container-load (LTL/LCL) supply chains to serve the SMEs and to offer an integrated supply-chain management service with real-time cargo monitoring and Internet based transactions.* This will require changes in customs procedures regarding bonded warehouses and movement of goods in bond. It will also require better cargo consolidation, cross-docking, and inventory monitoring services and more efficient data interchange between shippers and logistics providers.

20. ***Customs***. Pakistan has introduced a number of improvements in the area of customs clearance. These include:

(i) A Single Administrative Document (SAD) similar in format to the UN key layout was introduced in 2003. It replaced 10 other documents and made possible the computerization of data entry.

(ii) A typical Direct Trader Input (DTI) system was introduced in 1995 under the PRAL's management.[4] Since then other tasks have been computerized including the assignment of inspection officers, the selection of packages to be examined, and requests for duty drawback.

(iii) A green channel was recently established for preferred traders who have goods cleared based on documents. This includes a random inspection with current sampling rate of 10 percent.

21. As a result of these and other changes, the time and cost for clearing cargo at the borders and gateways have improved substantially, providing a level of trade facilitation better than its major competitors in South Asia. *At present, about one-fourth of import consignments can be cleared within 1 day and by the fourth day about 70 percent of the cargo by value completes customs procedures. Exports are cleared more rapidly, requiring only 1-2 days.*

22. Because of its limitations and the need to incorporate changes associated with the ongoing Tax Reform project, a new, state of the art Pakistan Automated Customs Clearance System (PACCS) is due to replace the DTI system as part of a broader effort aimed at reforming collection of duties and taxes. The pilot phase is soon to be completed. The World Bank is supporting the introduction of this new system under the Tax Administration Reform Project (TARP). Bringing additional risk-assessment capability and improved support for channelization, the PACCS promises to substantially shorten the period from the time when documents are lodged to when cargo is cleared. With additional measures, the change will limit the contact between cargo owners and customs officials in order to reduce informal payments. This system will also allow the declaration to be entered at the offices of the shippers and clearance agents. This and additional measures will limit the contact between cargo owners and customs officials in order to reduce informal payments. However, *despite substantial reforms, the customs procedures for re-exports, e.g., temporary admissions and handling of cargo in bond, remain cumbersome.*

23. *The way forward*. There are additional initiatives that will offer short-term benefits in improved trade facilitation, leading to reduced costs:

- *Simplification of customs procedures for establishing consolidation activities, bonded storage, and transport in bond.* This initiative would reduce the constraints on setting up bonded storage and inland container depots and on the competition for transport of goods in bond. It would also allow the designation of certified factories engaged in the production of exports as bonded facilities. This would require a change in customs regulation and so is unlikely to be implemented in less than a year and a half.

    - ***Time frame***: Medium-term. ***Responsible entity***: Ministry of Finance and CBR; Ministry of Commerce.

B. FOOD QUALITY AND SAFETY STANDARDS

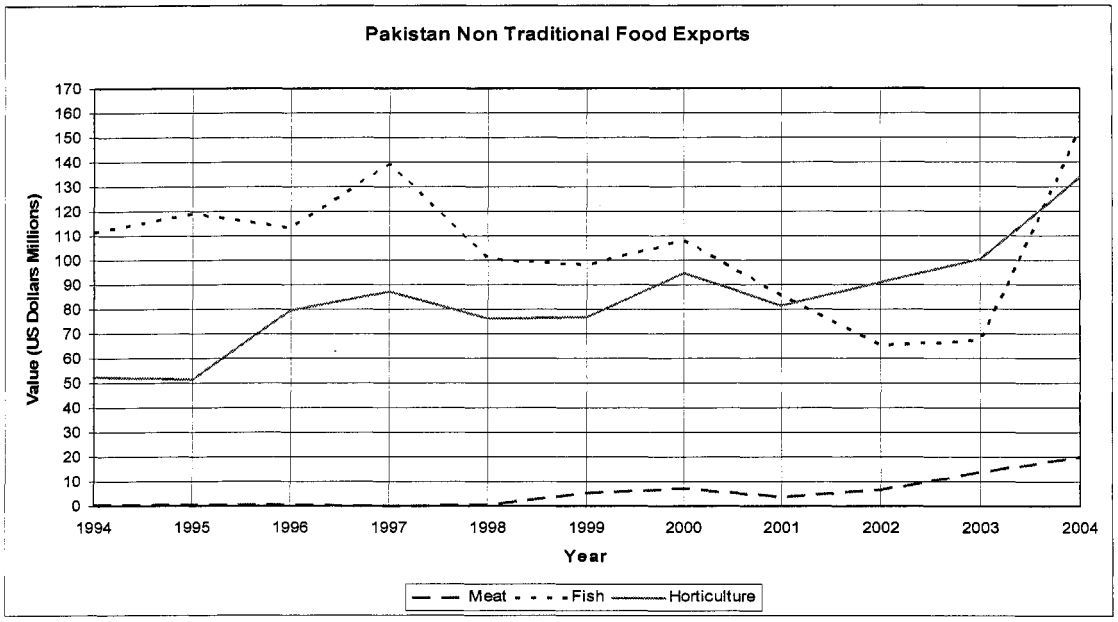
24. In recent years, a country's/industry's capacity to manage sanitary and phytosanitary (SPS) risks has emerged as an increasingly important component of international competitiveness in perishable foods these product lines. Trade in these products can contribute to the spread of plant pests or animal diseases and to the consumption of microbial pathogens, chemical/drug residues, and/or naturally occurring toxins in food. Advances in scientific understanding of these risks, recent food safety and animal/plant health scares or crises, and other factors have contributed to the adoption of more stringent SPS standards by

[4] PRAL stands for 'Pakistan Revenue Automation Limited'.

many countries as well as a proliferation of private sector codes of practice to mitigate SPS and commercial risks.[5]

25. Pakistan has developed a relatively modest yet growing trade in high-value perishable foods, as illustrated in Figure 8.1. In recent years, the country's trade in both fish and fresh fruit and vegetables has exceeded $130 million.[6] Trade in meat is considerably smaller and more recent in origin. Pakistan's exports of higher-value foods have been directed at numerous international markets (Table 8.1). Fish exports have been more or less evenly divided between sales to the European Union, to other higher income countries (in Asia, Europe, or North America), and to low and middle income countries (especially in Asia). Fruit and vegetable exports are primarily directed to other countries in South Asia or other low or middle income countries, although some trade has been developed with the EU (largely to serve immigrant communities there). Pakistan's exports in meat are directed at the Persian Gulf countries. Taking the three product categories together, other developing countries are the outlet for just over half of Pakistan's high-value food exports, reflecting geographical factors, broader bases for competitiveness, and, importantly, *relative weaknesses in managing product quality and SPS risks.*

FIGURE 8.1



Source: UNCTAD Statistics on line and Fruit, Vegetables and Condiments Statistics of Pakistan 2003-04

26. Pakistani exporters face very different official regulations and private standards in the various markets that they seek to compete in. The SPS measures adopted by most low and middle income countries are either comparatively less stringent or only weakly enforced. There are certain exceptions, however, especially on plant and animal health matters. In these markets most private standards also tend to be comparatively less stringent, with most attention given to cost considerations and the reliability of supply. Pakistani exporters have incurred relatively more frequent and more serious problems in meeting the SPS standards of the EU or of individual Member States. In each of the past three years, a dozen or more consignments of Pakistani products have been intercepted entering the EU and put on the latter's Rapid Alert Notification system. The majority of these cases have involved spice products and either violative levels of aflatoxin or the presence of banned colorants. As noted in Chapter 3, at present, Pakistan's fish industry faces serious challenges in maintaining its access to the EU market due to problems related to inadequate regulatory enforcement and to poor hygienic conditions throughout the supply chain.

[5] The pattern of emerging standards is summarized in World Bank (2005, Chapter 2).
[6] This places Pakistan among the leading two dozen developing country exporters in these product categories.

27. Pakistan presently lacks a coherent strategy (or set of strategies) for quality and SPS management in relation to its trade. Whatever strategy that exists is pursued independently at the company or business-to-business levels. In the absence of a coherent strategy, Pakistani stakeholders are largely reacting to events and adopting defensive postures in which they seek to limit the apparent impact of standards or potential damage from non-compliance with those standards. While there exists pockets of capacity for quality and SPS management within the non-traditional export sectors, these have tended to be overwhelmed by broader systemic or supply chain weaknesses. The Government is devoting increased attention to SPS issues, yet thus far there is an apparent lack of coordination of the efforts of various Ministries and agencies and still insufficient collaboration between government and industry/farming organizations in this area.

Table 8.1: Direction of Trade of Pakistan's High Value Food Exports (Percent of Merchandise Trade: 2003)

	Fish	Fruit + Vegs.	Meat	Combined
EU	41	26	0	31
High-Income Asia*	19	2	1	9
Low + Middle Income	29	64	99	51
Others**	11	8	0	9
All	100	100	100	100

*Includes Japan, Signapore, Taiwan, Hong Kong, and Australia
**Mostly includes USA, Canada, Russia, and Switzerland.
Source: Based on COMTRADE

Pakistan's SPS Management

28. Pakistan has various institutions which perform testing, quarantine, inspection, and other technically demanding SPS management functions, with a mixed picture on capacity and performance. For example, *Pakistan has reasonably well-developed capacity for laboratory testing of food and agricultural products and related materials, with several labs having been upgraded in recent years.* Some significant capacity is available at the Department of Agricultural and Livestock Products Marketing and Grading (for chemical, microbiological, and physical tests), the National Veterinary Laboratory (for animal disease diagnosis), the Atomic Energy Commission (for radiation), and the Pakistan Council for Scientific and Industrial Research (for mycotoxins).

29. *In contrast, until recently, the country's facilities to carry out animal and plant quarantine work were grossly inadequate. Neither the country's airports nor its seaports had any formal quarantine facilities.* The quarantine offices tended to be rented facilities --except the one located in Karachi-- where only visual inspections were possible. However, provincial Veterinary Research Institutes (VRI) services are acquired for laboratory testing, in case of need. New capacity for animal quarantine and for testing of consignments for veterinary residues has been recently put in place at Karachi. And new quarantine facilities are planned to monitor expected trade with China and India.

30. There are shortcomings in the effectiveness of inspections carried out by various government agencies for purposes of enforcing food safety or other regulations. For example, concerns have been raised by Pakistan's trading partners about the procedures and effectiveness of inspections made by the Marine Fisheries Department of fishing vessels and processing facilities (see below). Pakistan's systems for both animal disease monitoring and plant pest/disease surveillance are underdeveloped and do not inspire confidence on the part of the country's trading partners.

31. SPS and quality management falls under the jurisdiction of four Federal Ministries; principally departments within MINFAL, Ministry of Commerce, Ministry of Science and Technology, and the Ministry of Health, as well as many provincial and local government departments. There are indications that many of the functioning departments perform their work in isolation. *The diffusion of roles and responsibilities gives rise to duplication of effort, excessive use of limited resources, and a slow decision-*

making process, even in the face of trade partner demands or emerging crises. In several matters affecting trade, responsibilities for implementation are divided between federal and provincial (or district) agencies, often involving little coordination (i.e., on matters of phytosanitary and animal health programs; and the enforcement of national food laws). Export regulation is a federal matter.

32. *The way forward*. Hence, the overall picture with regard to SPS management institutions and regulations is one of fragmented, isolated, and non-coordinated capacity and a regulatory framework ill-suited to supporting Pakistan's international trade objectives and obligations. There is an evident need to:

- Better define and demarcate the roles and responsibilities of the different federal and provincial ministries and agencies related to SPS management matters;
- continue to review and upgrade laws and regulations dealing with food safety and agricultural health to bring them into conformity with international standards and good practices;
- develop a strategy and appropriate structure and capacity to more effectively participate in the international standard-setting process, through both the public and private sectors;
- strengthen existing technical capacities for administering science-based SPS measures including risk assessment; and
- (re-)institutionalize early warning or surveillance systems for pests and diseases, contaminants, which can affect Pakistan's trade as well as domestic consumers and producers.

    - ***Time frame***: Short to medium-term. ***Responsible entity***: Federal Ministry of Food, Agriculture and Livestock; Ministry of Commerce; Ministry of Science and Technology; Ministry of Health; the relevant provincial and local government departments; the private sector through Chambers of Industries and Commerce .

Industry-Specific Challenges

33. ***Fishery products***. Over the years there have been periodic problems with food safety and sanitary compliance of the products in the destination markets. Yet, the industry currently faces its most serious challenge to sustained access into one of its most important market outlets --the countries of the European Union. The EU stipulates harmonized requirements governing hygiene in the capture, processing, transportation and storage of fish and fishery products and maintains detailed requirements regarding the landing of fish, structure of wholesale and auction markets, and processing facilities (for example construction of walls and floors, lighting, refrigeration, ventilation, staff health, and hygiene), processing operations, transportation, storage, packaging, checks on finished products, laboratories, and water and ice quality. More generally, it requires that fish processing facilities undertake 'own checks', which refers to all actions aimed at ensuring and demonstrating compliance with standards laid down by EU legislation and are broadly based on the principle of HACCP (Henson and Mitullah, 2004).

34. In Pakistan, processing plants are ostensibly inspected and approved on an individual basis by the Marine Fisheries Department (MFD) to ensure they comply with these requirements. The European Commission undertakes checks to ensure that this so-called "Competent Authority" carries out this and other tasks in a satisfactory manner, such that the Pakistani system would be at least equivalent to those prevailing within the EU. In most cases the Commission undertakes periodic inspections for the purpose of determining local health conditions and establishing specific import conditions for the country concerned. Only establishments approved by the Competent Authority are permitted to export to the EU. The Competent Authority provides the Commission with a list of approved establishments and this is subsequently published in the Official Journal of the European Communities.[7]

35. In early 2005 an inspection visit to Pakistan was undertaken by the EU's Food and Veterinary Office (FVO), to assess compliance with the special conditions governing imports of fishery products

[7] Countries for which the European Commission has approved local requirements as being at least equivalent to those in the EU and for which specific import requirements have been established are subject to reduced physical inspection at the border.

originating in Pakistan. The evaluation covered the entire fisheries production chain; including vessels, landing areas, auctions, establishments, potable water, ice facilities, shrimp peeling facilities, and the surrounding environment. The delegation found significant areas of non-compliance with EU regulations, in relation to the country's regulatory enforcement system, in the operating methods and facilities of many of the country's licensed fish processors and exporters, and in other parts of the fish export supply chain. The mission concluded that significant adjustments would be needed for Pakistan to maintain its favorable status in accessing the EU market for fish products.[8]

36. Following the presentation of the FVO's inspection visit findings, the Government of Pakistan ordered a self-imposed suspension of fish product exports to the EU, ostensibly to avoid sanctions from the EU itself and provide a time window to make needed adjustments.[9] MINFAL has sought the assistance of UNIDO to develop an action plan to upgrade SPS management in the fisheries sector and to make sure that major parts of the industry (and regulatory system) are compliant with the pertinent EU Directive. This action plan has been prepared and implementation has begun. Some of the major elements of the plan will include:

- The development of a distinct "EU Corridor" at the Karachi Fish Harbour involving specific investments in fish handling and personnel hygiene facilities and limits on physical access to the corridor;
- amendments to existing legislation and revised procedures and checklists for boat and processing facility inspection authorities;
- the development of a Code of Practice, the formalization of programs in quality system management, and the provision of training and advisory services on HACCP for processing companies seeking approval for exporting to the EU; and
- development and implementation of a system to achieve traceability of fish destined for export markets.

37. Investments in collective infrastructure, in the upgrading of the regulatory enforcement capacity of the Marine Fisheries Department, and in upgrading the facilities and management systems of individual fish processing or fishing operations will cost millions of dollars, yet the experience of other countries --facing similar types of challenges-- suggests a relatively high return on this type of investment when a fish export industry is otherwise internationally competitive.[10] Many of the critical elements of the action plan for Pakistan's fisheries industry should be implemented by late 2005 or the first quarter of 2006. An EU inspection team is expected to visit Pakistan in October 2005 to review progress to date.

38. ***Horticulture***. Pakistani fresh produce has mostly competed in the lower cost segments of their focal export markets, primarily due to lower or uneven quality. The industry's ability to take full advantage of existing market opportunities is constrained by general weaknesses and fragmentation in the supply chain and by limited capacities to manage food safety and plant health risks. For example:

- Among horticultural growers, there is a general lack of awareness about '*good agricultural practices*'(GAP), with little application of integrated pest management (IPM) or integrated crop management (ICM);
- there is apparent over-reliance (and application) of pesticides, with periodic domestic market surveillance programs finding very high levels of pesticide residues. Little, if any, testing for pesticide residues is done for exported produce;

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[8] This is apparently a case where there is 'fire but no smoke'. While the FVO mission found major supply chain and regulatory problems within Pakistan, in the prior two years there had not been a single consignment of Pakistani fish intercepted under the Rapid Alert Notification system. This was a period in which many hundreds of fish consignments were intercepted from other country sources.

[9] In recent years the value of Pakistan's fish exports to the EU has been some $45 million per annum. In the first four months of the suspension, some $40 million in trade was affected, either being lost or redirected to less remunerative markets.

[10] See, for example, the experiences of Bangladesh (Cato and Subasinge, 2004), India (Henson et. Al., 2005), and Kenya (Henson and Mitullah, 2004).

- with very few exceptions, there is a lack of capacity to ensure traceability of fresh produce or raw materials, either because of multiple handling or limited record-keeping;
- there as yet has been very limited adoption of HACCP (Hazard Analysis and Critical Control Point), 'good manufacturing practices', or ISO 9000 management systems by Pakistani wholesale or pack house operators; and
- there exists only outdated pest risk assessment information and minimum capacity to undertake such work or broader pest surveillance. Partly as a result, there have been few agreements with Pakistan's trade partners regarding acceptable and achievable measures to minimize the risk of transmitting certain plant pests through fresh produce exports.

39. Despite these shortcomings, some initial steps are being taken. For example, six Pakistani pack houses have now put in place certified HACCP systems and an additional five companies are in the process of developing such systems. Several of the larger export companies, particularly of citrus fruit, have invested in improved cold stores to extend shelf life and therefore extend their seasonal marketing windows. The government, through the Export Development Fund and through efforts of the Pakistan Atomic Energy Commission and the Pakistan Horticulture Development and Export Board (PHDEB), is investing in facilities to enable the irradiation of various food products. This may facilitate market access for Pakistani fresh produce into certain markets that accept this form of treatment to increase shelf-life and/or control insects. Some pest risk assessment has been done in recent years --i.e., for mango seed weevil, although considerably more work is needed before importing countries relax their phytosanitary requirements for mangoes and citrus fruit. The PHDEB is beginning to promote the concept of GAP and to encourage some of the larger farming units to move toward EUREPGAP[11] certification, a status which could open up more opportunities for sales to West European supermarkets.

40. There *are opportunities for future growth for Pakistani horticultural exports, both to its traditional market outlets and to additional destinations, although this potential will not be realized without improvements in quality and SPS management.* Mango sales to the Gulf countries and to the ethnic market in the UK can continue, yet improved food hygiene measures will be needed to increase sales to European supermarkets. Pakistan faces increased (quality and cost-based) competition from China for its citrus sales to Indonesia. Poor storage capacity and broader quality-related concerns inhibit Pakistan's ability to compete with Indian and other supplies of onions in the Middle East and Asian markets. New export potential is possible vis-à-vis the markets of Russia, Eastern Europe, China, and Iran, although plant health issues have thus far been a factor holding up trade with the latter two countries.

41. *The supply side of the industry is the weakest link in the export of fresh produce for international compliance.* Already some pack houses and exporters have taken the initiative and are gearing themselves up and preparing for the SPS measures that they face or are likely to face in the future. Yet, their progress in improving risk management systems at the pack house level will pay little dividend in the absence of improved vertical coordination within the supply chain, the development of systems for traceability, and the promotion of 'good agricultural practices'. There are some things that individual firms can do, yet addressing these challenges will also require government support and some element of collective action at the industry level --either through product-specific or broader exporter organizations.

42. ***Meat and livestock.*** The livestock sector has an important role in the Pakistani economy, accounting for some 11 percent of national GDP and nearly half of the country's agricultural GDP. For many rural households livestock provide important sources of nutrition, income, savings/investment, and often serves as safety net in case of crop failure. The sector, however, is relatively underdeveloped, with limited application of (animal breeding and health) technologies and very little presence of modern supply chains.

43. Pakistan is free from BSE and has been declared provisionally free from Rinderpest, yet animal diseases such as foot-and-mouth disease, anthrax, hemorrhagic septicemia, and Black Quarter are

[11] Euro Retailer Produce Working Group: Good Agricultural Practice

endemic in certain parts of the country. The country does not have an effective animal disease monitoring system and it lacks contingency plans to manage potential outbreaks of emerging diseases (e.g., Avian influenza). In the past, Pakistan's (uncertain) status regarding various animal diseases --as well as concerns about food hygiene in processing plants-- has adversely affected its trade in live animals, meat, and animal casings, to the Middle East, the EU, and to countries in Eastern Europe.

44. Until recently, Pakistan was a very insignificant exporter of live animals and meat, and domestic needs were met. In 2005, Pakistan started importing meat. Livestock exports were limited to leather products, wool, and rugs, trade in which was less or unaffected by concerns about animal health or processing hygiene. Currently, fresh, chilled or frozen meat of cattle, sheep, and goats is exported to the Middle East and to Afghanistan and Malaysia. Most meat exports are in the form of full carcasses and its cuts, owing to the lack of modern processing facilities in the country. Meat exports in 2004 exceeded $20 million for the first time. Pakistan could increase trade in Halal beef and other Halal meats in the Middle East and elsewhere, provided that substantial improvements were made both in animal disease control/monitoring and in hygiene and quality control in meat processing.

45. With regard to animal disease control and monitoring, progress is needed on the phased privatization of government veterinary services, and on the standardization of diagnostic methods and certification of diagnostic laboratories. Pakistan's TADinf program should be activated and properly maintained to collect epidemiological data and to support animal health monitoring and service delivery systems.

46. With regard to meat hygiene, the overall situation is problematic although a limited number of private investors have begun to develop somewhat improved processing operations. For example:

- The domestic meat market is largely unregulated. Some 40 percent of meat is produced from animals slaughtered in rural areas. The remaining 60 percent comes from so-called approved slaughterhouses, although most of these lack clean water or basic hygiene controls and procedures;
- pre- and post-mortem inspections in the slaughterhouses are required by law, yet they are very loosely observed;
- there is a Code of Practice for slaughterhouses stipulating grades for carcasses and animal casings which have been developed by the Pakistan Quality Control and Standards Authority. In general this has not been observed or enforced;
- cold chain and cold storage facilities are limited. Apart from a few export orientated operations, there is a major risk of product spoilage and cross contamination. The microbiological quality of the meat deteriorates rapidly which renders meat unsafe, particularly during the hotter months. Various studies on meat hygiene in the Pakistani domestic market reveal relatively high incidences of E. coli, salmonella, and other bacteria;
- most of the 'regulated' slaughterhouses are in the public sector, the majority of which are run down, having little access to working capital. Modernization through privatization is required to promote food safety and boost meat exports. These slaughterhouses should have well-equipped meat hygiene laboratories attached to them; and
- there are presently six export-oriented slaughterhouses. However, only one is HACCP certified. In order to give confidence to international buyers and their customers, it is increasingly necessary to apply certified HACCP procedures. A program can be developed to build awareness, provide training, and provide technical assistance to SMEs and other operators within the sector.

47. *The way forward*. Pakistan's stakeholders need to adopt a more proactive approach to SPS management issues. There is much talk and in certain instances a lot of effort has been put into SPS issues, but all very ad hoc and certainly not coordinated. Within individual sub-sectors there are important challenges and opportunities which require both individual (firm) and collective action, with a much improved performance of both government regulatory and private supply chain governance

systems. At the same time, there is need for a more coherent and coordinated approach to SPS management at the national level --cutting across the various agribusiness sub-sectors. The so-called Consultative Group (CG) on WTO matters and its SPS Committee has to be fully activated with some of its members forming a Task Force comprising a balanced cross-section of stakeholders. With respect to ways of addressing the key SPS-related institutional and capacity issues, some of the high priority actions that are needed include (together with their timeframe) include:

- *Strategy and priority setting*. Highlight SPS management constraints and issues, prioritize them and elaborate action plan (short-term; very high priority);
- Awareness campaign on SPS management capacity issues and to conduct dialogue with the private sector. Develop SPS information systems in the public domain (short-term; high priority);
- *Institutional efficiency and effectiveness*. Review of existing institutional arrangements to minimize overlaps and ensure most effective use of limited technical and staff capacities. Evaluate further the need for FSVPHA and any privatization required (short-term; high priority);
- *Food safety controls in food and agriculture*. Awareness-raising and training in fish products, horticulture, meat and livestock sectors regarding HACCP, GAP, and GMP (short-term; high priority);
- promote and support the implementation of HACCP, GAP, GMP etc. throughout the supply chain utilizing loans, funding matching grants etc. (medium-term; high priority);
- implement and enhance food safety controls in slaughterhouses, fish processing plants, packhouses etc. via awareness-raising, certification, surveillance, auditing, etc. (short to medium-term; high priority);
- continue to invest in upgrading hygiene facilities at Karachi Harbor (short to medium-term; high priority);
- *Enhancing food quality standards in raw material production*. Implement initiatives that build on strengthening the raw material supply chain to supply high-value markets for agricultural and food products. Develop codes of practices for the various food sectors (short to medium-term; very high priority);
- *Phytosanitary control measures*. Raise awareness and training in practices for animal and plant health control, including GAP, ICM and IPM (medium-term; high priority);
- *Use and Registration of pesticides*. Review arrangements for pesticide registration and explore equivalency of approval processes in other countries (short-term; high priority); and
- improve pesticide residue analysis in horticulture crops and pharmaceutical residues meat products (short-term; high priority).

    - ***Time frame***: Short to medium-term. ***Responsible entity***: Federal Ministry of Food, Agriculture and Livestock; Ministry of Commerce; Ministry of Science and Technology; Ministry of Health; the relevant provincial and local government departments; the private sector through Chambers of Industries and Commerce .

CHAPTER 9: CONCLUSIONS AND SUMMARY OF RECOMMENDATIONS

1. Accelerating economic growth to the 7-8 percent range during the next decade, a key pillar of Pakistan's poverty reduction strategy (PRS), requires sustained macroeconomic stability and creating an investment-friendly business environment. At the same time, recognizing that a major source of sustained higher growth is a dynamic economy functioning in an export-oriented policy environment, the Government's growth strategy emphasizes globally competitive industrialization to open the way for stronger competitiveness and greater export diversification. Further, the PRS gives priority to human capital development, substantial increases in the existing capacity and quality of infrastructure services, and continued trade policy reform.

2. This report focuses on the goal of accelerating Pakistan's economic growth and on the related challenge of strengthening export competitiveness and ways to meet it. With respect to macroeconomic drivers of growth and competitiveness, it emphasizes that macroeconomic stability is and must remain the strategic base for Pakistan's enhanced growth and competitive prospects. It highlights the importance of raising savings rate and fostering higher investment activity, and stresses that overvaluation of exchange rate should be avoided not to undermine export competitiveness and sustainability of external balances.

3. However, *the principal focus of the report is on the microeconomic dimensions of the investment environment*, specifically on its weaknesses and ways to overcome them. The remedial measures it identifies aim at: reducing the cost of doing business and increasing market competition; stepping up factor productivity through efficiency gains; and, through declining production costs throughout supply chains, strengthening export competitiveness and the economy's base for export diversification. Success in these efforts, which will help accelerate growth and employment generation, will depend on the consistency of government action. Steady improvements in the quality of business environment would encourage domestic and foreign private investment --the latter also bringing with it positive spillover effects in information, technology and technology diffusion, competition, and linkages to marketing networks.

4. All of these developments will strengthen Pakistan's export performance and support stronger, job-creating, poverty-reducing economic growth. But action must be rapid. Since global economic integration is certain to continue and competitive pressures to intensify, Pakistan must aim high to induce firm-level productivity growth and to strengthen and diversify her export base. The challenge is great and multi-faceted, but the dynamism of Pakistan's public and private-sector leadership has proved equal to many daunting tasks in recent years.

5. ***High priority areas for early action***. The findings of the report also point to a number of high priority areas where early actions might have high payoffs, some requiring stroke-of-the pen type policy decisions, some longer-term effort. The high priority measures include:

- Strengthening macroeconomic framework (and avoiding overvaluation of the rupee);
- addressing electricity pricing and structural issues of the power sector;
- improving SMEs' access to financing;
- serious commitment to human capital development and to increased supply of skilled manpower;
- further improvements in the efficiency of the duty-drawback and sales tax rebate system for the new and/or small exporters and for the new export activities; and
- improving transport/trade logistics; and enhancing food quality and safety standards capacity.

6. The policy packages presented in Table 9.1 A and 9.1B below summarize, respectively: (a) the remaining, key cross-cutting policy and institutional issues, and a set of recommended short- and longer-term actions to address them; and (b) the principal product/activity-specific constraints identified and the recommended priority actions. (High priority measures are **in bold**).

Table 9A: Summary of Recommended Actions
Strengthening Pakistan's Export Competitiveness and Growth Performance: Microeconomic Dimensions

		Panel A: Cross-Cutting Issues/Challenges		
Areas of Intervention	**Challenges/Issues/Impacts**	**Recommended Actions**	**Objectives/Benefits**	**Time frame**
1. Economic Governance	• Notwithstanding the recent improvements, the business regulatory environment still includes some antiquated laws enforced by autonomous and government institutions at federal, provincial and local levels. These in turn constrain firm-level efficiency: o Progress has been made in making business registry easier, but the actual start-up of operation, including land acquisition, site development, construction licensing, utility hook up carries a high degree of administrative burden o Court processes, judicial capacity, and supporting institutions (advocates, registries, accountancy and related professions) have been rather ineffective in enforcing contracts and protecting property rights in Pakistan. • There is need for further improvement in the efficiency of the duty-drawback and sales tax rebate systems. Small and/or new exporters appear to be facing longer delays in receiving their rebates. Action in this area is critical towards to foster export diversification and support SMEs' competitiveness.	• In all aspects of commercial law and regulation, establish uniformity in the implementation of operational rules, procedures and monitoring systems. o To meet this challenge, a central part of capacity-building efforts should be an expansion of existing, pilot, e-government initiatives to improve business-government interface. o **Additionally, federal policy and active consultation should encourage a unified and competitive approach to implementation of provincial regulations so that provincial governments implement reforms in a unified and active manner.** o **As a first step, risk-based labor inspection regimes with strict limits on abuse and rent-seeking should be instituted at the provincial level.** • Beyond pending legal reform legislation that will help limit procedural delays (stays, continuances, etc.) and introduce formalized, alternative, dispute resolution, the system of commercial adjudication needs broader attention --not just new courts but expedited and summary procedures backed by swift and effective enforcement. • **Continue simplifying the duty-drawback rules and documentation, and provide importers/exporters with easy-to-use information about procedures; intensify efforts to shorten the processing of duty drawback submissions by new export firms and SMEs, which are facing particularly longer delays.** o Do the same for the sales tax rebates.	Reduce the cost of doing business; encourage growth of SMEs; increase market competition; induce firm-level efficiency; and strengthen cost competitiveness	Short to mediu m-term
2. Skills Gap, and actor Markets ***Improving education and addressing Pakistan's***	*Education/ skilled labor force*: • Pakistan's human development, basic education and workers skills indicators show Pakistan consistently at the lower end of the cross-country rankings. • With such poor level of basic schooling, it becomes difficult to train the new entrants to the labor force to meet the needs of manufacturing industries. The resulting lower labor productivity relative to the comparator countries with	• **Sustain commitment to high priority to the spending levels and quality of programs in the social sectors, including in all levels of education, as reflected in Pakistan's PRS and included in the national-level education sector reform program, which is led by the Federal Ministry of Education.** • **Continue: (i) improving *governance in the education* sector by further strengthening the existing mechanisms aimed at more effective management and performance of teachers, and**	Enhance competitiveness, flexibility, and efficiency of factor markets to strengthen factor productivity, competitiveness and economic growth.	Short to long-term

skills gap	stronger educational base adversely affects Pakistan's competitiveness and will inhibit Pakistan's growth prospects.	**monitoring of teachers' competencies and absenteeism; (ii) implementing transparent procedures for teacher training, recruitment, and instituting effective mechanisms for monitoring outcomes/impacts (drop-outs, completion rates etc.).** • **Expand the coverage of successful public-private partnership initiatives could also improve access to and quality of service delivery in education.** • **Focus a considerable portion of the limited education resources to upgrade quality of and access to primary and intermediate general education to better prepare students for the subsequent levels of education, to reduce drop-outs, and to meet the 'trainability' requirement of various industries.** • **Take steps to make intermediate and secondary education more purposeful and linked to the economy and changing needs in the labor market, and careers.**		
Labor Market	<u>*Labor market and skills*</u>: • Restrictive labor regulations governing maximum hours, overtime conditions, length of temporary contracts, remuneration rates, and welfare contributions. • The discretionary approach of provincial inspectors, labor tribunals, and wage authorities in enforcing requirements and adjudicating disputes adds considerable uncertainty to labor market outcomes. • The informal nature of the labor market stifles incentives and retards investment in workers' skills, both by the employer and the worker himself.	The first round of labor market reforms represents a good start by codifying antiquated legislation and starting the process of liberalizing the market. The agenda for the next round includes: • **Preparation of regulations for the new Employment Services Act**, which implements increased labor flexibility particularly in the use of temporary labor contracts. • **Completion of the legislative reform agenda focusing first on reforming the 14 laws governing labor welfare and rationalizing the labor levies system.**		
Land Market	<u>*Land market*</u>: • Weak land registration system prevents certainty of property rights: o Issues include the multiple agencies involved in land registration, complex and opaque records keeping, and sale transactions taking place without valid conveyance documents. These legal inadequacies and procedural deficiencies prevent indisputable land title and is one of the primary causes of the case backlog in the courts.	• **Establish a consistent legal framework, registry, and property tax system to define land use rights of owners and lease-holders.** • Facilitate the transferability of land with full confidence, minimum costs, and in an adequate time. (Such measures would eliminate transfers using dubious or traditional techniques, such as oral gifts under Sharia inheritance law, power of attorney, and rights conveyed under the patwani system for land in rural areas).		
Financial Markets	<u>*Financial markets*</u>: • Despite the significant reforms in the banking system and the excess liquidity position in the country, access to finance	• **Improving the legal framework and judicial processes for enforcement of financial contracts (such as with a modern secured transactions regime for movable collateral) and an expansion of credit registry coverage, particularly for private credit registries.**		

	continues to be an important constraint. • The legal system for enforcement of financial contracts is partly untested and is faced with problems at the execution level, and credit bureaus are at a nascent stage of development.	• Increase the private sector's role in insurance, for example, by removing regulatory constraints on investments by insurance and pension/ provident funds.		
3. Infrastructure Utilities Power	*Power*: • The difficulty in getting electricity connections and unreliable supply with frequent outages have traditionally been an enormous burden on business, causing over 40 percent of firms to back up operations with their own generation. • In addition, the sector's inadequate pricing and subsidy structure causes the burden to fall particularly hard on the manufacturing industry, further harming price competitiveness	• **Setting an appropriate pricing structure for distribution companies** to support the sector restructuring, facilitate better targeting of subsidies, and to strengthen operational performance by reducing theft and losses. • Completing the unbundling of Water and Power Development Authority (WAPDA) into separate transmission and distribution companies, and continuing with privatization of generation companies.		Medium to long-term
4. Transport Logistics Trucking Rail Port and Shipping	*Some of the key challenges faced in Pakistan's transport sector*: • Age and condition of the transport fleet • Serious overloading of trucks • Restrictions on the provision of bonded transport • High cost of 'less than container load' movements • Limitation on the range of logistics services available The Pakistan Railways is not permitted to operate as a commercial entity. And much of the difficulty in organizing a competitive freight service is because the railroad gives priority to passenger train operations provided as public service • The high levels of occupancy in the port storage yards, which causes congestion, is the principal problem in the ports' terminals	*Trucking*: • Enforce safety and axle limit regulations • **Improve availability of medium-term credits through increased flexibility in acceptable collateral and full insurance coverage requirement for truck operators** • **Reduce duties on imports of trucks, parts** • Consolidate marketing • Improve fleet management • Improve urban access *Rail*: • **Joint concession of unit train operation and ICD operations** • **Allocate slots to container trains** *Port and shipping*: • Coordinate planning of new port capacity • **Reduce port overhead costs** • Evaluate dredging options • **Rationalize terminal tariffs to reduce congestion**	Improve quality and utilization of the truck fleet Increase frequency and quality of container train services; reduce truck traffic on roads Improve quality of service for container vessels calling at Pakistan ports; reduce shipping costs	3-5 years 1-3 years 3-5

				years
5. Trade Logistics Customs	• In recent years, substantial reforms have been undertaken at Customs. However, the customs procedures for re-exports, e.g., duty-drawback, temporary admissions and handling cargo in bond, remain cumbersome.	• Simplification of customs procedures for establishing consolidation activities, bonded storage, and transport in bond	Reduce order cycle and cost of clearing cargo and provide incentives for compliance	1-2 years
6. Trade Policy	a. The remaining trade policy agenda to be addressed in the comings years: • Considerable tariff escalation, which has been further aggravated by increased dispersion; • Significant 'tariff peaks' which help provide very high protection to specific manufacturing industries such as the *motor vehicles* and *edible oils*; and, as a result, • the remaining anti-export bias of the trade regime is still considerable. b. Economic case for forming bilateral FTA agreements with small countries is questionable.	• Continue reducing the general maximum customs duty (CD) rate • **Eliminate the existing tariff exemptions and concessions, say, over a period of 2-3 years** • In the ***auto industry***: o **eliminate the existing (assembler and subcomponent) deletion programs**; o **gradually reduce the existing differentiated CD rates to a lower uniform single rate that would be the same for all models (say, to, 50% in a couple of years); then** o **introduce a phased tariff reduction program of, say 5 percentage points each year, to bring down the CD on cars to the general maximum rate**; o unification of tariffs on CKD kits, original equipment components, and replacement parts at a single rate (say, at the current maximum rate); o imposition of excise taxes on imports and domestic production of expensive and luxury cars could be considered to offset possible revenue losses (with economic rationale based on having users pay for negative externalities). • **Gradually reduce the extremely high tariffs on imports of *motorcycles* towards the general maximum – to 50%, say, in two years, then reduce the rate by 5 percentage points every year.** • Convert specific tariffs on ***edible oils*** to ad valorem rates immediately, then reduce the latter gradually towards the general maximum rate. • A potential FTA with a very large trading partner, such the US, may have an economic rationale, but FTAs with small economies will simply end up in costly complications in the tariff system without much gain to show.	Further reduce the anti-export bias of the trade regime to promote export diversification and boost export competitiveness	Short to mediu m-term

7. Food Safety and Quality Standards	• Pakistan presently lacks a coherent strategy (or set of strategies) for quality and SPS management in relation to its trade. Whatever strategy that exists is pursued independently at the company or business-to-business levels. • In the absence of a coherent strategy, Pakistani stakeholders are largely reacting to events and adopting defensive postures in which they seek to limit the apparent impact of standards or potential damage from non-compliance with those standards.	1. With respect to the needed actions in the areas of institutional changes and capacity building, some of the specific, high priority recommended actions (together with their timeframe) include: • ***Strategy and priority setting*. Highlight SPS management constraints and issues, prioritize them and elaborate action plan (short-term; very high priority);** • **Awareness campaign on SPS management capacity issues and to conduct dialogue with the private sector. Develop SPS information systems in the public domain (short-term; very high priority);** • *Food safety controls in food and agriculture*. Awareness-raising and training in fish products, horticulture, meat and livestock sectors regarding HACCP, GAP, and GMP (short-term; high priority); • promote and support the implementation of HACCP, GAP, GMP etc. throughout the supply chain utilizing loans, funding matching grants etc. (medium-term; high priority); • implement and enhance food safety controls in slaughterhouses, fish processing plants, and pack-houses via awareness-raising, certification, surveillance, auditing, etc. (short to medium-term; high priority); • **continue to invest in upgrading hygiene facilities at Karachi Harbor (short to medium-term; very high priority)**; and • *Phytosanitary control measures*. Raise awareness and training in practices for animal and plant health control including GAP, ICM and IPM (medium-term; high priority).	Enhance trade-related SPS management capacity; improve compliance with the importing country food quality and SPS requirements to increase exports of horticulture, fishery and other agricultural food products.	
*/: Bold indicates high priority actions.				

Table 9B
Product/Activity Specific Issues and Recommended Actions

Areas of Intervention	Challenges/Issues/Impacts	Recommended Actions	Objectives/Benefits	Time frame
1. Blue Denim (Textile and Clothing Sector)	**Sewing/finishing**: • Average to *low labor productivity and limited skills* due to: (i) insufficient supply of technical and design skills; (ii) insufficient sources for shop floor productivity training; (iii) rigid and costly labor legislation/regulations encourage informal labor pools and discourage training. • Cash flow pressures limiting ability to meet changing demands due to: (i) lack of working capital finance; (ii) slow processing of duty and sales tax rebates. **Spinning/Weaving**: • Average *age of spindles* old an d suited for low quality input –a legacy of previously protected cotton sector and of supported spinning activity that suppressed upgrading: o impact: lower quality fabric suitable for lower end production. • *High cost and unreliability of electricity supply*: o impact: higher production costs, suppression of power - intensive capital investments **Ginning** : • Poor ginning outturn due to *dilapidated ginning equipment*, producing contaminated and low quality lint cotton: o impacts: higher costs for low quality product; low quality cotton passed down the value chain, resulting in lower quality fabric **Farming**: • Insufficient availability of quality, de-linted and improved *seeds* due to: (i) lack of private sector involvement in the production and distribution of seeds; (ii) high susceptibility of the retained hybrids to pests and viruses; and (iii) below cost provision of seeds and inadequate management of the state seed companies. This contributes to low cotton yields and quality.	*Government Actions*: • **Reform of the labor market legislation and regulations** • **(See Table 9A with respect to investing in education)** • **Improve efficiency of the duty drawback/tax rebate schemes.** *Private Sector actions* : • Train management and skilled technicians • Strengthen existing design centers • **Timely submission of full documentation needed to process duty-tax drawback claims** *Government Actions*: • **Improving the legal framework and judicial processes for enforcement of financial contracts (such as with a modern secured transactions regime for movable collateral) and an expansion of credit registry coverage, particularly for private credit registries.** • Implementation of the power sector reforms *Private Sector actions* : • Work with industry and the Government to develop and implement a nation-wide cotton standard and a system of lint cotton grading • Strengthening of ginners' associations/groups for better market information collection and distribution on local/global price trends, cotton quality and standards/grading. *Government Actions*: • Assess the role and condition of provincial seed companies. • Aside from below-cost sales of cotton seed by SOEs, examine other barriers to entry for private seed producers and distributors, and take steps to remove such barriers. • Strengthen support R&D into pest resistant seeds.	Strengthening cost competitiveness of the T&C sector	Short to long-term Short to long-term Short to medium-term

	• *Excessive use of water* (which is subsidized) through flood irrigation, which harms cotton yield/quality and also raises costs of water extraction and tube-well investments. • *Poor use and application of sprays* due to lack of information on proper use of pesticides. Such practice: (i) leads to higher crop losses due to pests; (ii) causes health hazards and reputation risks; and (iii) raises cost of cotton farming.	• Improve seed certification system. • Strengthen extension services: (i) for irrigation; (ii) spraying pesticides • Reform pricing mechanisms for water distribution, and improve water resource management. *Private Sector actions* : • Promote and participate in public-private efforts to improve seed production and distributions; and strengthen research linkages with the Government and universities.		
2. Shrimp (Fisheries Sector)	• *Low fishing yields and high costs* due to: (i) reliance on fishing techniques that lead to excessive waste; (ii) lack of simple instruments to locate fish schools; (iii) excess fishing capacity and over-crowding of harbor dueto 'open access' policy; (iv) poor hygienic conditions (i.e., limited supply of water, ice, sanitary areas) at Harbor and the Auction House, which lead to high spoilage; (v) lack of fishermen training; and (vi) raised transaction costs along the supply chain due to high duties, fees, an informal payments; and (vi) inability to access financing due to lack of loss insurance on collateral (boats). o *Impact*: (i) These problems lead to low yields and low returns; (ii) the latter also constrains vessel owners and the processors from upgrading technology. • *Over-exploitation of fishery resources* due to: (i) 'open-access' policy that leads to excess fishing capacity, resulting in 4-5 times as many fishing vessels than the capacity of harbor allows; (ii) myriad of laws, regulations and overlapping institutions to protect fisheries resource result in leaving the resource unprotected; and (iii) netting of 'rice' shrimp through illegal netting causes depletion of shrimp resources. o *Impact*: (i) over-fishing adversely affecs sustainability of fishery resources, reducing yields and raising costs. • *Inadequate capacity to meet quality and health safety standards* due to: (i) inadequate knowledge on good management practices on the part of the private sector operators (vessel owners, processing plants); (ii) lack of enforcement mechanism through the value chain to comply with the EU quality and health standards. o *Impact*: below potential performance in exploiting	*Government Actions*: • **Allow the use of UHF band for citizen use (in the short-term).** • Provide training vouchers to enable private sector delivery of training in new technologies and waste avoidance. • Improve port clearance process to eliminate overlap, duplication, and inefficiency. • **Reduction of customs duties in line with the overall reforms of the CD structure and continued improvements in the duty and sales tax rebate systems** (as elaborated in Chapter 7). • Review taxes/fees along the supply chain with the aim of reducing unnecessary costs. • **Enforcement of various laws and regulations which are in place, in particular, the enforcement of netting bans (in the short-term).** • Review fishing related laws/regulations and institutions to rationalize oversight and duties. • Strengthen marine resources research capacity and carry out regular surveys of coastal fishery resources and on the sustainable catch levels. • **Drawing on the global experience (from New Zealand, Canada, Iceland, Norway, and Peru), examine, together with the Fishermen's Cooperative Society (FCS), various options to replace 'open access' policy (in the medium- and long-term).** • Develop pilot acuaculture sites to investigate commercial feasibility and environmental impact of fish farming as an industry. • **Upgrade Karachi and Korangi harbors, landing sites, auction houses, particularly focusing on sanitary areas, cold storage, and the quality of water and ice (immediately).** • Develop, institute, and apply certification program for vessels and processors.	Improve Pakistan's fishery export capacity	Short to medium-term Medium to long-term Short-term

	Pakistan's fishery export potential.	• **Strengthen institutional mechanism in Marine Fisheries Department for health and safety certification, including reporting and enforcement (short- to long-term).** • **Strengthen testing and certification facilities (short- to long-term.** *Private Sector actions* : • **Organize through, FCS, a base station to provide information to fishermen during trips.** • **Invest in basic technologies to locate fish.** • Establish open entry to new commission agents ('mole holders'). • FCS could investigate the feasibility of group insurance policies against losses. • **Develop industry-wide standards along supply chain to enable compliance with the quality and health standards required by the major importing countries.** • **Introduce self monitoring system in vessels , harbor, and processors, and introduce Good Management Practices (GMP) and Hazard Analysis Critical Control Point (HCAAP)**		Short to medium-term Short to medium-term
3. Marble Tiles (Mining)	*Processing*: • High duties and taxes on imported inputs and delays in rebate of duties and taxes. • Low quality of processing due to: (i) low labor productivity and technical skills; (ii) lack of gang saws and other precision machinery due to underinvestment; and (iii) inadequate and costly electricity supply o *Impact*: higher polishing costs and low quality end product for export. *Mining*: • Inadequate management and exploitation of mining resource, due to: (i) lack of coordinated regulation and intervention at different Federal and State government levels in the implementation of the sector-wide strategy; (ii) lack of technical knowledge on mining resources. o *Impact*: economically inappropriate mining techniques, and uncertain supply of marble output in term of amount/quality • Uncontrolled blasting techniques as a prevalent form of mining due to: (i) inadequate enforcement of 'no blasting' regulation; (ii) opaque and cumbersome leasing procedures which are also vulnerable to political pressures; (iii) poor	*Government Actions*: • **(See Chapter 7 and Table 9A above on the recommended measures to further reform the customs duty structure and the duty-tax rebate schemes).** • **Seek technical assistance on mining to improve processing techniques** • Build vocational system, in partnership with the private sector and with TA, for labor and quarry masters *Private Sector*: • **Seek technology transfer and develop training programs to upgrade skills.** *Government Actions*: • **Adopt and implement new mining strategy, distinguishing between regulatory and enforcement roles.** • Strengthen research capacity and linkages with private sector. • Carry out mining survey at the provincial level. • Implement new mining regulations. *Private Sector*: • Support public-private efforts to contribute to regulation and oversight. • Increased use of geologists.		Short to long-term Medium to long-term

	definition and enforcement of property rights in terms of surface land; (iv) access to finance. • Wastage in transport due to: (i) poor roads and old trucks; (i) limited ability to use precision processing; (iii) limited use of adequate packing. o *Impact*: transit losses of as much as 25% of a shipment, and high unit costs.	• Strengthen linkages with research institutes for technical assistance. • Examine cooperative arrangements to increase use of geologists. • **Examine the feasibility of access to finance using mining assets as collateral (see Table 9A on improving SMEs' access to financing).**		
4. Powdered Milk (Dairy Processing)	*Dairy Processing*: • Low and volatile supply of milk for processing due to: (i) scattered and fragmented production points and marketing; (ii) informal system of collection resulting in 10-15% losses due to adulteration and poor quality; (iii) inadequate cold chain; and (iv) high seasonality of milk production. o *Impact*: high cost of collection, and low capacity utilization in processing. • High cost of processing due to: (i) low capacity utilization; and (ii) high protection on cold/sanitary packaging. o *Impact*: inability to compete internationally • Weak system of quality-assurance and health safety standards due to: (i) lack of coordination between the provincial and local governments and low skills on the part of inspectors; (ii) inadequate testing facilities; and (iii) scattered small farms plus combining milk from formal with milk collected from informal sector makes control and traceability difficult. • Distorted and depressed international prices due to production and export support programs in developed countries. o *Impact*: inability of processors to compete on a sustained basis *Dairy Farming*: • Low milk yields due to: (i) low protein feeding techniques; (ii) inadequate veterinarian services; lack of artificial insemination and long calving intervals; and high mortality rate; and (iii) insufficient extension service provision and support. o *Impact*: tight and volatile milk supply; difficulty in increasing animal stock levels	*Private Sector*: • **Strengthen existing cooperative institutions and support the formation of new ones for improved collection of milk and delivery of extension services.** • Through cooperatives, work with the public sector entities for increased effectiveness and expanded coverage of extension services. • Initial marketing focus on Afghanistan, Middle East, and Asian Countries *Government Actions*: • **Strengthen the effectiveness and coverage of extension services.** • **Reduce protection on imports of packaging material (in line with the measures recommended for further trade liberalization –see Chapter 7).** • **Improve testing and enforcement capacity of the competent authority.** • **Strengthen coordination between provincial and local authorities in implementation of food quality assurance and safety standards.** • **Integrate testing and enforcement with collection systems.** • Pro-active engagement in the ongoing WTO Doha Round of trade negotiations, particularly those pertaining to agricultural trade. *Government Actions*: • Improve the supply of irrigation water for maintenance of grazing areas. *Private Sector*: • Replicate successful cooperative arrangements which provide private sector extension services	Strengthen value addition and expanded export prospects	Short tp medium-term
5. Automobile	• Antiquated technology development relative to global	*Government Actions*:		

Radiator (Light Engineering)	industry demands resulting from: (i) very high tariffs on imports of motor vehicles and parts restrict foreign competition; (ii) deletion programs which assure local content requirements for auto components in the domestic assembly industry and, together with high protection, limit pressures for efficiency and product quality upgrading; and (iii) increased consumer credit for car purchases causing a boom in domestic demand for cars. ○ *Impact*: inability to produce for the Western export market, as current operations catering to the domestic market with small scale production and lower quality • Inadequate internal management practices that result in less focus on cost efficiency and quality control. ○ *Impact*: difficulties in tracking unit costs and participating in international bidding for external contracts • Weak competitiveness position in terms of cost and quality.	• **Eliminate domestic deletion programs** • **Gradually reduce protection levels for motor vehicles and parts** to promote domestic competition, lower cost of production, and encourage expansion of efficient firms (see Chapter 7 for details on the recommended actions on trade policy). *Private Sector*: • Investment in aluminum radiator production to create opportunities for exporting. • Investment in improving quality in production lines, and obtaining ISO and QS 9000 certifications as well as reducing defect rate.	Strengthening efficiency and competitiveness of the auto parts industry	Short to medium-term
*/: Bold indicates priority actions.				

ANNEXES

ANNEXES

Annex 2.1

Annex to Chapter 2

Solow Growth Accounting: Methodology and Caveats

The analysis of the sources of economic growth dates back to the late 1950s, when Jan Tinbergen, Moses Abramovitz and, most notably, Robert Solow first decomposed output growth in a weighted average of the rate of growth of labor and capital, and a residual that became known as total factor productivity growth (TFP). Although the so-called "Solow residual" was nothing more than the unexplained part of economic growth, economists increasingly became accustomed to viewing the residual as a measure of productivity change.

There are several studies that apply growth accounting exercises to large samples of countries. Taken together, these studies point out two quite relevant results. The first is that the contribution of TFP to overall growth is larger when growth itself becomes larger. The second is that whatever the contribution of TFP to the *level* of the output growth, movements in TFP explain to a large extent the *changes* that output growth experiences. The latter result is confirmed by Easterly and Levine (2001), who in addition find that the cross-country variation in GDP growth rates is mostly driven by cross-country differences in total factor productivity.

In analyzing the growth accounting exercise for Pakistan and other comparator countries presented in the main text, it is worth emphasizing some of the general limitations of the growth accounting methodology. First, the TFP component of growth is by definition a residual, being calculated as the difference between output growth and a weighted average of the growth in the quantity and quality of factors of production. As such, any measurement errors present in the variables used to measure labor and capital are mechanically imputed to TFP. Second, growth accounting is a descriptive methodology and does not provide specific insights into the factors that underlie the TFP growth component, which could represent from technological changes to structural and institutional reforms. Finally, the growth accounting results depend to some extent on the assumption of independence between employment growth, capital accumulation and productivity growth. This is a questionable assumption since TFP growth can help materialize previously unprofitable investment projects and, in turn, technological improvement can be embodied in new capital.

All these limitations suggest that great caution should be used when employing growth accounting results for more than descriptive purposes. For instance, these problems are important enough to warrant skepticism regarding regression analysis that employs the TFP residual as dependent variable. For this reason, this study will not attempt to distinguish the determinants of capital accumulation from those of TFP growth via regression analysis. Rather, the study will focus on per capita GDP growth as a whole as the dependent variable of interest for econometric analysis.

With these caveats in mind, the growth accounting exercise proceeds as follows. Consider a neoclassical production function that depends on physical capital K, labor L, and the level of total factor productivity A. Assuming a Cobb-Douglas specification, the production function can be written as follows,

$$Y = AK^{\alpha} L^{1-\alpha}$$

In addition, assume that there are no adjustment costs in capital accumulation, and that there is perfect competition in the markets for production factors, so that the latter are paid their social marginal products. Taking logs and time derivatives, leads to the standard estimate for the growth rate of productivity,

$$TFP\ Growth = GdpGrowth - S_K * CapGrowth - (1 - S_K) * LaborGrowth$$

where S_K is the share of capital in income.[1] This is the standard Solow decomposition, in which capital growth consists simply of investment net of depreciation and labor growth comprises only the expansion of the working-age population. When growth accounting is conducted for short periods (quarterly or annually, for instance), capital and labor utilization adjustments are crucial. Since this study concentrates on long periods, the standard decomposition is a good approximation.

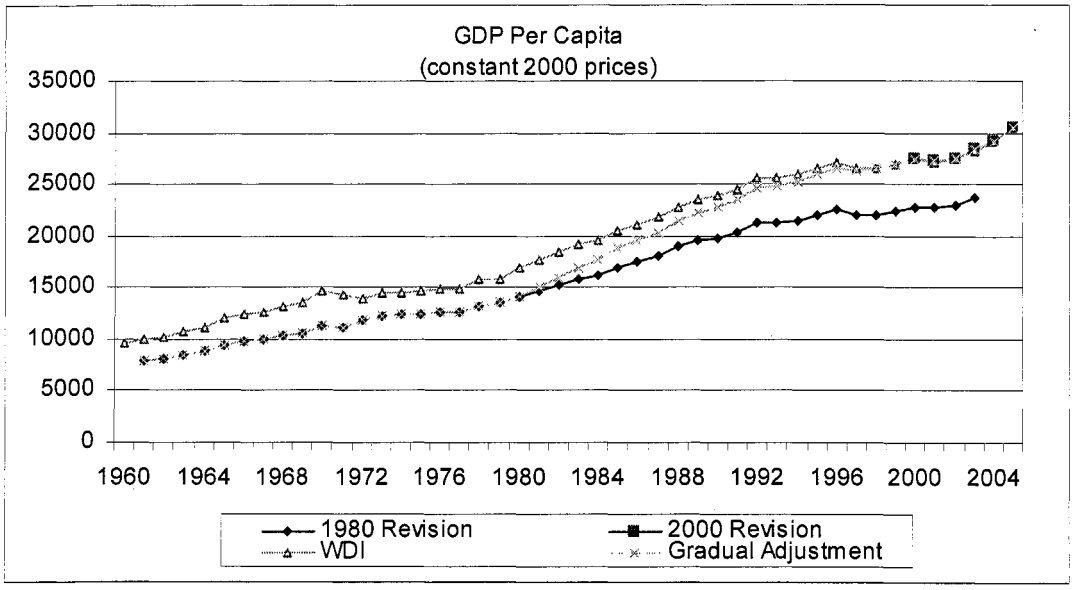
[1]The value of S_K is assumed to be constant across countries and equal to 0.35. This value is close to the developing country median of the share of income accruing to capital owners according to national accounts statistics.

Annex 2.2

Revised GDP figures

In 2000, Pakistan revised its national accounts in order to incorporate new sectors of economic activity in their production surveys. The last national account revision had been conducted in 1980, and naturally the economy had transformed considerably in the following two decades. The 2000 revision would then lead to a more accurate estimation of sectoral value added and, ultimately, GDP and national income. In fact, the revised methodology produced a GDP estimate for 2000 that was about 20% higher than that obtained under the old methodology.

The application of the new methodology creates the issue as to how to link the estimates from the new methodology with those obtained under the old one. Ideally, old estimates should be subjected to and adjusted according to the new methodology. However, this involves information and resources that may not be available. In the production of its World Development Indicators Database, The World Bank adopts the figures obtained under the new methodology (which in this case implies an upward adjustment in the level of GDP) and then estimates the unavailable figures by projecting backward using the implied growth rates under the old methodology. This smooth pasting method produces conservative growth rates, and it is the one used throughout this study. An alternative adjustment method would take as given the actual estimates in the revision years (1980 and 2000) and produce estimates for the intervening year that take into account both the estimates under the old methodology and the need to correct the level of GDP. This "gradual adjustment" method is more controversial as it depends on a larger set of assumptions. The growth rates it produces for the intervening years are higher than under the conservative method.



Determinants of Economic Growth

Transitional convergence. One of the main implications of the neoclassical growth model, and indeed of all models that exhibit transitional dynamics, is that the growth rate depends on the initial position of the economy. The "conditional convergence" hypothesis maintains that, *ceteris paribus*, poor countries should grow faster than rich ones because of decreasing returns to accumulable factors of production. This study controls for the initial position of the economy by including the (log of the) **initial level of real GDP per capita** in the set of explanatory variables.

Cyclical reversion. Although the main objective is to account for long-run trends in economic growth, in practice –both for econometric estimation and forecasts—this study works with medium-run periods (5- or 10-year averages). At these frequencies, cyclical effects are bound to play a role. The study includes some explanatory variables that are not standard in the long-run growth literature but capture important elements of the business cycle. One of them deals with cyclical reversion to the long-run trend. (Other cyclical factors are included under the category of stabilization policies, introduced below). Cyclical reversion is accounted for by including the **output gap** at the start of the period as a growth determinant. The output gap used in the regression is given by the difference between (the log of) actual and trend GDP per capita around the start of the period, which is obtained using the Baxter-King filter (introduced above)

Structural policies and institutions. The underlying theme of all the endogenous growth literature is that the rate of economic growth can be affected by public policies and institutions. Although there may be disagreement on what policies are most conducive to growth or the sequence in which policy changes must be undertaken, there is no doubt that governments can and do influence long-run growth in their countries. While theoretical work has usually studied one or the combination of a few policies, empirical work has tended to be comprehensive in the sense of considering a wide array of policy and institutional determinants of growth. Given its empirical objective, this study takes a comprehensive approach to explaining economic growth performance. Thus, it considers explanatory variables representing all major categories of public policies.

The first area of structural policies is **education**, and human capital in general. The direct role of human capital in economic growth is as a factor of production. In addition, education and human capital can serve as a complement to other factors such as physical capital and natural resources, determine the rate of technological innovations in countries that produce technology, and facilitate technological absorption in countries that imitate it. This study measures the policies directed to increase education and human capital in general with the rate of gross secondary-school enrollment.

The second policy area is related to **financial depth.** Well-functioning financial systems promote long-run growth. They influence economic efficiency and economic growth through different channels. Financial markets facilitate risk diversification by trading, pooling, and hedging financial instruments. They can help identify profitable investment projects and mobilize savings to them. Moreover, financial systems can help monitor firm managers and exert corporate controls, thus reducing the principal-agent problems that lead to inefficient investment. Here financial depth is measured as the ratio of private domestic credit supplied by private financial institutions to GDP.

The next area of economic policy is **international trade openness.** The literature points out five channels through which trade affects economic growth. First, trade leads to higher specialization and, thus, gains in total factor productivity (TFP) by allowing countries to exploit their areas of comparative advantage. Second, it expands potential markets, which allows domestic firms to take advantage of economies of scales and increase their productivity. Third, trade diffuses both technological innovations and improved managerial practices through stronger interactions with foreign firms and markets. Fourth, freer trade tends to lessen anti-competitive practices of domestic firms. Finally, trade liberalization reduces the incentives for firms to conduct rent-seeking activities that are mostly unproductive. In this

study the measure of openness is the volume of trade (real exports plus imports) over GDP, adjusted for the size (area and population) of the country, for whether it is landlocked, and for whether it is an oil exporter.

The next area is related to the **government burden**, and it focuses on the drain that government may represent for private activity. Although government can play a beneficial role for the economy, it can be a heavy burden if it imposes high taxes, uses this revenue to maintain ineffective public programs and a bloated bureaucracy, distorts markets incentives, and interferes negatively in the economy by assuming roles most appropriate for the private sector. To account for the burden of government, the study uses as proxy the ratio of government consumption to GDP. The rational for this choice is that much of current (or consumption) expenditures by government do not have a clear social return and, in fact, are mostly devoted to cover the bureaucracy's wage bill.

Another important area of policy involves the availability of **public services and infrastructure**. Whether they are treated as classic public goods or subject to congestion, public services and infrastructure can affect growth by entering directly as inputs of the production function, by serving to improve total factor productivity, and by encouraging private investment through property rights protection. There are a few alternative measures of public services and infrastructure. Among them, the variables with the largest cross-country and time-series coverage focus on the provision of infrastructure. Due to data considerations, this study works with telecommunications capacity, measured by the number of main telephone lines per capita.

The last area is related to **governance**. This large area comprises several aspects of the institutional quality of government, including the respect for civil and political rights, bureaucratic efficiency, absence of corruption, enforcement of contractual agreements, and prevalence of law and order. The recent empirical cross-country literature has used various subjective indices to measure different aspects of governance and compare them across countries and over time. In general these indices are highly mutually correlated, which suggests that the underlying processes they measure are quite interdependent. The regression analysis presented here uses the first principal component of four indicators reported by Political Risk Services in their publication *International Country Risk Guide* (ICRG). They are the indicators on the prevalence of law and order, quality of the bureaucracy, absence of corruption, and accountability of public officials.

Stabilization policies. Fiscal, monetary, and financial policies that contribute to a stable macroeconomic environment and avoid financial and balance-of-payments crises are important for long-run growth. By reducing uncertainty, they encourage firm investment, reduce societal disputes for the distribution of ex-post rents (for instance between firm owners and employees in the face of high unexpected inflation), and allow economic agents to concentrate on productive activities (rather than trying to manage high risk).

The first area in this category is related to macroeconomic stabilization policies. This is a vast subject, and we consider two interrelated effects of fiscal and monetary policies. The first is the **lack of price stability** and is measured by the average inflation rate for the corresponding country and time period. This is a good summary measure of the quality of fiscal and monetary policies and is positively correlated with other indicators of poor macroeconomic policies such as fiscal deficits and the black-market premium on foreign exchange. The second aspect is the **cyclical volatility of GDP** and reflects the lack of output stability. It is measured by the standard deviation of the output gap for the corresponding country and period.

The second area is related to **external imbalances and the risk of balance-of-payments crises** and is measured by an index of real exchange rate overvaluation. RER overvaluation captures the impact of monetary and exchange-rate policies that distort the allocation of resources between the exporting and

domestic sectors. This misallocation leads to large external imbalances, whose correction is frequently accompanied by balance-of-payments crises and followed by sharp recessions.

The third area concerns the occurrence of **systemic banking crises** and serves to account for the deleterious effect of financial turmoil on economic activity. Banking crises may be the product of an inadequate regulatory framework for financial transactions, which leads to over-lending and unsustainable consumption booms. They can also result from monetary and fiscal policies that put undue burden on creditors and financial institutions. The occurrence of banking crises is measured by the fraction of years that a country undergoes a systemic banking crisis in the corresponding period, as identified in Caprio and Klingebiel (1999).

External conditions. The economic activity and growth of a country is not only shaped by internal factors but also by external conditions. These have an influence on the domestic economy both in the short and long runs. There is ample evidence of transmission of cycles across countries via international trade, external financial flows, and investors' perceptions about the expected profitability of the global economy. Moreover, changes in long-run trends can also be spread across countries. This is achieved through, for example, the demonstration effect of economic reforms and the diffusion of technological progress. This study takes into account external conditions by including two additional variables in the growth regression. They are the **terms of trade shocks** affecting each country individually and a **period-specific shift** affecting all countries in the sample.

Annex 2.4

Econometric Methodology for Growth Regressions

This study estimates the following variation of the standard growth regression:

$$y_{i,t} - y_{i,t-1} = \alpha\ y_{i,t-1} + \alpha_C (y_{i,t-1} - y^T_{i,t-1}) + \beta' X_{i,t} + \mu_t + \eta_i + \varepsilon_{i,t}$$

where y is log of output per capita, $(y_{i,t-1} - y^T_{i,t-1})$ is the output gap at the start of the period, X is a set policy and external variables, μ_t is a period-specific effect, η_i represents unobserved country-specific factors, and ε is the regression residual. The subscripts i and t refer to country and time period, respectively. For simplicity, the length of the time period is normalized to 1; then, the expression on the left-hand side of the equation is the growth rate of output per capita in a given period. On the right hand side, the regression equation includes all growth determinants discussed above measured during the same period as the growth rate.

The proposed growth regression poses some challenges for estimation. The first is the presence of unobserved period- and country-specific effects. While the inclusion of period-specific dummy variables can account for the time effects, the common methods to deal with country-specific effects ("within" or "difference" estimators) are inappropriate given the dynamic nature of the regression. The second challenge is that most explanatory variables are likely to be jointly endogenous with economic growth, and, thus, it is necessary to control for the biases resulting from simultaneous or reverse causation.

To address the estimation challenges, this study uses an estimation method that is suited to panel data, deals with static or dynamic regression specifications, controls for unobserved time- and country-specific effects, and accounts for some endogeneity in the explanatory variables. This is the generalized method of moments (GMM) for dynamic models of panel data developed by Arellano and Bond (1991) and Arellano and Bover (1995). The method assumes that future realizations of the error term do not affect current values of the explanatory variables, that the error term □ is serially uncorrelated, and that *changes* in the explanatory variables are uncorrelated with the unobserved country-specific effect. The papers cited above show that this set of assumptions generate moment conditions that allow estimation of the parameters of interest. The instruments corresponding to these moment conditions are appropriately lagged values of both levels and differences of the explanatory and dependent variables. Since typically the moment conditions over-identify the regression model, they also allow for specification testing through a Sargan-type test.

The framework of regression analysis can be used to explain the changes of economic growth between two periods in a given country. Taking period differences and expectations of the growth regression presented above, the projected change in growth is given by the following equation:

$$E[gr_{i,s} - gr_{i,p}] = \hat{\alpha}(y\_ini_{i,s} - y\_ini_{i,p}) + \hat{\alpha}_c(ygap\_ini_{i,s} - ygap\_ini_{i,p}) + \hat{\beta}'(X_{i,s} - X_{i,p}) + (\hat{\mu}_s - \hat{\mu}_p)$$

where *gr* represents per capita GDP growth rate, *y_ini* is (the log of) per capita GDP at the start of the period, *ygap_ini* is the difference between actual and trend (log of) per capita GDP at the start of the period, s and p are two time periods, and hatted coefficients represent estimated values. Apart from the projected (or explained) change in growth rates between periods s and p, this regression framework estimates the corresponding contribution of each explanatory variable (or groups of variables) to the projection.

Annex 2.5: Economic Growth Regressions

Dependent Variable: Growth Rate of GDP per capita
(t-Statistics are presented below the corresponding coefficient)

Regression Period:		
Time Horizon:		
Type of Model:		System - IV
Estimation Technique:		GMM
Instruments:		Lagged Levels/Differences
Transitional Convergence:		
Initial GDP Per Capita		-0.0176
(in logs)		-3.80
Cyclical Reversion:		
Initial Output Gap		-0.2371
(log[actual GDP/potential GDP])		-8.52
Structural Policies and Institutions:		
Education		0.0172
(secondary enrollment, in logs)		6.70
Financial Depth		0.0066
(private domestic credit/GDP, in logs)		4.28
Trade Openness		0.0096
(structure-adjusted trade volume/GDP, in logs)		3.14
Government Burden		-0.0154
(government consumption/GDP, in logs)		-3.18
Public Infrastructure		0.0071
(Main telephone lines per capita, in logs)		2.71
Governance		-0.0012
(1st principal component of ICRG indicators)		-0.68
Stabilization Policies:		
Lack of Price Stability		-0.0048
(inflation rate, in log [100+inf. rate])		-1.89
Cyclical Volatility		-0.2771
(Std. Dev. of output gap)		-3.76
Real Exchange Rate Overvaluation		-0.0061
(in logs; index is proportional, overvaluation if > 100)		-3.90
Systemic Banking Crises		-0.0289
(frequency of years under crisis: 0-1)		-7.42
External Conditions:		
Terms of Trade Shocks		0.0720
(growth rate of TOT)		4.98
Period Shifts		
(benchmark for Cols. 1 and 3: 1971-75;	71-75:	-0.0090 **
benchmark for Cols. 4: 1966-70;	76-80:	-0.0092 **
benchmark for Col. 2: average 1971-99)	81-85:	-0.0238 **
	86-90:	-0.0194 **
	91-95:	-0.0258 **
	96-99:	-0.0270 **
Intercept		0.1216
		2.79
No. Countries / No. Observations		78 / 350
SPECIFICATION TESTS (P-Values)		
(a) Sargan Test:		0.996
(b) Serial Correlation :		
First-Order		0.000
Second-Order		0.461

Notes: For period shifts: ** means significant at 5% and * means significant at 10%
Source: Authors' estimations

Annex 2.6

Projections Procedures under Realistic Scenario

Variable	Procedure
Education	Projected for 2006-2015 using an OLS regression model incorporating a linear trend . The inclusion criterion was (i) to increase the fit of equation and (ii) to generate plausible values for the projected variable.
Financial Depth	Projected for 2006-2015 using median growth rate of financial depth in the period 2001-05.
Trade Openness	Projected for 2006-2015 using an OLS regression model incorporating a quadratic trend, and ARMA terms. The inclusion criterion was (i) to increase the fit of equation and (ii) to generate plausible values for the projected variable.
Inflation	IMF forecasts for 2006-2009. Projected for 2010-2015 using an OLS regression model with ARMA terms. The inclusion criterion was (i) to increase the fit of equation and (ii) to generate plausible values for the projected variable.
Government Burden	Projected for 2006-2015 using moving average of government burden of the previous 5 years.
Public Infrastructure	Projected for 2006-2015 using an OLS regression model incorporating a linear trend and ARMA terms. The inclusion criterion was (i) to increase the fit of equation and (ii) to generate plausible values for the projected variable.
Initial per capita GDP	Average of per capita GDP corresponding to the years 2005 (actual) and 2010 (model-consistent projection for the middle of the forecasting period)
Initial Output Gap and Cyclical Volatility	Initial output gap computed using the Baxter-King filter. Cyclical volatility computed from actual values. For 2006-2015 ouput gap and cyclical volatility projected using a GARCH model incorporating ARMA terms (for the gap regression) and GARCH terms (for the volatility regression).
Real Exchange Rate Overvaluation	Projected for 2006-2015 using OLS regression models the (projected) level of terms of trade, and ARMA terms. The inclusion criterion was (i) to increase the fit of equation and (ii) to generate plausible values for the projected variable.
Systemic Banking Crises	For 2006-2015 projected using a panel data model including the level of real exchange rate overvaluation, the inflation rate, output gap, lagged presence of crisis and a fixed effect as explanatory variables. The inclusion criterion was (i) to increase the fit of equation and (ii) to generate plausible values for the projected variable.
Terms of trade shocks	Computed using the projected level of terms of trade for 2006-2015 using OLS regression models incorporating a quadratic trend and ARMA terms. The inclusion criterion was (i) to increase the fit of equation and (ii) to generate plausible values for the projected variable.

Annex 2.7

Productivity Growth in Agriculture: Trends in Crop Production and Yields

Cropping patterns vary across Pakistan according to soil type and water availability. In the northern irrigated areas of Punjab, basmati rice is cultivated in the monsoon season (kharif), followed by wheat in the winter season (rabi). In southern Punjab and northern Sindh, cotton is the major kharif crop, typically followed by wheat. Further south, in southern Sindh, where drainage problems inhibit cotton cultivation and warm night temperatures are a constraint on wheat yields, ordinary (non-aromatic) rice is the major crop.

From 1990-91 to 2004-05, average yields of grains continued to increase in Pakistan, though at rates below those of the 1980s. The fastest gains in yields were for maize (3.95 percent per year) and basmati rice (3.73 percent per year). Yields of wheat (the major crop in Pakistan in terms of both area cultivated --36.3 percent of total area cultivated in 2003-05, and share of agricultural GDP --10 percent in the 1990-91) also increased, by an average of 2.1 percent per year. Yield growth of other crops was generally much slower. Yields of other foodgrains (mainly millet and sorghum) increased by only 0.56 percent per year; cotton yields increased by only 0.59 percent per year, and yields of sugar cane increased by only 0.91 percent per year.

Further increases in wheat yields are possible, but water availability and quality remain major constraints. Wheat yields in Haryana, India (4.48 tons/ha) and in the Jhelum canal system in Punjab, Pakistan[2] (4.11 tons/ha) are similar, with high yield differences across watercourses within a given distributuary, especially in Pakistan (Hussain et. al., 2003). Average irrigated wheat yields in Punjab were only 2.63 tons/ha in 2003-04, however, compared with average irrigated wheat yields in Bhakra, India of nearly 4 tons/hectare. Major inequities in distribution of canal water, as well as significant differences in groundwater quality, are major factors. In systems with sufficient canal water, reallocation of canal water to areas where groundwater quality is low could substantially increase average yields.

There is significant potential to increase average cotton yields, which fluctuated between 0.49 and 0.62 tons/hectare from 1992/93 to 2002/03. Good weather and low incidence of pests contributed to 0.20 tons/ha increase in cotton yields in 2003-04 to 0.77 tons/hectare, but even under favorable weather conditions, continued success in pest controls through improved varieties, pesticides and/or integrated pest management techniques will be required for sustained increases in yields.

[2] The data are from a sample of 216 farms in the Bhakra canal system in Haryana, India and 218 farms in the lower Jhelum canal system of Punjab, Pakistan in the October 2000 to May 2001 rabi season.

Annex 2.8

Growth in total and partial TFP indices in Punjab by period 1971-2003

Period	**Total TFP** (percentage growth)			**Contribution of TFP in output growth**	**Partial TFP** (percentage growth)					
	Output	**Input**	**TFP**		Fertilizer	Labor	Land	Water	Machine	Pesticide
1971-81	2.71	1.92	0.79	29.2	-8.69	0.89	2.05	-2.14	-12.36	-
1982-92	3.91	1.05	2.86	73.1	-1.50	5.92	3.01	0.75 [ns]	-5.75	-6.29
1993-2003	1.69	1.80	-0.11 [ns]	-6.5	-0.20 [ns]	-0.79	1.56	3.27	-1.32	-2.73 [ns]
Overall	3.01	1.47	1.54	51.2	-2.86	2.84	2.38	0.76	-6.09	-4.39

Source: Ali and Byerlee (2004), "Accelerating Agricultural Growth in the Punjab: Priorities for Public Policy"

Annex 2.9

Agricultural Productivity in the Two Punjabs Compared

In spite of broadly similar agro-ecologies, average crop productivity in Punjab, Pakistan is substantially lower than in Punjab, India, where input use is much higher, in part because of support prices for major crops and subsidized inputs. Micro-level differences in water availability, water quality and soil fertility are also significant factors. Policy factors, including, also have major effects on input use and yields. In both Punjabs, however, there is growing concern regarding sustainability of the land and water resource base under current production systems.

Wheat yields in Indian Punjab (4.4 tons/ha) are nearly double those in Pakistan Punjab (2.4 tons/hectare; 2.6 tons/ha for irrigated wheat). Detailed analysis of farm-level data in Haryana, India (4.48 tons/ha) and in the Jhelum canal system in Punjab, Pakistan suggest that water availability may be the most important factor explaining yield differentials (Hussain et. al., 2003).[3] Yields in the two areas were similar (4.48 tons/ha in Haryana and 4.11 tons/ha in the Jhelum area), but there high yield differences across watercourses within a given distributuary, especially in Pakistan.

Average rice yields in Indian Punjab are more than double those in Pakistan Punjab (3.4 and 1.5 tons/ha, milled rice, respectively). Part of this yield differential is due to extensive planting of basmati rice in Pakistan Punjab, for which yields are only 1.39 tons/ha, (compared to yields of non-basmati rice of 1.86 tons/ha). Higher use of fertilizer in Indian Punjab and subsidies to water use in Pakistan Punjab also help explain these yield differentials. In contrast, cotton yields are higher in Pakistan Punjab are more than double the Indian national average (0.56 versus 0.21 tons/ha, respectively).

Data on natural resources indicate considerable degradation of the water and soil resource base in both states, however (Murgai, Ali and Byerlee, 2001). The wheat-rice cropping system in the Indian Punjab has been adversely affected by a steep decline in the water table, while rising water levels in the wheat-cotton zone have led to severe waterlogging in the wheat-cotton zone. Waterlogging and salinity are serious problems in Pakistan Punjab, as well, due in part to deterioration in the quality of tubewell water (reflected in a significant increase in residual carbonate and electroconductivity of groundwater). Soil quality in Pakistan (in terms of available soil organic matter and phosphorus) has also deteriorated, particularly in the wheat-rice zone.

Analysis of total factor productivity using data from 1961-94 (India) and 1966-94 (Pakistan) by Murgai, Ali and Byerlee (2001) has shown that there were **wide spatial and temporal variations between the two Punjabs**. Although output growth and crop yields were much higher in the Indian Punjab, productivity growth was higher by only a small margin. Moreover, the lowest growth in productivity took place during the initial Green Revolution period (as opposed to the later intensification and post-Green Revolution periods) and in the wheat-rice system in both states. The time lag between adoption of Green Revolution technologies and realization of productivity gains is related to learning-induced efficiency gains, better utilization of capital investments over time, and problems with the standard methods of productivity measurement that downwardly bias estimates, particularly during the Green Revolution period. Second, **input growth accounted for most of the output growth** in both Punjabs during the period under study. Third, **intensification, especially in the wheat-rice system, resulted in resource degradation in both Punjabs**. Data from Pakistan show that resource degradation reduced overall productivity growth from technical change and from education and infrastructure investment by one-third. *These findings imply the need for policies that promote agricultural productivity and sustainability through public investments in education, roads, and research and extension; and that reduce resource degradation by decreasing or eliminating subsidies that encourage intensification of inputs.*

[3] The data are from a sample of 216 farms in the Bhakra canal system in Haryana, India and 218 farms in the lower Jhelum canal system of Punjab, Pakistan in the October 2000 to May 2001 rabi season.

Annex 2.10

Growth in poverty, TFP and input use in Punjab, 1970-2002[1]

Region		Poverty	Output	Input	TFP	Fertilizer	Labor	Land	Water	Machine	Pesticide
Punjab	Overall	-	3.01	1.47	1.54	-2.86	2.84	2.38	0.76	-6.09	-4.39
	1971-81	-	2.71	1.92	0.79	-8.69	0.89	2.05	-2.14	-12.36	-
	1982-92	6.5	3.91	1.05	2.86	-1.50	5.92	3.01	0.75 ns	-5.75	-6.29
	1993-2003	36	1.69	1.80	-0.11 ns	-0.20 ns	-0.79	1.56	3.27	-1.32	-2.73 ns
Barani region	Overall	-	- 1.13	0.74	-1.87	-4.26	-0.94	-0.80	-3.62	-12.75	2.29 ns
	1971-81	-	4.83	1.94	2.89 ns	-5.22	2.37 ns	4.85	-7.26	-13.90	-
	1982-92	58.7	- 3.47	- 0.81	-2.67	-7.47	-1.16 ns	-2.88	-3.61	-16.02	21.48
	1993-2003	43.2	- 2.18 ns	2.37	-4.55	2.11 ns	-3.38	-2.06 ns	-0.52 ns	-6.11	-14.45
Wheat-Mix	Overall	-	2.18	0.79	1.39	-2.32	2.66	1.80	-0.38	-5.97	-2.21
	1971-81	-	2.58	1.01	1.57	-6.72	1.25	3.79	-1.96	-12.25	-
	1982-92	-8.1	2.07	0.47	1.60	-1.94	4.23	0.98	-1.33	-6.03	-4.24
	1993-2003	54.1	2.01	1.14	0.87	0.78 ns	1.15	1.51	2.62	-0.48 ns	-0.44 ns
Wheat-Cotton	Overall	-	3.15	1.59	1.56	-3.14	3.07	2.70	1.97	-6.10	-4.17
	1971-81	-	2.78	2.24	0.54 ns	-8.74	1.08 ns	1.31	-1.35 ns	-12.74	-
	1982-92	-15	5.10	1.14	3.96	-1.50	7.80	4.80	2.71	-5.03	-6.09
	1993-2003	52	0.11 ns	1.81	-1.69	-1.17 ns	-3.39	0.29 ns	3.54	-2.24	-2.50 ns
Wheat-rice	Overall	-	2.36	1.43	0.93	-2.10	2.40	1.89	0.21 ns	-6.43	-6.32
	1971-81	-	2.45	2.56	-0.11 ns	-9.38	-0.07 ns	1.77	-2.97	-12.58	-
	1982-92	56.8	1.31	0.98	0.33 ns	-1.00 ns	3.24	0.69	-1.42	-6.81	-6.18
	1993-2003	10.3	4.08	1.25	2.84	2.22	3.08	4.06	5.75	-0.51 ns	-6.44
Low-Intensity	Overall	-	3.76	2.53	1.24	-3.92	2.39	2.32	-0.61	-6.89	-4.35
	1971-81	-	1.24	2.45	-1.21	-12.39	-0.67 ns	-1.03 ns	-4.71	-11.85	-
	1982-92	-16	5.47	2.28	3.19	-0.94 ns	6.11	3.54	-0.60 ns	-8.29	-5.06
	1993-2003	52.3	2.98	3.02	-0.04 ns	-1.81 ns	-1.42	3.07	2.88	-0.24 ns	-3.74

[1] The data on poverty count for the periods, 1984, 1987, 1993, 1998, and 2001 are taken from Malik (2003). These periods reflect the years in which the federal bureau of statistics conducted the household surveys. Therefore, the growth in poverty counts during 1982-92 in fact is the growth in poverty count between 1993 and 1984 survey years. Similarly, growth in poverty counts during 1993-2003 reflects the growth over the survey period, 1993 and 2001. Therefore, the periods of growth in TFP and poverty counts do not match exactly.

The indices on input, output, and TFP, and individual inputs were estimated from the TFP data collected for every year through the collaboration of the World Bank and Mubarik Ali.

Source: Ali and Byerlee (2004).

Annex to Chapter 7

Pakistan's Duty-Tax Drawback Schemes

In Pakistan, as in other countries, there are a number of schemes to put the exporters on a duty-tax free basis such that they compete on a level-playing field in international markets. These include: the Duty Drawback (DDB) mechanism which facilitates the rebate of customs duties collected on importe inputs; a program to refund the sales tax collected; and the Duty and Tax Remission for Exports (DTRE) scheme. This note discusses the most popular of these -- the DDB scheme, the refund of sales tax and DTRE.

Rebating customs and taxes collecting was quite important during the 1980s and 1990s. However, with falling tariff rates and consequent decline in DDB rates the importance of customs refunds in absolute terms and as a share of gross tax collection, exports and GDP has been falling continuously since FY02. The sales tax refunds have been increasing in absolute terms with the widening of the sales tax base in recent years. However, the sales tax refunds have started declining in relative terms after reaching a peak in 2003/04. With zero-rating of sales tax for major export groups in the FY06 Budget, the absolute amount of sales tax refunds and its relative share in terms of gross collections, exports and the GDP is expected to decline further.

Table 1: Refund/Rebates in Comparison to Key Macro economic Indicators (Million Rs)

	1995/96	2001/02	2002/03	2003/04	2004/05
Refund/rebates	30.7	79.3	81.0	87.1	99.8
o/w Customs	9.4	26.8	17.2	14.1	15.8
Sales Tax	17.0	36.0	43.9	52.1	54.9
Gross Tax Collection	298.8	483.3	541.7	608.0	690.9
o/w Customs	98.3	74.6	86	105.1	130.9
Sales Tax	66.9	202.5	239.1	271.4	294.9
Exports	294.7	560.9	652.3	709.0	855.2
GDP (market prices)	2120.2	4401.7	4822.8	5532.7	6547.6
	Percentages				
Customs Refunds % of Gross Collection	3.1	5.5	3.2	2.3	2.3
Sales Tax Refund % of Gross Tax Collection	5.7	7.4	8.1	8.6	7.9
Customs Refunds % of Exports	3.2	4.8	2.6	2.0	1.8
Sales Tax Refund % of Exports	5.8	6.4	6.7	7.3	6.4
Customs Refunds % of GDP	0.4	0.6	0.4	0.3	0.2
Sales Tax Refund % of GDP	0.8	0.8	0.9	0.9	0.8

Source: CBR

DDB scheme for refund of customs duty: The DDB scheme for customs duties paid on imported inputs used in the manufacture of exports comes under the Customs Act 1969 (under Section 21 (c)). The scheme is applicable on all duty paid imported inputs used for exports, with the exception of exports to Afghanistan and Central Asian Republics through the land route.[4] As Table 2 shows, the largest beneficiaries of this scheme have been the textile and leather sectors, which account for 70-75% of Pakistan's exports. There has been a sharp increase in the DDB payments for the "other" categories since 2002/03 primarily because of the increase in non-traditional exports in recent years. Overall export growth has averaged around 16% during FY03-05, but exports of non-traditional goods (lumped into "other" exports), has been increasing on average by 28% over this period, increasing their share in total exports from 17% to 27% (see Table 3).

[4] The reason for this exception was that exports to Afghanistan and CARs via the land route often ended up back in Pakistan and hence the government decided not to allow DDB to curb smuggling.

Table 2: Sectoral Distribution of Customs DDB Refund Payments (percent)

Items	2001/02	2002/03	2003/04	2004/05
Textiles	62.85	47.37	50.51	44.17
Leather	14.20	10.43	9.50	7.50
Sports goods	4.36	4.70	4.30	2.47
Surgical/cutlery goods	3.13	2.88	2.89	2.19
Plastic/rubber goods	0.97	0.62	0.74	1.40
Biscuits/confectionary	0.43	0.62	0.90	0.68
Carpets/handicrafts	6.20	2.50	0.32	0.19
Electric goods	0.04	0.14	0.23	0.14
Other goods	7.80	30.72	30.62	41.26
Total	100	100	100	100
Total (Rs Billion)	26.013	16.432	13.630	15.455

Source: CBR

Table 3: Distribution of Major Exports from Pakistan (percent)

Major Exports	2001/02	2002/03	2003/04	2004/05
Cotton group	59.4	63.3	62.3	57.3
Leather	6.8	6.2	5.4	5.4
Rice	4.9	5	5.2	5.9
Synthetic Textiles	4.5	5.1	3.8	2.2
Sports Goods	3.3	3.1	2.6	2.1
Others	21.1	17.4	20.7	27.1
Total Exports	100	100	100	100
Total Exports (fob in Million US$)	9140	10889	12395	14410

Source: Economic Survey

Duty drawback determination: Although the scheme has been in operation since the early 1970s, significant changes were made in Customs Rules of 2001 regarding fixation of the DDB rates. An Input-Output Coefficient Organization (IOCO) was established in 2001 under the Central Board of Revenue (CBR) which has worked out detailed input-output coefficients for major export categories such as textiles, leather, sports goods and carpets. These input-output coefficients have been calculated using industry surveys by sector experts. Agreements on input-output coefficients for specific products are reached after discussions with the relevant trade/industry associations. These new procedures have helped in rationalizing the duty-drawback rates and have considerably reduced the delays in processing of claims caused by disputes on the exporters' and the tax collectors' assessment of input-output ratios. The rates of DDB are fixed on the basis of actual duty paid on imported inputs; the only exception is polyester staple fiber (PSF), where rates are determined on the basis of deemed import of PSF.[5]

Customs DDB process. The DDB for customs duties is processed through the Customs Collectorate (Exports). The claim is filed once the exporter has received the bank notification of export proceeds. The claim consists of the: (i) Goods Declaration document; (ii) sale proceeds realization document; and (iii) worksheet with the exporter's calculation on inputs used in the exports based on the fob value of the exports. The Karachi collectorate, which processes about 400-500 DDB claims per day and accounts for 70-75% of refund payments, has set up a fairly efficient system of handling the DDB claims. The exporter's claim is: (i) stamped and put in the system within a day; (ii) it is passed on to four sub-sector groups to check the documentation and calculations and to check the value of exports; (iii) if the claim contains all the required documentation and the correct calculations, it is passed on to the accounts section which issues the refund check; and (iv) the refund check is sent to the exporter via courier service. According to the Karachi collectorate, it takes *about 7-10 days* for a claim to be processed and the check to be issued. The delays are generally because of time in getting the bank

[5] This is because of high import duties on PSF due to a sovereign guarantee to a multinational firm that produces this input.

notification regarding export proceeds, incorrect or incomplete documentation or inconsistencies between the I-O calculations used by the exporter and CBR.

Customs DDB performance. There has been a trend of falling DDB rates with reduction in customs tariffs as part of economic reforms in Pakistan. Table 4 gives the trends of how DDB rates have fallen during the 2000s for a few selected items. The duty draw-back rates have been reduced sharply in four key export categories: textiles, leather, sports and surgical goods in the FY06 Budget. In most of these categories the DDB rate would be around 1% or less of the fob value of exports, giving very low incentives for exporters to file refund claims. If there was an element of subsidy for exporters in the past with ambiguity over I-O coefficients and higher DDB rates, the implicit subsidy has been removed with the technical evaluation of I-O coefficients and the reduction in DDB rates over time.

Table 4: Evolution of DDB rates for selected inputs used in exports

	2001	2003	2005
Polyester Staple fiber used in bed-wear	4.00	2.23	0
Caustic Soda used in dyed fabrics (100% cotton)	0	0	0
Reactive dyes used in bleached cotton thread	4.00	2.20	1.13
Chemicals in finished leather	4.90	2.4	2.0

Source: CBR

Table 5 shows that over time the importance of the DDB on customs duty has been falling because of general decline in tariffs on imports and reduction in DDB rates. The ratio of DDB refunds to exports has been falling because of both falling numerator as well as increase in the denominator because of a sharp growth in exports in recent years (as seen in Table 3).

Table 5: Share of DDB claims vis-à-vis export value

Year	DDB share in rebateable export value (%)	DDB ratio in total export value (%)
2001/02	6.7	4.6
2002/03	3.2	2.5
2003/04	2.3	1.9
2004/05	2.1	1.8

Source: CBR

The general assessment by the Karachi-based exporters is that the custom duty refund system has improved significantly over time. The survey-based calculation of input-output coefficients (by the establishment of the IOCO) and the automation of the system of claim refunds has helped to reduce the time in getting refunds appreciably over the years. Moreover, the reduction in duty-drawback rates over time has also reduced incentives to use this system for getting refunds. However, the *businessmen* estimate that it *takes about 1-2 months* to get the proceeds from the time they file a claim to when they get the refund check. The CBR staff indicate that often the delay in payments is due to lack of proper paper work and documentation on part of the exporters. If exporters use private agents, who know the system well, it may take about 10-15 days to get the refund but this involves paying the agents' fee, and some speed money. The use of private agents for DDB refunds is largely done by larger exporters or export houses particularly related to sub-sectors of textile and leather where traditionally refund rates were high. The system has traditionally been less friendly toward the newer and smaller exporters or those who have opted to export in non-traditional export sectors, partly because they cannot spend the time and the resources (e.g. agents' fees, speed money) required to get refunds quickly. In the past there was also the tendency on part of CBR to withhold refund payments (both of DDB and Sales tax refunds) to meet the IMF targets for gross tax collection as part of the IMF Structural Adjustment program, but this is not an issue anymore.

Recommendations:

- The Government should continue with measures to provide easy-to-use information, rules and notifications related to DDBs and improve the administration of the system. In the FY06 Budget, the CBR has reduced the DDB notifications from 110 to only 4 standard notifications and has also clubbed 723 DDB rates into 465 rates. This measure is expected to help the smaller exporters who are less able to make through the maze of complicated DDB notifications. (Over the past year, administrative measures have been taken to reduce the number of overdue claims from 35,000-40,000 (in December 2004) worth approximately Rs 2 billion to around 3,500-4,000 pending claims (by early FY06) worth Rs 0.5 billion.
- It is important to introduce new mechanisms that may help speed up the processing of DDB claims. New approaches could be tried on a pilot basis and then introduced for full implementation. In this regard, it is worth trying CBR's new proposal aimed at refining the system further by proposing an on-line DDB system, which is likely to benefit a range of exporters. Under this new system the Goods Declaration (GD) document would be treated as the refund claim and there would be no need to file a separate refund claim as is the current practice. This will imply that the proof of sale proceeds will not be required in the future and there would be automatic calculation and appraisement of the exports at the time of shipping. CBR will merely check to ensure that the calculations are correct. As part of the on-line system, it is proposed that commercial banks would get on-line advice to issue checks for refund claims. The modalities of these proposals are being worked out. There is some resistance from commercial banks, because not all are fully automated or have systems that would be compatible for the on-line refund system to work. The current view is that State Bank of Pakistan would be sent the advice for refund claims and it would send it onward to the headquarters of the commercial banks for onward disbursement to exporters.

Sales tax refund. Under section 10 of the Sales Tax Act 1990, all taxpayers can adjust tax paid on inputs and claim refund if the input tax exceeds the output tax. Since exports are zero-rated, exporters can claim refund according to the u/s 4 of the Sales Tax Act. As expected, the major recipient of refund on sales tax is the textile sector.

The sales tax refunds are processed by the Sales Tax Collectorate. Monthly tax returns filed by exporters are treated as a refund claim if it includes all supportive documents, including invoices, bills of entry. The initial examination is carried out by an Auditor. The comprehensive refund report is sent to the Senior Auditor within 7 days of filing of the claim. The Senior Auditor/Superintendent forwards the report with recommendations to the Assistant Collector/Deputy Collector within 3 days. The refund is sanctioned if the claim is found to be genuine. With the computerization of the Sales Tax system in almost all the collectorates, the claim is now filed both manually and electronically in the Refund Claim Processing (RCP) form. The STARR system matches and checks invoices of other vendors that are mentioned in the claim and the refund application is processed. Exporters have been categorized into Gold, Silver and Other categories. Gold category exporters were expected to get their refunds processed within 72 hours, Silver category within 15 days and the Other category, only after scrutiny. A new system called STREAMS has further improved the processing of claims by improving the prioritization of refund claims and with built-in risk management checks. Tax payers are put in the Green, Yellow and Red channels. The Green channel tax payers are those with impeccable tax records, good manufacturing records, ISO and other certification, and are the lowest risk category prioritized for immediate refund.[6] The Yellow channel tax-payers are also those with good tax record and who are next in line for the refund claims, while for the Red channel tax-payers the refunds are processed only after detailed scrutiny.

[6] SRO 283/2005 lists the units that have been identified for STREAMS.

According to the Karachi collectorate, for the Gold category exporters, a refund claim is processed within 5-6 days, whereas it takes about 2 months for the Other category exporters. The system largely benefits about 300 of the larger tax payers who belong to the Gold and Silver categories and who, according to CBR estimates, claim around 70% of the sales tax refunds. It is less beneficial for the smaller and medium-sized taxpayers and exporters who find it difficult to comply with the automated system and its requirements, and who also have business relationships with the un-documented and un-registered vendors. The biggest issue currently is that refunds are delayed if an exporter has purchased inputs from non-registered vendors. Refund claims are blocked by the system and only these refunds claims are paid that relate to sales tax-registered vendors.

The FY06 Budget has made a dramatic move by zero-rating exports in five areas for sales tax. This means there would be no sales tax levied on finished goods and inputs used in manufacture of exports of textiles, leather, carpets, sports and surgical goods. This change has made a large range of chemicals, dyes, ginned cotton, tanning materials exempt from sales tax if these goods are used for exports. Domestic usage of goods produced in these sectors would have a 3% ad valorem tax including 1% income tax and 2% sales tax. CBR officials feel that this measure of zero-rating of major export categories from sales tax is going to reduce their work-load significantly and would enable them to concentrate on expanding the sales tax net to the unregistered sector. They feel that the 3% sales tax on domestic usage is a good incentive to enable registration of hitherto un-registered vendors.

Sales Tax refund performance. According to the exporters' evaluation, it usually takes at least 3-4 months for getting sales tax refunds. Although most exporters claim that the system has improved over time with automation, delays in refund payments are still reported which cause liquidity constraints to exporters. The recent initiative of the government to zero-rate sales tax for five major export categories is viewed very positively by businessmen who feel that the government has finally agreed to a long-standing demand of exporters. They hope that the new initiative is carried out in its true spirit of zero-rating indirect taxes for exports and that does not get distorted with removing items from the list of zero-rated items periodically.[7] The main demand from the businesses is zero-rating of utilities (e.g. electricity, gas, etc.) because of high utility tariffs in Pakistan compared to their export competitors. The CBR has already issued the list of 345 exporters of the Gold and Silver categories who would be exempted from sales tax (ST) on electricity used (SRO 621 2005) and a list of more companies is being compiled for exemption on ST on electricity. Moreover, another SOR is being put together listing companies that would be exempt from sales tax on gas.

Recommendations for the Government's consideration:

- Continue and improve the recent initiative for zero-rating of sales tax for exports by expanding the list of inputs of non-traditional exports as well. This is going to benefit the smaller and the newer exporters who had more difficulties in claiming ST refunds compared to the better-established and larger exporters who are qualified for Gold/Silver or Green/Yellow channels and get priority in claiming refunds. The current move to zero-rate exports for sales tax in five major sectors starting FY06 is expected to reduce about 80-90% of the export-related sales tax claims, thus reducing the burden on the sales tax refund system and reduce the volume of pending claims.

- Delays in processing refund claims due to wrong or incorrect documentation, particularly in electronic format, is a major reason for the delay in processing the refund claims of smaller and newer exporter. CBR has conducted a number of 2-3 day training sessions on electronic filing of RCP in various cities (e.g. Karachi, Lahore, Islamabad, Faisalabad, Multan). The trader/exporter

[7] For instance, one exporter mentioned the case of caustic soda which was initially zero-rated but shortly after the FY06 Budget the 15% sales tax was re-imposed. CBR said the caustic soda is an example of mistakes that can be made; initially it was zero-rated but it was found that 2 large units were producing this domestically and the zero-rating was withdrawn.

associations have been involved in these sessions and have been periodically provided support and training by CBR so that they can help their members. However, the issue of limited IT skills/capacity for correctly filing the electronic claims remains. It is recommended that CBR continue with IT training sessions and awareness-building in smaller towns and involving associations dealing with non-traditional exports.

- Expanding the list of registered sales tax payers would also help in easing the current problems facing the SMEs whose refund claims are blocked if the vendor is non-registered. The CBR has conducted campaigns for expanding the net of registered tax-payers. The problem of non-registered tax payers is partly due to high failure rate of small businesses, seasonal nature of a variety of export-related vendors, and a large unregulated private sector in Pakistan. The CBR has provided an incentive for expanding ST registration in the FY06 Budget by waiving off the earlier liabilities. The Universal Assessment Scheme also provides incentives for sales tax registration where there would be no audit for lump-sum payment. There is a need to continue with initiatives to document the economy, and provide incentives for the SMEs to become registered tax payers.

Duty and Tax Remission for Exports (DTRE). The DTRE scheme was first introduced in 2001 as *no-duty no-drawback scheme* to avoid the difficulties in getting refunds on customs and sales taxes. The initial response from exporters was lukewarm. The scheme was further modified in November 2002 and more changes were brought about after discussions with the various stakeholders and the revamped scheme was announced in the FY04 Budget. After detailed discussion with exporters, further revisions in the DTRE rules have been made and announced in the FY06 Budget. The scheme is applicable for both manufacturer-cum-exporters as well as commercial exporters.

The DTRE scheme allows both direct and indirect exporters to import inputs for exports without payment of any duties and other taxes. The manufacturer-cum-exporters can get the duty-free imports against an indemnity bond or post-dated check while the commercial exporters can get goods against an irrevocable bank guarantee. To apply for DTRE, the exporter have been required to provide a copy of an export order, description of the goods that would be supplied for exports with details of the quantity and value of inputs to be imported or purchased locally, as well as the I-O coefficients that would be used for the exports. In the FY06 revisions, the documentation requirement has been reduced further. Now the exporter has to file a form with basic information about his firm and line of business, goods that would be exported and imported, goods that are expected to be used using the DDB, and the I-O coefficients. Direct exporters who have had annual exports of US$100,000 or more can apply for DTRE approval showing export performance of the previous 2 years. They are allowed to import or procure locally inputs equivalent to the maximum export production requirements in any consecutive six month period in the previous 2 years.

There are a number of advantages in the DTRE scheme. Besides imported and locally produced inputs, it also allows adjustment of sales tax on electricity and gas consumption in proportion of the usage for export purposes. The scheme allowed duty drawback on locally manufactured PSF on deemed import basis without any limits, which is very attractive for the textile industry and allows them to either import or procure PSF locally.[8] There are a number of flexibilities built into the scheme, such as: allowing the movement of duty-free and tax free inputs between DTRE-approved exporters; the exporters can acquire all or part of their goods from anywhere in Pakistan as long as the vendors/agents are sales tax registered; sale of admissible wastage is allowed after payment of sales tax; exporters can be part of DTRE and the DDB schemes simultaneously; an exporter can only opt for DTRE for sales tax alone and be entitled for DDB on duty-paid basis; and at the DTRE approval stage an exporter can include the existing stocks of raw materials for DTRE. The inputs under DTRE scheme have to be utilized in production and export within 18 months (extendable to a maximum of two years) of the procurement, otherwise a penalty of 2%

[8] In the revised FY06 rules, PTA, raw sugar and cooking/vegetable oil and their raw materials are not allowed for DTRE.

of the value of un-utilized inputs is imposed. There are options for an exporter to dispose of the un-utilized inputs in the local market on payment of a surcharge and the liable duties and taxes. The exporters have to file a reconciliation statement on the expiry of the utilization period specifying the quantities of inputs used in the production of exports, the quantity of exports, the I-O ratios relating to each export consignment, the quantity of good not used in the production and the duties and taxes leviable on un-utilized goods. A post-export audit is carried on within a year of filing of the reconciliation statement. A Duty Suspension Audit Organization (DSAO) was set up to audit DTRE exporters.

Despite the various incentives, the DTRE scheme has not taken off in a big way compared to the DDB scheme in Pakistan. During 2001-2005, DTRE approvals have been granted to only 1712 exporters, compared to thousands of DDB claimants. One of the major flaws mentioned earlier has been the documentation required by the scheme and also the time it takes to get DTRE notification. CBR had instructed its staff to give DTRE status within 15 days of application, but it normally has taken between 15-45 days to get approval. Because Customs staff has been responsible for approvals, but they have lacked ready access to information on the registered units and therefore have not had all the relevant information for the verification of documents submitted. In the recent revisions, the Sales Tax Collectorate will issue the approvals and since they have a good data-base of information on the sales-tax registered units in Pakistan, DTRE approvals are expected to be issued within a week.

Exporters said that DTRE required showing an export contract or an export purchase order and fairly firm assessment of export quantities and input requirements, which was difficult to assess at the beginning of the year because of the sudden changes in export orders that Pakistani exporters often face. Although the DTRE scheme did not allow for substitution of export orders and also listing of approximate description and quantities and values of inputs, exporters indicated that in practice these changes led to problems at the post-audit stage. Initially, the post audit mechanism which was set up (DSAO) lacked the audit capacity, thus resulting in lengthy disputes. This was subsequently changed and the Sales tax Collectorate now does the post-export audit. The DTRE scheme suffered because of an alternative scheme that allowed temporary imports for re-exports in a bonded warehouse (according to SRO 410). This scheme has been popular because it did not require a post-audit and has been renewed every 6 months since 2001. Again, it was the larger export houses that could deal with the paper-work and other technical requirement of the DTRE scheme and hence this scheme failed to become popular with small and medium sized exporters.

Recommendations:

- The revised DTRE rules have incorporated changes to address a number of problems faced by exporters in the old DTRE scheme. The new DTRE rules allow DDB on locally-produced goods that are often purchased by exporters in emergency situations. The changes also include refunds on inputs of services used in exports, surcharges that were imposed on the use of imported inputs not used within 1 year has been amended to 18 months, etc. This process of continuous improvement in the DTRE rules to facilitate exporters has been quite healthy and should continue.

The government should take stock of a number of alternative schemes (e.g., SRO 410) and streamline or eliminate them to avoid duplication.

- CBR should raise awareness about the revised DTRE rules among exporters so that they are better understood and better utilized.

REFERENCES

REFERENCES

Aksoy, M. Ataman and John Beghin (ed) (2005). "Global Agricultural Trade and Developing Countries". World Bank. Washington, D.C.

Ali, M. and D. Byerlee. 2000. "Productivity Growth and Resource Degradation in Pakistan's Punjab: A Decomposition Analysis", Policy Research Working Paper No. 2480, World Bank.

Ali, M. and D. Byerlee. 2002. "Productivity Growth and Resource Degradation in Pakistan's Punjab: A Decomposition Analysis", Policy Research Working Paper No. 2480, World Bank.

Ali, M. and U. Farooq. 2004. "Dietary Diversity and Rural Labor Productivity: Evidence From Pakistan", Paper presented in the AAEA Annual Meeting Held in Denver, July 30-August 2, 2004.

Ali, Shujat. 2005. "Total Factor Productivity Growth in Pakistan's Agriculture: 1960-1996". Paper presented at The 20th Annual General Meeting and Conference of the Pakistan Society of Development Economists. Islamabad: Pakistan Institute of Development Economics

Arellano, Manuel, and Olympia Bover. 1995. "Another Look at the Instrumental-Variable Estimation of Error-Components Models." *Journal of Econometrics* 68(1): 29-51.

Arellano, Manuel, and Stephen Bond. 1991. "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations." *Review of Economic Studies* 58(2): 277-97.

Ayyagari, Demirgüç-Kunt and Maksimovic, "How Important Are Financing Constraints?" The Role of Finance in the Business Environment, (Forthcoming)

Barro, Robert J., and Jong-Wha Lee. 1994. "Sources of Economic Growth." *Carnegie-Rochester Series on Public Policy* 40: 1-57.

Bastos and Nasir, *Productivity and the Investment Climate: What Matters Most?* 2004. World Bank Policy Research Working paper 3335.

Baysan, T., A. Panagariya, and N. Pitigala (2004), "*Preferential Trading in South Asia*", (mimeo; World Bank, South Asia Region).

Bolaky, Bineswaree, and Caroline Freund (2004), "Trade, Regulations, and Growth", World Bank, *Policy Research Paper*, No. 3255.

Caprio, Gerard, and Daniela Klingebiel. 1999. "Episodes of Systemic and Borderline Financial Crises." Washington: World Bank. Processed.

Cato, James and S. Subasinge (2004). "An Overview of the Bangladesh Shrimp Industry With Emphasis on the Safety and Quality of Exported Products". World Bank, Washington, D.C.

Chan and Gemayel, "Macroeconomic Instability and the Pattern of FDI in the MENA Region", Mimeo.

Chang, Roberto, N. Loayza, and L. Kaltani (2005), "Openness Can be Good for Growth: The Role of Policy Complementarities", World Bank, *Policy Research Paper*, No.3763.

D. Lal and R.H.Snape (eds.) *Trade, Development and Political Economy: Essays* in Honor of A.O. Krueger (New York: Palgrave).

Damania, Richard. 2005. "Water and Agricultural Productivity in Sindh". DRAFT. Mimeo.

Dollar, D. and A. Kraay (2004). "Trade, Growth, and Poverty", *Economic Journal* (2004); Dollar, D. and A. Kraay (2002).

Dollar, David, M. Hallward-Driemeier, and T. Mengistae (2005), "Investment Climate and Firm Performance in Developing Economies", in *Economic Development and Cultural Change*, Vol. 54, No.1, pp. 1-31 (October), University of Chicago Press.

Easterly, William, and Ross Levine. 2001. "It's Not Factor Accumulation: Stylized Facts and Growth Models." *World Bank Economic Review* 15(2): 177-220.

Easterly, William, Norman Loayza, and Peter Montiel. 1997. "Has Latin America's Post-Reform Growth Been Disappointing?" *Journal of International Economics* 43(3-4):387-311.

Government of Pakistan, " Towards a Prosperous Pakistan: A Strategy for Rapid Industrial Growth". March 2005.

Gramlich, E.M. (2004) "Budget and Trade Deficits: Linked, Both Worrisome in the Long Run, but Not Twins", speech delivered at the Euromoney Bond Investors Congress, February 2005.

Guisinger, S. and G. Scully (1991), "Liberalizing Foreign Trade: The Experience of Pakistan", in World Bank (1991), *Liberalizing Foreign Trade: The Experience of Indonesia, Pakistan, and Sri Lanka*, eds. Papageorgiou, D., Michaely, M., and Choksi, A., Volume 5 (Basil Blackwell).

Government of Pakistan. 2005. Pakistan Economic Survey 2004-05. Islamabad.

Harberger, A. (1988). "Reflections on Uniform Taxation", Paper Presented at the 44th Congress of the International Institute of Public Finance, Istanbul (August, 1988), University of Chicago and University of California, Los Angeles.

Henson, Spencer and Winnie Mitullah (2004). "Kenyan Exports of Nile Perch: Impact of Food Safety Standards on an Export-Oriented Supply Chain". DEC Working Paper, World Bank, Washington, D.C.

Henson, Spencer, Mohammed Saqib, and D. Rajasenan (2005). "Impact of Sanitary Measures on Exports of Fishery Products from India: The Case of Kerala". *Agriculture and Rural Development Department Discussion Paper*, World Bank, Washington, D.C.

Hussain, Initizar, R. Sakthivadivel, Upali Amarasinghe, Muhammad Mudasser and David Molden. 2003. "Land and Water Productivity of Wheat in the Western Indo-Gangetic Plains of India and Pakistan: A Comparative Analysis". Research Report 65. Colombo, Sri Lanka: International Water Management Institute (IWMI).

ISEG Occasional Papers, 1993. "Does Macroeconomic Policy Matter? Evidence form Developing Countries", and "The Role of Macroeconomic Factors in Growth", *Journal of Monetary Economics*, 32(3), pp.485-512.

Ismihan, Metin-Ozcan and Tansel, A. "Macroeconomic Instability, Capital Accumulation and Growth: The Case of Turkey 1963-1999", ERC Working Papers in Economics, November 2002;

Jaffee, Steven and Spencer Henson (2004). "Standards and Agro-Food Exports from Developing Countries: Rebalancing the Debate". DEC Working Paper, World Bank, Washington, D.C.

Khan, Ashfaque (1999). "*The Experience of Trade Liberalization in Pakistan*", Pakistan Society of Development Economists, Fourteenth Annual General Meeting, Jan. 31, 1999.

Khan, Saldar Ullah (2005). "Determinants of Total Factor Productivity in Pakistan." Working paper (draft), State Bank of Pakistan.

Kaufmann, D., A Kraay, and M. Mastruzzi (2005). "Governance Matters IV: Governance Indicators for 1996-2004", World Bank Policy Research Paper 3630 (June).

Loayza, Norman, Pablo Fajnzylber and César Calderón. 2005. "Economic Growth in Latin America and the Caribbean: Stylized Facts, Explanations, and Forecasts" Washington: World Bank.

Logistic Consulting Group. *Pakistan: Logistics Cost Study* (May 1996).

Michaely, M., D. Papageorgiou, and A. Choksi (1991). "Growth is Good for the Poor", *Journal of Economic Growth*;

Murgai, Rinku, Mubarik Ali and Derek Byerlee. 2001. "Productivity Growth and Sustainability in Post-Green Revolution Agriculture: The Case of the Indian and Pakistan Punjabs". The World Bank Research Observer; Fall 2001. 16(2):199-218.

Parsons, David, Saeed Akthar, Mike Dillon, Peter Davison, and Syed Pirzada (forthcoming) "Pakistan's Agrobased Exports and International SPS Compliance". Paper submitted to World Bank.

Rodriguez, F. and Rodrik, D. (2000). "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence", NBER Macroeconomics Annual (Cambridge, MA; MIT Press).

Srinivasan. T.N. and J. Bhagwati (2001). "Outward Orientation and Development: Are Revisionists Right?"

The World Bank (2004). *Aide-Memoire: Study on the Auto Industry in Pakistan: Trade Policies and Performance*" (a memo submitted to the Government).

The World Bank (2004). *Trade Policies in South Asia: an Overview,* (in three volumes), Rep. No. 299949; World Bank (2004).

The World Bank (2004). "Study on the Auto Industry in Pakistan: Trade Policies and Performance", Aide Memoire, March 2004 mission.

The World Bank (2005), *Global Economic Prospects: Trade, Regionalism, and Development*; World Bank (2000), *Trade Blocks*.

The World Bank (2005). "*The External Environment for Developing Countries*", July mimeo. (Development Economics, Prospects Group).

The World Bank (2005). *Food Safety and Agricultural Health Standards: Challenges and Opportunities for Developing Country Exports.* Poverty Reduction and Economic Management Trade Unit and Agriculture and Rural Development Department. Washington, D.C.

The World Bank, *Economic Growth in the 1990s: Learning from a Decade of Reform*, 2005.

The World Bank. 2004. *Pakistan Rural Factor Markets: Policy Reforms for Growth and Equity.* Report No. 30381-PK. November 19. Washington, D.C.: World Bank.

Trade Policies in South Asia: An Overview op. cit., and "*Tariff Rationalization Study*", op. cit.

Winters, L. Alan, N. McCulloch, and A. McKay (2004). "Trade Liberalization and Poverty: The Evidence So Far", *Journal of Economic Literature*, Vol, XLII (March).

STATISTICAL APPENDIX

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Section A

Table A1: Pakistan Macroeconomic Indicators

Description	Ave 1980s	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05
Growth Rates (%)	Based on the old GDP Series (Real Figures are in Terms of 1980-81 Prices)									Re-based (1999-00) GDP Series					
GDP Growth	6.1	7.3	2.1	4.3	4.9	6.4	1.7	3.4	4.1	3.8	1.8	3.1	4.8	6.4	8.4
GDP Growth Per Capita	3.2	4.7	-0.5	1.8	2.5	4.0	-0.7	1.1	1.9	1.6	-0.4	0.9	4.2	4.3	6.1
Per Capita GDP (US$) 1/	404.8	509.8	526.1	517.3	589.9	601.4	579.1	563.7	517.0	525.5	500.2	492.3	562.8	642.9	723.8
Saving & Investment (% of GDP)															
Gross Domestic Saving	11.5	14.7	13.4	15.2	13.8	12.0	11.6	14.0	11.4	14.4	14.0	16.0	16.5	14.6	10.0
Gross National Saving	18.8	17.9	14.7	16.4	15.2	12.9	13.1	15.4	12.5	15.7	15.6	19.0	22.0	19.3	15.4
Private Investment	11.2	14.2	15.9	15.1	14.3	14.2	14.6	14.4	12.4	14.9	15.0	13.9	14.2	14.4	13.8
Public Investment	9.3	6.0	4.7	4.3	4.2	4.6	3.2	3.3	3.1	2.5	2.2	2.9	2.7	2.9	3.1
Consolidated Govt. Budget (% of GDP)															
Total Revenue	15.3	16.0	15.0	14.3	13.7	14.5	13.4	13.1	13.8	14.4	14.3	16.1	17.4	14.9	14.9
Total Expenditure	21.6	22.2	21.7	20.3	19.7	21.2	19.1	19.5	18.1	18.7	17.6	19.7	18.8	16.7	17.1
Overall Budget Balance	6.3	6.2	6.7	6.0	6.0	6.7	5.8	6.4	4.3	4.3	4.3	5.5	3.8	2.4	3.0
Balance of Payments (% of GDP)															
Exports	8.1	11.5	10.9	10.7	10.6	10.8	10.7	11.2	10.7	11.2	12.5	12.7	13.2	12.9	12.8
Imports	14.5	15.3	16.1	13.8	14.0	15.7	14.9	13.7	13.6	13.1	14.3	13.1	13.7	14.1	16.7
Services & Income (net)	-0.4	-4.3	-5.0	-4.2	-3.5	-4.6	-4.8	-4.3	-3.7	-3.7	-4.4	-3.6	-2.6	-3.7	-5.0
Current Transfers	7.2	5.8	4.3	4.3	3.7	3.4	4.3	4.6	3.6	4.0	4.6	6.3	8.2	6.9	7.5
Current Account Balance (including transfers)	0.3	-2.3	-5.9	-3.0	-3.3	-6.0	-4.7	-2.3	-3.0	-1.6	-1.6	2.2	5.1	2.0	-1.4
External Indicators															
External Debt (US$ b.)		24.9	24.5	27.4	30.2	29.8	30.1	32.3	33.9	32.8	31.7	33.7	36.3	33.3	34.0
Ext. Debt as % of GDP		42.3	39.4	43.6	41.2	38.9	39.8	42.8	48.0	44.6	44.4	46.9	44.0	34.6	30.8
BB Gross Reserves (US$ b.) (end of period)		NA	NA	NA	2741	2053	1141	940	1680	908	1679	4330	9521	10674	10472
BB Gross Reserves (in months of imports)		NA	NA	NA	9.4	7.4	4.6	4.2	7.4	3.8	7.5	16.0	27.1	7.3	4.7
External Debt Service Ratio (% of Export Earning)		246.2	248.6	254.3	249.6	248.9	254.2	307.0	333.5	289.8	260.5	211.3	192.0	-	-
Exchange Rate															
Nominal Period Average (PRs/US$) 2/		24.8	26.0	30.2	30.9	33.6	39.0	43.2	46.8	51.8	58.4	61.4	58.5	57.6	59.4
Nominal End of Period (PRs/US$) 3/		25.7	30.1	30.7	34.2	40.0	43.9	45.9	51.8	53.6	61.9	59.7	57.8	58.3	60.1
Real Effective (1995=100)		113.4	111.8	111.4	108.9	108.2	106.1	109.3	104.8	98.8	100.0	93.1	96.7	92.6	94.4
Rate of Inflation (%) (year on year)	7.0	10.6	9.8	11.3	13.0	10.8	11.8	7.8	5.7	3.6	4.4	3.5	3.1	4.6	9.3
Total Public Debt (% of GDP)	NA	131.3	132.4	138.3	127.5	126.1	91.4	96.4	107.3	106.2	103.1	96.9	86.9	--	--
Memorandum Items															
GDP at Current. Prices (Rs bill.)		1453	1607	1882	2249	2556	2927	3228	3542	3793	4163	4402	4823	5533	6548
Population (mill.) end June		115.5	118.5	121.5	124.5	127.5	130.6	133.6	136.6	139.8	142.9	146.8	149.7	152.5	154.0
Population growth Rate		2.6	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.2	2.7	2.0	1.9	0.9

Source: MOF, Economic Survey of Pakistan; Federal bureau of Statistics; World Bank, World Development Indicators.

1/ WB estimates based on National account and Population data.

Note: National Accounts (NA) data from 1999-00 are based on the re-based ne NA series. Therefoe the data covering the pre-1999-00 period are not directly comparable.

In the new NA series, GDP levels are about 25-33 percent higher due to the inclusion of new activities (such as cellular phone services) and improved accounting of the existing economic accitivities. Accordingly, some indicators expressed in percentages of GDP will not be comparable between the two cited periods. The officials of of FBS have indicated that the differences in the real GDP growth rates are not significant between the two series.

2/ Economic Survey 2004-05, MoF

3/ International Financial Statistics, IMF

Section B

Table B1: No of Establishments in Selected Small Scale Industries

PSIC Code	Description	1996-97 Number of Establishments	1996-97 As % of Total Establishments of Small Scale Industries	1999-00 Number of Establishments	1999-00 As % of Total Establishments of Small Scale Indutries
3	All Industries	427,784		8,438,344	
31	Food, Beverages and Tobacco	87,542	20.5	150,806	1.8
311-2	Food Manufacturing	76,966	18.0		
31162	Wheat/Grain Milling	58,779	13.7		
314	Tobacco Industry	10,196	2.4		
32	Textile and Leather	144,041	33.7		
320-1	Textile Manufacturings	110,602	25.9	219,606	2.6
32012	Cotton Weave/Finish	10,863	2.5		
32120	Made-up Textiles	41,635	9.7		
32142	Woollen Carpets	26,369	6.2		
32150	Cordage,Rope,Twine	10,491	2.5		
324	Footwear Manufacture	24,035	5.6		
32410	Leather Footwear	22,479	5.3	50,415	0.6
33	Wood and Wood Products	49,461	11.6	51,354	0.6
331	Wood and Cork Products	24,279	5.7		
33110	Saw and Planning Mills	12,491	2.9		
332	Furniture and Fixture	25,179	5.9	195,423	2.3
33210	Wooden Furniture	24,082	5.6		
36	Mineral Products	16,252	3.8		
	Basic Metals			3,239	0.0
38	Metal Products etc	44,462	10.4	53,014	0.6
380-1	Copper/Brass Utensils	27,857	6.5		
38050	Structural Products	12,064	2.8		
39	Other Industries and Handicrafts	75,544	17.7		
391	Handicrafts	11,602	2.7		
392	Sports and Athletics Goods	34,622	8.1		
393-4	Other Manufacturing Industries	29,321	6.9		
39310	Jewellery/Precious Material	24,149	5.6		

Source: Survey of Small and Household Manufacturing Industries 1996-97 (Summary Report) March 2000, FBS and Study on Small Scale and Household Manufacturing and Industries in Pakistan, January 2002, FBS.

Note: Classification for small and household industrial manufacturing industries: less than 10 persons engaged in an establishment.

Table B2: Number of Reporting Establishments in Manufacturing

Description	1987/88	As % of total Establishments in Manufacturing	1988/89	As % of total Establishments in Manufacturing	1990/91	As % of total Establishments in Manufacturing	1995/96	As % of total Establishments in Manufacturing
All Industries	4,753		4,820		4,792		4,474	
Food Manufacturing	822	17.3	860	17.8	858	17.9	931	20.8
Manufacture of Textile	1,045	22.0	1,105	22.9	1,135	23.7	1,068	23.9
Ginning, Pressing and Baling of fibre	302	6.4	305	6.3	343	7.2	299	6.7
Iron and Steel Basic Industries	218	4.6	217	4.5	187	3.9	136	3.0
Manufacture of Fabricated Metal Products (except machinery & equipment)	260	5.5	234	4.9	211	4.4	171	3.8
Manufacture of Machinery (except electrical)	367	7.7	348	7.2	259	5.4	193	4.3
Manufacture of Electrical Machinery	191	4.0	207	4.3	220	4.6	183	4.1

Source: Pakistan Statistical Year Book 2004, FBS.

Table B3: Quantum Index Number of Large Scale Manufacturing Industries (1980-81=100)

Year	Overall Manufacturing	Growth rate %	Vegetable products	Growth rate %	Tea blended	Growth rate %	Cigarettes	Growth rate %	Cotton yarn	Growth rate %	Cotton Cloth	Growth rate %	Jute Goods	Growth rate %	Paper & Board	Growth rate %	Fertilizers	Growth rate %	Cement	Growth rate %	Automobiles
Weights			**3.004**		**1.785**		**2.505**		**8.850**		**4.881**		**0.932**		**1.359**		**0.430**		**1.846**		**2.103**
1993-94	237.2		130.9		138.4		100.0		349.3		102.3		154.9		373.1		261.6		230.9		245.0
1994-95	240.8	1.5	137.6	5.1	128.4	-7.2	91.2	-8.8	374.1	7.1	104.5	2.2	138.8	-10.4	432.1	15.8	258.0	-1.4	238.9	3.5	289.7
1995-96	248.4	3.2	141.8	3.1	128.6	0.2	126.8	39.0	398.7	6.6	106.2	1.6	142.4	2.6	427.2	-1.1	282.5	9.5	270.3	13.1	377.7
1996-97	243.1	-2.1	138.2	-2.5	131.4	2.2	128.4	1.3	405.6	1.7	108.3	2.0	136.8	-3.9	488.1	14.3	278.6	-1.4	269.4	-0.3	371.2
1997-98	261.6	7.6	139.2	0.7	132.4	0.8	134.3	4.6	408.7	0.8	110.5	2.0	189.8	38.7	485.6	-0.5	273.5	-1.8	264.5	-1.8	368.9
1998-99	270.9	3.6	149.5	7.4	128.4	-3.0	143.7	7.0	410.8	0.5	124.9	13.0	170.0	-10.4	507.5	4.5	291.8	6.7	272.2	2.9	441.4
1999-00	270.9	0.0	135.1	-9.6	119.0	-7.3	130.9	-8.9	445.4	8.4	142.0	13.7	170.0	0.0	612.1	20.6	324.5	11.2	263.1	-3.3	413.3
2000-01	296.4	9.4	161.6	19.6	100.4	-15.6	162.3	24.0	459.0	3.1	159.2	12.1	177.7	4.5	748.0	22.2	356.9	10.0	273.3	3.9	465.1
2001-02	311	4.9	154.3	-4.5	118.6	18.1	154.1	-5.1	482.4	5.1	184.6	16.0	162.4	-8.6	771.5	3.1	355.4	-0.4	280.6	2.7	455.5
2002-03	327.5	5.3	143.9	-6.7	124.7	5.1	137.5	-10.8	512.1	6.2	187.7	1.7	189.8	16.9	527.2	-31.7	365.2	2.8	311.3	10.9	660.4

Source: Pakistan Statistical Year Book 2004, FBS.

Section C

Table C1: Pakistan Balance of Payments

(US$ million)

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Trade Balance	**-1411**	**-1268**	**-292**	**-444**	**-1212**	**-4332**
Exports f.o.b.	8191	8934	9140	10889	12395	14094
Imports c.i.f.	-9602	-10202	-9432	-11333	-13607	-18426
Service (net)	**-776**	**-983**	**-298**	**83**	**-1379**	**-1774**
Receipt	1385	1350	1916	2797	2728	2843
Payments[3]	-2161	-2333	-2214	-2714	-4107	-4617
Income (net)	**-1932**	**-2160**	**-2319**	**-2210**	**-2207**	**-2266**
Receipt	116	113	111	170	186	255
Payments	-2048	-2273	-2430	-2380	-2393	-2521
Current Transfers	**2923**	**3299**	**4500**	**6775**	**6684**	**8278**
Official[4]	926	839	1495	1038	574	422
Private	1997	2460	3005	5737	6110	7856
Of which, Workers' Remittances	983	1086	2390	4237	3871	4035
Current Account Balance	**-1195**	**-1112**	**1591**	**4204**	**1886**	**-94**
Capital Account	**-2770**	**-1626**	**-5598**	**-7388**	**-4166**	**-1245**
Financial Account	**-4218**	**-2690**	**-4493**	**-2233**	**-3344**	**-480**
Direct Investment	471	285	366	585	710	702
Portfolio Investment	-588	-142	-491	-394	156	593
Other long term official capital	-679	-600	-923	-1099	-2260	-406
LT loans	1311	1463	613	601	434	792
LT amortization payments	1990	2063	1537	1700	2694	1198
Other long term loans (net)	-270	-237	-652	-568	-192	-303
Other short term loans (net)	-3152	-1996	-2793	-757	-1758	-1066
Reserves (inc. FE25 deposits held by	**-72**	**-1003**	**-3276**	**-5679**	**-1077**	**-801**
Errors and Omissions	**1521**	**2067**	**2171**	**524**	**255**	**36**
FCA with Banks and non-banks institutions	454	629	927	524	255	36
SBP purchases in kerb market	1067	1438	1244	0	0	0
OVERALL BALANCE	**-3965**	**-2738**	**-4007**	**-3185**	**-2280**	**-1339**
EXCEPTIONAL FINANCING	**3965**	**2738**	**4007**	**3185**	**2278**	**1885**
Accumulation of Arrears	463	-461	0	0	0	0
of which Military	45	-45	0	0	0	0
Debt Relief Public Debt and Publicly Guaranteed	988	627	1210	909	0	0
of which Military	122	56	82	122	0	0
Repayment of Arrears	-120	-64	0	0	0	0
of which Military	-49	-56	0	0	0	0
Relief of Arrears of Paris Club (March to Nov. 2000)	0	960	0	0	0	0
Rollover FE-45 (December 2000)	1872	1676	1314	900	1200	0
Debt Relief from Commercial Banks	152	0	0	0	0	0
PSI	610	0	0	100	100	100
Additional Financing from IFIs	0	0	1367	1090	779	1682
World Bank	0	0	698	213	90	894
ADB	0	0	185	408	444	533
IMF	0	0	484	469	245	255
Privatization receipts	0	0	117	186	199	103
Moratorium interest rescheduled (memo)	0	0	240	150	150	150
Privatization receipts	0	0	117	186	199	103

Source: IMF latest figures.

Table C2: Exports over US$ 10 million in Million US$

	Commodities	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05
A	**Cotton and Textile Manufactures**	**5,975.4**	**5,557.7**	**5,624.7**	**4,954.9**	**5,641.4**	**5,911.2**	**5,820.5**	**7,297.0**	**8,137.3**	**8,679.9**
	Raw Cotton	*506.8*	30.7	126.1	2.3	72.6	139.3	24.7	49.0	47.8	111.3
	Textile Manufactures	*5,468.6*	*5,527.0*	*5,498.6*	*4,952.6*	*5,568.8*	*5,771.9*	*5,795.8*	*7,248.0*	*8,089.6*	*8568.6*
	Cotton yarn	1,540.3	1,411.6	1,159.4	945.2	1,071.6	1,073.5	929.7	928.4	1,141.2	1088.4
	Cotton Fabrics	1,275.8	1,262.4	1,250.1	1,115.2	1,096.2	1,032.5	1,130.8	1,345.7	1,711.8	1994.1
	Synthetic Textiles	457.1	512.2	617.9	398.7	457.6	544.6	410.0	574.3	467.7	300.7
	Hosiery (knitwear)	703.4	688.9	696.6	742.2	886.7	911.4	845.9	1,146.7	1,471.4	1626.0
	Bedwear	422.2	456.3	508.7	611.0	709.9	744.9	918.6	1,329.1	1,388.4	1407.9
	Towels	174.1	194.1	200.0	177.7	195.6	241.7	267.7	374.8	412.0	501.9
	Ready Made Garments	648.5	736.4	746.4	651.2	771.7	826.8	875.0	1,092.6	1,003.5	1108.6
	Others	247.2	265.1	319.5	311.4	379.5	396.5	418.1	456.4	493.6	541.0
B	**Major Food Items**	**710.4**	**698.1**	**883.0**	**991.3**	**811.2**	**778.9**	**779.2**	**949.2**	**959.2**	**1219.4**
	Rice	504.0	468.6	562.4	533.6	539.7	525.5	448.2	555.5	627.2	933.2
	Fish and fish preparations	140.7	149.1	171.6	122.6	138.9	137.8	125.6	134.5	156.3	129.0
	Fruits	44.1	70.7	64.3	55.5	79.9	78.7	83.1	83.2	103.5	90.1
	Vegetables	10.4	9.7	19.3	48.1	43.3	36.9	29.1	31.5	24.2	20.2
	Sugar	11.2	0.0	65.4	231.5	9.4	--	1.3	7.7	--	--
	Oil Seeds & Nuts etc	--	--	--	--	--	--	20.5	7.2	11.4	21.9
	Wheat	--	--	--	--	--	--	71.4	129.6	6.0	--
	Tobacco	--	--	--	--	--	--	--	--	11.4	10.5
	Spices	--	--	--	--	--	--	--	--	19.1	14.4
C	**Leather and Manufactures**	**590.3**	**603.6**	**551.2**	**511.6**	**513.9**	**658.4**	**623.1**	**621.3**	**646.0**	**787.4**
	Leather	259.2	239.6	207.8	177.3	175.2	232.9	239.9	234.8	242.9	296.3
	Leather Manufactures	331.1	364.0	343.4	334.3	338.7	425.5	383.2	386.5	403.1	491.1
D	**Other Major Exports**	**1,406.4**	**1,433.4**	**1,544.4**	**1,300.9**	**1,583.0**	**1,833.9**	**1,175.4**	**1,339.7**	**1,376.4**	**1838.5**
	Sports goods	247.5	308.8	383.5	256.2	279.2	270.6	304.5	335.2	309.5	315.0
	Carpets and Carpeting Rugs	209.3	199.1	200.1	202.6	264.3	288.7	249.6	220.9	220.3	282.8
	Surgical and Medical Instruments	126.7	125.8	125.3	111.6	120.1	124.1	145.0	150.0	124.0	172.2
	Petroleum and Petroleum Products	66.2	81.6	35.6	47.4	81.9	183.9	190.7	248.6	284.1	427.2
	Chemicals and Pharmaceuticals	59.2	48.3	55.8	49.3	100.0	156.9	152.8	260.9	263.2	381.9
	Cutlery	19.0	19.9	17.6	18.0	22.9	26.4	24.5	29.6	28.4	30.9
	Onyx	8.6	11.8	10.9	5.9	10.0	12.0	10.0	11.7	11.6	8.3
	Molasses	70.7	51.0	59.1	39.4	42.5	41.3	68.7	45.5	47.6	71.8
	Others	599.2	587.1	656.5	570.5	662.1	730.0	29.6	37.3	87.6	148.4
E	**Engineering Goods**	--	--	--	--	--	--	--	--	96.4	160.1
F	**Others**	--	--	--	--	--	--	720.6	936.3	1,058.2	1725.1
	Total Exports (custom basis) 1/	**8,682.5**	**8,292.8**	**8,603.3**	**7,758.7**	**8,549.5**	**9,182.4**	**9,118.8**	**11,143.5**	**12,273.5**	**14410.4**

1/ Export(custom basis) differ from exports (fob) by adjustment in freight and valuation.

Source: Various issues of the annual reports of the SBP

Table C3: Pakistan Exports of Textile Yarn and Thread by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Bangladesh	6.6	10.0	0.9	52.1	13.6	1.2	36.0	19.7	1.7	44.5	21.5	2.0	9.3	19.4	2.1	-9.8
Canada	29.8	25.8	2.4	-13.3	26.3	2.4	1.8	18.5	1.6	-29.5	14.2	1.3	-23.2	11.2	1.2	-21.1
China Republic of	77.2	65.3	6.1	-15.3	49.9	4.6	-23.6	92.7	7.9	85.8	92.0	8.4	-0.7	88.8	9.6	-3.5
Hongkong	378.6	300.4	28.1	-20.7	281.9	25.7	-6.2	340.1	28.8	20.7	341.5	31.2	0.4	290.0	31.4	-15.1
Japan	259.8	170.8	16.0	-34.3	150.6	13.8	-11.8	109.7	9.3	-27.2	79.2	7.2	-27.8	49.5	5.4	-37.5
Korea South Republic of	100.6	103.7	9.7	3.1	155.6	14.2	50.1	171.1	14.5	9.9	173.9	15.9	1.6	128.2	13.9	-26.2
Others N.E.S	92.6	63.0	5.9	-31.9	52.9	4.8	-16.1	40.4	3.4	-23.5	39.9	3.6	-1.3	37.4	4.1	-6.1
Portugal	72.6	66.8	6.2	-8.0	60.7	5.5	-9.2	50.6	4.3	-16.5	44.6	4.1	-12.0	31.9	3.5	-28.4
U.S.A	63.0	61.2	5.7	-2.8	94.5	8.6	54.4	32.4	2.7	-65.7	88.8	8.1	174.1	75.8	8.2	-14.7
Others	282.4	203.7	19.0	-27.9	208.8	19.1	2.5	304.0	25.8	45.6	198.7	18.2	-34.6	191.9	20.8	-3.4
Total	**1,363.1**	**1,070.7**	**100.0**	**-21.5**	**1,094.7100.0**		**2.2**	**1,179.3**	**100.0**	**52,486.5**	**1,094.4**	**100.0**	**-97.9**	**924.3**	**100.0**	**-1,044.0**
As % of total exports	***15.8***	***13.8***			***12.8***			***12.8***			***12.0***			***8.6***		

Source: Various issues of Export Receipts, SBP.

Table 4: Pakistan Exports of Cotton Fabrics Woven by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Bangladesh	53.7	41.4	2.6	-22.9	39.9	2.7	-3.7	44.7	2.9	12.0	38.7	2.4	-13.3	33.8	1.9	-12.8
Belgium	96.4	73.6	4.6	-23.7	63.1	4.2	-14.3	61.7	4.0	-2.2	59.5	3.7	-3.6	48.8	2.8	-17.9
Canada	40.7	38.6	2.4	-5.0	45.0	3.0	16.4	40.0	2.6	-11.0	26.7	1.7	-33.4	31.6	1.8	18.5
Chile	23.8	25.1	1.6	5.5	18.0	1.2	-28.2	21.0	1.4	16.6	16.5	1.0	-21.8	20.9	1.2	27.0
China Peoples Republic of	10.1	20.6	1.3	105.1	27.3	1.8	32.2	32.4	2.1	18.7	27.2	1.7	-16.0	30.6	1.7	12.6
Egypt	23.3	20.4	1.3	-12.4	17.4	1.2	-14.8	21.3	1.4	22.3	18.9	1.2	-11.3	21.4	1.2	13.3
Germany	41.0	32.6	2.1	-20.5	39.1	2.6	20.0	37.3	2.4	-4.7	33.1	2.1	-11.3	54.9	3.1	66.2
Greece	26.6	23.3	1.5	-12.6	21.5	1.4	-7.6	21.6	1.4	0.6	22.4	1.4	3.5	26.2	1.5	16.9
Hongkong	218.1	231.6	14.6	6.2	212.2	14.1	-8.4	161.6	10.5	-23.8	132.0	8.3	-18.3	149.3	8.5	13.1
Italy (including Vatican City	71.4	53.8	3.4	-24.6	45.6	3.0	-15.4	54.0	3.5	18.5	61.2	3.9	13.4	63.5	3.6	3.6
Korea South Republic of	24.2	24.6	1.6	1.8	36.8	2.4	49.4	33.1	2.1	-10.1	24.0	1.5	-27.4	17.7	1.0	-26.2
Saudi Arabia	32.2	22.0	1.4	-31.7	13.1	0.9	-40.6	19.7	1.3	50.3	20.4	1.3	3.9	31.0	1.8	51.8
South Africa	20.6	13.6	0.9	-34.0	17.9	1.2	31.7	20.8	1.3	16.4	22.8	1.4	9.5	25.0	1.4	9.7
Turkey	18.9	16.6	1.0	-12.1	13.7	0.9	-17.6	33.2	2.2	142.2	46.0	2.9	38.4	49.1	2.8	6.8
U.S.A	283.5	259.9	16.4	-8.3	283.7	18.9	9.2	289.6	18.8	2.0	357.3	22.5	23.4	442.3	25.1	23.8
U.A.E Dubai	64.5	67.7	4.3	5.0	72.4	4.8	6.9	75.7	4.9	4.5	104.6	6.6	38.2	120.1	6.8	14.8
U.K	165.0	134.1	8.5	-18.7	111.7	7.4	-16.7	115.7	7.5	3.5	109.6	6.9	-5.2	106.8	6.1	-2.6
Others	535.3	486.5	30.7	-9.1	424.6	28.3	-12.7	461.0	29.9	8.6	466.8	29.4	1.2	490.9	27.8	5.2
Total	**1,749.4**	**1,586.2**	**100.0**	**-9.3**	**1,502.9100.0**		**-5.2**	**1,544.2**	**100.0**	**2.7**	**1,587.6**	**100.0**	**2.8**	**1,763.8**	**100.0**	**11.1**
As % of total exports	***20.3***	***20.4***			***17.5***			***16.8***			***17.4***			***16.4***		

Source: Various issues of Export Receipts, SBP.

Table 5: Pakistan Exports of Clothing Textile Fabrics by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Canada	18.0	18.6	2.6	3.7	22.9	3.2	22.7	29.7	3.9	29.7	24.3	3.1	-18.0	22.5	2.8	-7.3
France	43.5	41.7	5.9	-4.0	43.5	6.2	4.2	36.1	4.7	-17.1	34.0	4.4	-5.8	37.6	4.6	10.6
Germany	97.2	93.6	13.2	-3.7	91.8	13.0	-1.9	100.4	13.1	9.4	100.9	13.0	0.5	95.1	11.7	-5.7
Netherlands (Holland)	26.1	25.9	3.6	-0.7	25.3	3.6	-2.3	28.2	3.7	11.5	28.5	3.7	0.9	32.6	4.0	14.3
Saudia Arabia	12.0	10.6	1.5	-11.5	10.4	1.5	-1.8	24.4	3.2	133.8	36.3	4.7	49.0	31.6	3.9	-13.1
U.S.A	297.6	287.6	40.5	-3.3	341.9	48.5	18.9	352.4	45.9	3.1	272.2	35.0	-22.8	286.2	35.2	5.1
U.A.E Dubai	31.4	28.1	4.0	-10.5	16.2	2.3	-42.3	24.3	3.2	50.1	61.3	7.9	151.9	73.9	9.1	20.6
U.K	38.4	45.9	6.5	19.5	54.0	7.7	17.6	55.3	7.2	2.5	81.7	10.5	47.7	91.8	11.3	12.3
Others	128.7	158.4	22.3	23.0	99.3	14.1	-37.3	117.1	15.2	17.9	138.3	17.8	18.1	142.1	17.5	2.8
Total	**692.9**	**710.5**	**100.0**	**2.6**	**705.3**	**100.0**	**-0.7**	**767.9**	**100.0**	**8.9**	**777.5**	**100.0**	**1.3**	**813.4**	**100.0**	**4.6**
As % of total exports	***8.0***	***9.1***			***8.2***			***8.3***			***8.5***			***7.6***		

Table 6: Clothing Knit or Crocheted by Destination

	FY98			FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Belgium	5.6	4.8	2.1	-14.5	4.7	1.6	-1.3	8.6	2.0	83.3	14.7	3.2	70.4	13.6	2.4	-7.9
Germany	18.2	23.7	10.3	30.5	24.2	8.2	1.7	28.8	6.7	19.1	18.8	4.1	-34.5	29.1	5.2	54.2
U.S.A	99.9	124.8	54.1	24.8	185.7	62.8	48.8	285.8	66.0	53.9	294.1	64.0	2.9	327.6	58.8	11.4
U.K	29.5	26.9	11.7	-9.0	30.9	10.4	14.8	38.4	8.9	24.4	40.8	8.9	6.2	50.2	9.0	23.1
Others	51.3	50.5	21.9	-1.7	50.3	17.0	-0.4	71.1	16.4	41.5	91.0	19.8	27.9	136.7	24.5	50.3
Total	**204.6**	**230.6**	**100.0**	**12.7**	**295.7**	**100.0**	**28.2**	**432.7**	**100.0**	**46.3**	**459.4**	**100.0**	**6.2**	**557.1**	**100.0**	**21.3**
As % of total exports	***2.4***	***3.0***			***3.5***			***4.7***			***5.0***			***5.2***		

Source: Various issues of Export Receipts, SBP.

Table 7: Fabrics Knitted or Crocheted by Destination

	FY98			FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Bangladesh	1.6	0.7	1.6	-57.3	0.4	1.0	-44.7	1.1	2.6	194.9	0.1	0.2	-88.8	0.2	0.2	27.6
China Peoples Republic of	0.1	1.5	3.5	920.9	0.3	0.8	-78.7	0.6	1.3	79.6	0.1	0.2	-85.2	0.1	0.1	-8.4
Germany	0.9	1.2	2.8	24.4	1.9	5.0	66.4	0.9	2.1	-55.7	0.3	0.6	-60.2	3.7	5.8	978.1
Hong Kong	1.6	3.0	7.3	85.2	1.0	2.5	-67.8	2.9	6.9	197.7	0.3	0.6	-89.7	1.0	1.5	218.2
Saudi Arabia	0.7	0.8	1.9	9.3	1.7	4.3	104.3	2.4	5.7	44.8	1.1	2.1	-53.2	1.1	1.8	0.0
U.S.A	15.1	15.7	37.8	4.0	17.5	45.3	11.4	12.3	29.4	-29.6	9.5	17.9	-22.7	18.3	28.7	92.3
U.A.E Dubai	4.8	3.6	8.7	-25.1	2.8	7.2	-22.5	6.5	15.5	132.0	18.4	34.6	184.2	7.0	11.0	-61.8
Others	18.6	15.1	36.4	-18.4	13.1	33.8	-13.7	15.3	36.4	16.8	23.3	43.8	53.0	32.6	50.9	39.7
Total	**43.5**	**41.6**	**100.0**	**-4.4**	**38.6**	**100.0**	**-7.1**	**41.9**	**100.0**	**8.4**	**53.3**	**100.0**	**27.2**	**64.0**	**100.0**	**20.1**
As % of total exports	***0.5***	***0.5***			***0.5***			***0.5***			***0.6***			***0.6***		

Source: Various issues of Export Receipts, SBP.

Table 8: Clothing Made of Rubber & Fur by Destination

	FY98			FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
France	21.3	24.9	7.5	17.2	28.8	9.0	15.5	42.5	10.7	47.4	36.2	9.3	-14.7	27.7	7.6	-23.4
Germany	67.0	66.2	19.8	-1.3	58.1	18.2	-12.2	66.5	16.8	14.4	48.5	12.4	-27.0	46.6	12.8	-3.8
Netherlands (Holland)	19.6	17.5	5.2	-10.8	16.9	5.3	-3.5	21.5	5.4	27.4	19.4	5.0	-9.6	13.2	3.6	-32.3
U.S.A	62.1	59.3	17.8	-4.4	71.8	22.5	20.9	97.0	24.4	35.1	87.2	22.4	-10.0	92.9	25.5	6.5
U.A.E Dubai	13.4	12.3	3.7	-8.6	6.9	2.2	-43.7	8.1	2.0	16.9	22.3	5.7	175.8	25.6	7.0	14.9
U.K	49.3	41.9	12.6	-15.0	38.4	12.0	-8.3	49.0	12.4	27.7	41.3	10.6	-15.7	34.9	9.6	-15.5
Others	123.9	111.4	33.4	-10.0	97.8	30.7	-12.2	112.2	28.3	14.7	135.1	34.6	20.4	123.8	33.9	-8.3
Total	**356.6**	**333.5**	**100.0**	**-6.5**	**318.7**	**100.0**	**-4.5**	**396.6**	**100.0**	**24.5**	**390.0**	**100.0**	**-1.7**	**364.8**	**100.0**	**-6.5**
As % of total exports	***4.1***	***4.3***			***3.7***			***4.3***			***4.3***			***3.4***		

Source: Various issues of Export Receipts, SBP.

Table 9: Pakistan Exports of Articles of Textile Materials NES by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Australia	22.0	26.1	2.4	18.7	33.1	2.8	26.9	45.7	3.4	37.7	41.7	2.4	-8.6	45.3	2.2	8.6
Belgium	24.3	31.5	2.9	29.5	31.8	2.6	1.0	26.0	1.9	-18.2	32.4	1.9	24.6	30.6	1.5	-5.5
Canada	20.1	25.3	2.3	25.6	30.9	2.6	22.4	32.2	2.4	4.0	42.1	2.5	30.9	46.9	2.3	11.4
France	50.3	67.9	6.2	35.0	78.2	6.5	15.1	67.5	5.0	-13.6	66.2	3.9	-2.1	87.3	4.3	31.9
Germany	89.9	103.2	9.4	14.8	94.8	7.9	-8.1	80.9	6.0	-14.7	85.8	5.0	6.1	115.6	5.7	34.7
Hongkong	13.1	15.1	1.4	15.3	11.6	1.0	-23.3	9.1	0.7	-21.5	24.0	1.4	163.2	40.2	2.0	67.8
Italy (including Vatican City	28.2	32.8	3.0	16.4	28.4	2.4	-13.5	30.9	2.3	9.1	34.9	2.0	12.8	41.2	2.0	18.1
Netherlands (Holland)	57.5	67.5	6.1	17.6	51.4	4.3	-23.9	49.7	3.7	-3.4	50.9	3.0	2.5	68.0	3.3	33.7
Singapore	3.8	2.9	0.3	-25.3	5.2	0.4	80.8	12.8	0.9	146.9	17.6	1.0	37.8	13.0	0.6	-26.2
U.S.A	320.6	397.8	36.1	24.1	464.1	38.6	16.7	536.1	39.6	15.5	616.6	35.9	15.0	631.8	31.1	2.5
U.A.E Dubai	23.5	28.1	2.5	19.5	30.6	2.5	9.1	76.8	5.7	150.6	182.7	10.6	138.0	262.5	12.9	43.7
U.K	93.7	100.8	9.1	7.6	122.4	10.2	21.5	125.7	9.3	2.7	175.8	10.2	39.9	217.2	10.7	23.6
Others	216.3	203.3	18.4	-6.0	220.8	18.4	8.6	261.2	19.3	18.3	344.8	20.1	32.0	434.4	21.4	26.0
Toal	**963.2**	**1,102.2**	**100.0**	**14.4**	**1,203.4**	**100.0**	**9.2**	**1,354.5**	**100.0**	**12.6**	**1,715.4**	**100.0**	**26.6**	**2,033.9**	**100.0**	**18.6**
As % of total exports	***11.2***	***14.2***			***14.0***			***14.7***			***18.8***			***18.9***		

Source: Various issues of Export Receipts, SBP.

Table 10: Fish Fresh Chilled or Frozen by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
China Peoples Republic of	9.3	5.9	18.7	-36.3	11.3	22.7	90.0	7.6	15.6	-32.2	5.7	11.7	-25.6	15.2	22.5	167.4
Japan	6.7	4.3	13.4	-35.9	6.0	12.1	40.8	6.8	13.8	12.9	6.2	12.7	-8.7	6.6	9.8	6.4
Malaysia	0.2	0.7	2.2	227.2	1.9	3.8	161.3	2.8	5.7	49.4	4.5	9.3	62.0	5.2	7.7	15.0
U.S.A	1.9	0.8	2.4	-59.1	3.0	6.0	288.0	1.7	3.4	-43.2	0.8	1.7	-51.4	1.4	2.1	75.9
U.K	4.3	1.9	6.0	-56.1	3.6	7.2	90.3	4.2	8.6	17.3	2.2	4.6	-47.4	2.3	3.5	5.7
Others	26.2	18.2	57.3	-30.7	23.9	48.2	31.7	26.0	52.9	8.6	29.2	60.1	12.4	36.8	54.5	25.9
Total	**48.6**	**31.7**	**100.0**	**-34.7**	**49.6**	**100.0**	**56.4**	**49.1**	**100.0**	**-1.1**	**48.6**	**100.0**	**-0.9**	**67.5**	**100.0**	**38.9**
As % of total exports	***0.6***	***0.4***			***0.58***			***0.5***			***0.5***			***0.6***		

Source: Various issues of Export Receipts, SBP.

Table 11: Fish dried or smoked by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Hong Kong	0.4	0.7	4.8	94.4	0.8	5.1	12.3	0.3	2.5	-57.2	0.3	2.1	-16.6	0.3	3.2	14.1
Japan	0.7	0.8	5.9	15.8	1.3	8.6	54.5	0.7	5.7	-43.3	1.1	8.6	49.7	0.7	6.7	-40.1
Sri Lanka	11.4	10.5	74.0	-8.7	9.2	61.3	-11.5	9.9	76.7	7.4	9.6	74.8	-3.6	7.4	75.6	-22.7
U.K	1.1	0.5	3.9	-48.0	0.3	2.2	-40.4	0.2	1.6	-37.1	0.1	0.5	-68.6	0.0	0.0	-93.8
Others	0.8	1.6	11.4	109.5	3.4	22.9	113.7	1.7	13.5	-49.3	1.8	14.0	2.8	1.4	14.4	-21.5
Total	**14.3**	**14.1**	**100.0**	**-1.5**	**15.1**	**100.0**	**6.7**	**12.9**	**100.0**	**-14.2**	**12.8**	**100.0**	**-1.0**	**9.8**	**100.0**	**-23.6**
As % of total exports	***0.2***	***0.2***			***0.2***			***0.1***			***0.14***			***0.1***		

Source: Various issues of Export Receipts, SBP.

Table 12: Crabs, Lobsters, Shrimps by Destination

	FY98				FY99			FY00			FY01			FY02		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Japan	13.2	12.3	16.7	-6.6	12.1	18.4	-1.9	10.9	15.5	-9.5	7.5	13.1	-31.0	7.6	16.6	0.5
Netherlans (Holland)	20.6	11.2	15.2	-45.5	4.5	6.9	-59.7	12.4	17.6	175.7	8.9	15.5	-28.5	2.1	4.6	-76.6
U.S.A	7.2	11.0	14.9	52.4	10.3	15.6	-6.4	8.3	11.8	-18.6	10.3	17.9	23.6	4.0	8.7	-61.6
U.K	27.6	17.1	23.2	-38.3	18.8	28.7	10.4	16.8	23.8	-10.7	13.8	24.0	-17.9	8.6	18.9	-37.4
Others	33.5	22.0	29.9	-34.4	19.9	30.3	-9.5	22.0	31.2	10.7	16.9	29.4	-23.3	23.4	51.3	38.7
Total	**102.1**	**73.5**	**100.0**	**-28.0**	**65.6**	**100.0**	**-10.8**	**70.6**	**100.0**	**7.6**	**57.5**	**100.0**	**-18.6**	**45.7**	**100.0**	**-20.5**
As % of total exports	***1.2***	***0.9***			***0.8***			***0.8***			***0.6***			***0.4***		

Source: Various issues of Export Receipts, SBP.

Table 13: Fish Repd or Predvd Nes by Destination

	FY98				FY99			FY00			FY01			FY02		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Hong Kong	2.4	2.4	41.4	-0.5	2.3	38.3	-2.2	3.7	58.2	60.0	1.8	43.4	-51.6	2.4	22.7	32.9
Japan	2.7	1.4	24.7	-47.9	1.0	16.1	-31.2	0.4	6.4	-57.9	0.5	13.1	32.0	1.6	14.8	188.0
U.S.A	0.2	0.3	5.2	81.2	0.0	0.0	-100.0	0.3	4.3	0.0	0.3	6.8	3.9	0.4	4.0	46.8
Others	2.6	1.7	28.8	-35.5	2.8	45.6	67.4	2.0	31.1	-28.2	1.5	36.7	-23.1	6.2	58.5	303.1
Total	**7.9**	**5.8**	**100.0**	**-26.7**	**6.1**	**100.0**	**5.6**	**6.4**	**100.0**	**5.3**	**4.2**	**100.0**	**-35.0**	**10.6**	**100.0**	**153.4**
As % of total exports	***0.1***	***0.1***			***0.1***			***0.1***			***0.0***			***0.1***		

Source: Various issues of Export Receipts, SBP.

Table 14: Veg etc Fresh & Simply Prsvd by Destination

	FY98				FY99			FY00			FY01			FY02		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
India	0.0	1.1	3.1	21878.6	1.1	3.7	5.9	6.3	25.3	458.0	4.4	16.5	-29.6	23.4	38.4	428.2
Japan	0.0	0.0	0.1	0.0	0.0	0.2	31.6	0.7	2.6	1254.5	0.6	2.4	-2.5	0.6	1.0	0.0
Saudi Arabia	0.2	0.3	0.9	28.7	0.6	1.8	88.1	0.6	2.3	1.3	2.8	10.4	395.3	2.0	3.3	-29.2
Sri Lanka	10.3	23.4	67.7	125.8	15.0	48.6	-35.9	8.8	35.7	-40.9	6.6	24.5	-25.6	4.8	7.8	-27.6
U.A.E Dubai	1.7	4.3	12.5	160.5	3.8	12.3	-12.3	3.5	14.0	-8.5	3.3	12.2	-5.6	7.3	12.0	123.2
Others	5.4	5.4	15.8	1.0	10.3	33.5	89.8	5.0	20.1	-51.6	9.1	34.1	83.0	22.9	37.5	149.8
Total	**17.6**	**34.5**	**100.0**	**95.8**	**30.8**	**100.0**	**-10.7**	**24.8**	**100.0**	**-19.5**	**26.9**	**100.0**	**8.3**	**60.9**	**100.0**	**126.7**
As % of total exports	***0.2***	***0.4***			***0.36***			***0.3***			***0.3***			***0.6***		

Source: Various issues of Export Receipts, SBP.

Table 15: Veg Prsvd or Prepd Nes by Destination

	FY98		FY99			FY00			FY01			FY02			FY03	
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
France	1.1	1.5	47.4	39.5	1.3	33.5	-12.9	0.7	22.0	-45.3	0.7	24.2	-7.4	1.0	18.4	44.4
Switzerland	0.8	0.6	19.1	-20.1	1.2	28.9	86.6	1.0	30.1	-13.2	0.8	29.2	-18.4	0.8	15.3	0.0
U.K	0.0	0.2	6.1	684.7	0.3	7.8	58.5	0.6	18.3	96.3	0.4	14.1	-35.4	0.6	12.2	64.2
Others	0.7	0.9	27.4	21.2	1.2	29.9	34.5	1.0	29.6	-17.6	0.9	32.4	-8.2	2.9	54.1	218.4
Total	**2.6**	**3.2**	**100.0**	**23.0**	**4.0**	**100.0**	**23.4**	**3.3**	**100.0**	**-16.8**	**2.8**	**100.0**	**-16.1**	**5.3**	**100.0**	**90.6**
As % of total exports	***0.03***	***0.04***			***0.05***			***0.04***			***0.03***			***0.0***		

Source: Various issues of Export Receipts, SBP.

Table 16: Fruits/Nuts Fresh or Dried by Destination

	FY98		FY99			FY00			FY01			FY02			FY03	
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
India	21.8	19.0	29.2	-13.0	19.4	24.9	2.6	22.7	30.9	16.6	26.7	29.9	17.8	22.4	30.8	-16.0
Indonesia	1.5	1.9	2.9	28.3	4.6	5.9	139.3	7.2	9.9	58.3	7.9	8.8	9.0	5.3	7.3	-33.1
Phillipines	0.2	2.0	3.1	771.3	2.8	3.6	41.1	2.4	3.2	-15.0	3.2	3.6	34.8	1.6	2.2	-49.0
Saudi Arabia	7.0	6.5	10.0	-7.8	7.8	9.9	20.1	5.1	7.0	-34.0	8.6	9.6	67.0	8.2	11.2	-4.6
U.S.A	5.2	4.9	7.6	-5.4	3.4	4.3	-32.2	2.3	3.1	-31.1	2.2	2.5	-2.8	1.7	2.3	-25.2
U.K	6.4	4.8	7.4	-24.6	8.2	10.4	70.3	7.2	9.7	-12.3	10.0	11.2	40.2	7.9	10.8	-21.6
Others	31.5	25.8	39.8	-18.1	32.1	41.0	24.3	26.5	36.1	-17.2	30.7	34.3	15.6	25.7	35.3	-16.3
Total	**73.6**	**64.9**	**100.0**	**-11.9**	**78.2**	**100.0**	**20.5**	**73.4**	**100.0**	**-6.1**	**89.3**	**100.0**	**21.6**	**72.7**	**100.0**	**-18.6**
As % of total exports	***0.9***	***0.83***			***0.9***			***0.8***			***1.0***			***0.7***		

Source: Various issues of Export Receipts, SBP.

Table 17: Pakistan Exports of Leather by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
France	13.6	14.2	6.6	4.4	12.1	6.1	-15.1	13.4	5.4	11.2	15.1	5.2	12.6	11.9	4.1	-21.2
Germany	27.2	29.5	13.6	8.6	27.8	13.9	-5.9	24.8	9.9	-10.5	26.5	9.1	6.5	26.5	9.0	0.0
Hongkong	41.0	32.8	15.1	-20.1	30.1	15.1	-8.0	33.1	13.2	9.6	33.7	11.5	1.9	45.1	15.3	33.8
Italy (Including Vatican City	32.8	27.1	12.5	-17.6	23.9	12.0	-11.5	34.6	13.9	44.7	36.6	12.5	5.7	33.3	11.3	-9.2
Korea South (Republic of)	13.9	17.6	8.1	27.4	26.9	13.5	52.5	34.4	13.8	27.7	39.3	13.5	14.4	37.9	12.9	-3.5
Spain	15.6	11.0	5.0	-29.9	7.2	3.6	-34.1	10.5	4.2	46.1	12.2	4.2	16.1	12.7	4.3	3.5
U.S.A	13.7	20.9	9.6	52.3	10.6	5.3	-49.1	9.1	3.6	-14.7	7.5	2.6	-16.9	13.8	4.7	83.0
U.K	3.9	4.8	2.2	23.5	4.0	2.0	-18.1	5.3	2.1	34.8	9.0	3.1	68.4	12.4	4.2	38.1
Others	69.8	59.2	27.3	-15.2	57.1	28.6	-3.6	84.5	33.8	48.1	111.7	38.3	32.3	100.1	34.1	-10.4
Total	**231.6**	**217.1**	**100.0**	**-6.2**	**199.7**	**100.0**	**-8.0**	**249.8**	**100.0**	**25.1**	**291.7**	**100.0**	**16.8**	**293.6**	**100.0**	**0.7**
As % of total exports	***2.7***	***2.8***			***2.3***			***2.7***			***3.2***			***2.7***		

Source: Various issues of Export Receipts, SBP.

Table 18: Manufacturers of Leather by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
France	13.9	15.2	10.5	9.2	15.4	11.0	1.5	14.9	10.5	-3.3	13.2	8.9	-11.3	11.8	8.6	-10.7
Germany	21.5	21.8	15.1	1.2	18.2	13.0	-16.5	15.1	10.6	-16.8	13.6	9.1	-10.0	16.4	12.0	20.4
Italy (Including Vatican City	9.5	8.1	5.6	-14.6	7.6	5.5	-5.7	7.4	5.2	-2.9	8.5	5.7	15.1	5.4	4.0	-36.5
Netherlands (Holland)	4.9	6.1	4.2	25.2	4.2	3.0	-30.9	3.1	2.2	-27.1	3.5	2.4	14.7	3.3	2.4	-5.8
Spain	4.6	5.6	3.9	20.0	6.2	4.4	11.2	6.7	4.8	9.1	9.6	6.5	42.5	8.9	6.5	-7.3
U.S.A	28.6	31.1	21.5	8.6	28.3	20.3	-9.0	31.2	22.0	10.5	29.9	20.1	-4.2	24.9	18.2	-16.6
U.K	20.7	17.2	11.9	-16.8	18.2	13.0	5.7	13.2	9.3	-27.3	14.5	9.7	9.6	14.5	10.6	0.4
Others	44.5	39.5	27.3	-11.3	41.3	29.7	4.7	50.3	35.4	21.7	56.1	37.6	11.4	51.4	37.6	-8.3
Total	**148.2**	**144.5**	**100.0**	**-2.5**	**139.4**	**100.0**	**-3.5**	**142.0**	**100.0**	**1.9**	**148.9**	**100.0**	**4.9**	**136.7**	**100.0**	**-8.2**
As % of total exports	***1.7***	***1.9***			***1.6***			***1.5***			***1.6***			***1.3***		

Source: Various issues of Export Receipts, SBP.

Table 19: Toys Games and Sporting Goods by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Germany	46.9	29.3	13.5	-37.6	27.4	12.5	-6.5	24.3	10.7	-17.1	26.8	10.0	10.3	32.7	10.5	22.1
HongKong	5.7	8.1	3.7	42.9	6.2	2.8	-23.7	4.3	1.9	-47.5	9.3	3.5	117.0	4.7	1.5	-48.8
Italy (including Vatican City	10.2	9.4	4.3	-8.3	9.4	4.3	0.3	8.7	3.8	-7.1	11.3	4.2	30.3	12.8	4.1	13.1
Netherlands (Holland)	14.3	12.6	5.8	-12.4	17.1	7.8	36.2	17.4	7.7	38.6	14.0	5.2	-19.3	19.4	6.2	37.9
Spain	14.7	10.1	4.7	-31.0	10.0	4.6	-1.2	9.0	4.0	-10.9	10.0	3.7	10.4	13.8	4.4	38.4
U.S.A	38.6	31.7	14.6	-17.7	37.8	17.2	19.1	37.5	16.6	18.2	38.2	14.3	1.9	44.1	14.1	15.3
U.A.E Dubai	5.8	5.6	2.6	-2.9	6.6	3.0	16.8	17.1	7.6	203.5	25.3	9.4	47.6	26.2	8.4	3.7
U.K	19.0	20.1	9.3	5.7	18.7	8.5	-6.8	18.7	8.2	-7.2	22.8	8.5	22.1	25.2	8.1	10.5
Others	122.2	90.2	41.5	-26.2	86.7	39.4	-3.9	89.5	39.5	-0.7	110.5	41.2	23.4	133.4	42.7	20.8
Total	**277.4**	**217.2**	**100.0**	**-21.7**	**219.9**	**100.0**	**1.2**	**226.5**	**100.0**	**4.3**	**268.1**	**100.0**	**18.4**	**312.3**	**100.0**	**16.5**
As % of total exports	***3.2***	***2.8***			***2.6***			***2.5***			***2.9***			***2.9***		

Source: Various issues of Export Receipts, SBP.

Table 20: Medical Insturments by Destination

	FY98	FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Australia	1.8	1.7	1.3	-4.2	2.0	1.5	19.7	1.8	1.3	-9.9	2.0	1.2	7.8	2.2	1.3	9.0
Germany	18.0	19.5	15.3	8.1	19.5	14.3	-0.1	18.5	12.9	-4.8	19.6	11.8	5.6	21.2	12.7	8.2
Italy (including Vatican City	5.2	5.2	4.0	-0.1	7.1	5.2	37.4	6.3	4.4	-10.6	7.6	4.6	19.8	7.3	4.4	-3.7
Japan	3.4	4.0	3.2	18.5	5.5	4.1	37.1	4.0	2.8	-28.0	4.2	2.5	5.4	4.6	2.7	8.9
Korea South Republic of	1.6	1.5	1.2	-7.5	2.5	1.8	65.0	3.1	2.1	24.0	3.6	2.2	17.8	3.6	2.2	0.0
Mexico	2.4	2.3	1.8	-6.2	3.1	2.3	37.2	3.6	2.5	16.6	4.3	2.6	20.0	4.0	2.4	-9.1
Netherlands (Holland)	2.0	1.8	1.4	-9.6	2.0	1.5	13.4	2.0	1.4	1.4	2.9	1.7	40.3	3.2	1.9	10.9
Spain	1.7	1.9	1.5	12.0	2.2	1.6	16.0	2.3	1.6	5.2	2.3	1.4	-1.2	2.9	1.7	26.6
U.S.A	56.1	52.1	40.9	-7.1	46.5	34.2	-10.7	51.8	36.1	11.4	55.4	33.6	7.0	54.8	32.9	-1.1
U.K	7.0	7.5	5.9	7.6	11.5	8.5	53.0	12.6	8.8	9.5	20.9	12.7	66.3	12.5	7.5	-40.2
Others	32.4	30.0	23.6	-7.4	34.1	25.1	13.7	37.4	26.0	9.4	42.3	25.6	13.2	50.7	30.4	19.9
Total	**131.5**	**127.4**	**100.0**	**-3.1**	**136.1**	**100.0**	**6.8**	**143.5**	**100.0**	**5.5**	**165.1**	**100.0**	**15.1**	**166.9**	**100.0**	**1.1**
As % of total exports	***1.5***	***1.6***			***1.6***			***1.6***			***1.8***			***1.6***		

Source: Various issues of Export Receipts, SBP.

Table 21: Medical & Pharma Products by Destination

	FY98				FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
Austria	0	0.2	0.4	100.0	0.0	0.0	-100.0	1.9	3.9	--	2.4	5.1	22.3	0.3	0.6	-88.9			
China Peoples Republic of	0.1	0.3	0.7	185.9	0.6	1.1	108.4	4.7	9.5	719.4	1.2	2.5	-75.4	0.2	0.3	-87.0			
Nigeria	7.9	11.3	26.6	41.7	15.2	28.7	35.5	11.1	22.3	-27.1	10.6	23.0	-4.8	12.8	27.5	20.7			
Phillipines	0.3	1.0	2.4	206.7	1.9	3.5	83.4	1.9	3.7	0.4	1.2	2.5	-37.8	2.2	4.7	88.8			
Singapore	0.9	0.9	2.2	4.6	2.1	4.0	129.4	1.6	3.1	-25.8	2.2	4.8	40.5	2.7	5.7	21.1			
South Africa	0.4	0.4	1.0	-3.6	2.3	4.3	468.1	3.0	6.1	32.4	2.5	5.4	-17.9	2.3	5.0	-5.9			
Sri Lanka	3.9	4.0	9.4	1.6	5.0	9.5	26.8	4.1	8.1	-19.5	4.4	9.5	7.5	4.9	10.6	13.3			
U.S.A	1.8	3.0	7.1	65.4	2.9	5.4	-4.2	2.8	5.5	-3.4	2.4	5.3	-12.3	1.6	3.5	-32.6			
U.K	0.5	1.4	3.3	195.4	1.3	2.5	-4.4	0.8	1.5	-42.1	1.9	4.2	152.5	1.4	3.0	-27.6			
Others	16.9	19.9	47.0	18.0	21.8	41.0	9.5	18.1	36.3	-16.9	17.3	37.6	-4.3	18.1	38.9	4.3			
Total	**32.7**	**42.3**	**100.0**	**29.3**	**53.1**	**100.0**	**25.6**	**50.0**	**100.0**	**-5.9**	**46.0**	**100.0**	**-7.9**	**46.4**	**100.0**	**0.9**			
As % of total exports	***0.4***	***0.5***			***0.6***			***0.5***			***0.5***			***0.4***					

Source: Various issues of Export Receipts, SBP.

Table 22: Pakistan Exports of Cutlery by Destination

	FY98				FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
France	2.2	2.4	14.1	7.7	1.8	11.2	-24.8	1.3	6.5	-29.2	2.3	8.5	79.2	1.9	9.2	-14.5			
Italy (including Vatican City	0.1	0.1	0.7	-9.2	0.1	0.7	-9.5	0.1	0.3	-46.4	0.2	0.6	159.3	0.4	1.7	135.7			
Saudi Arabia	1.0	0.6	3.7	-35.3	0.9	5.7	44.9	0.5	2.4	-47.8	1.3	4.8	169.6	1.0	4.9	-18.5			
U.S.A	9.4	10.1	60.4	7.9	9.7	61.1	-4.3	14.2	73.6	46.2	19.1	72.5	35.0	13.1	62.2	-31.7			
Others	3.8	3.5	21.0	-6.2	3.4	21.3	-4.3	3.3	17.1	-2.5	3.6	13.6	8.7	4.6	22.0	29.3			
Total	**16.4**	**16.7**	**100.0**	**2.0**	**15.8**	**100.0**	**-5.4**	**19.2**	**100.0**	**21.4**	**26.4**	**100.0**	**37.1**	**21.0**	**100.0**	**-20.4**			
As % of total exports	***0.2***	***0.2***			***0.2***			***0.2***			***0.3***			***0.2***					

Source: Various issues of Export Receipts, SBP.

Table 23: Sugar and Honey Incl. Molasses by Destination

	FY98				FY99			FY00			FY01			FY02			FY03		
	US$ Million	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%	US$ Million	% of total	Growth%
India	43.0	147.8	53.1	243.5	2.1	4.1	-98.6	0.1	0.3	-93.4	0.4	0.5	175.8	0.4	0.6	-5.5			
Netherlans (Holland)	19.6	9.7	3.5	-50.7	11.3	22.0	16.3	17.7	37.2	57.0	27.1	27.8	53.6	21.8	35.5	-19.5			
Singapore	1.8	18.2	6.5	895.9	0.2	0.5	-98.7	0.7	1.4	171.1	0.0	0.0	-94.4	0.8	1.3	2008.1			
U.K	13.0	12.5	4.5	-3.8	16.0	31.2	28.5	13.1	27.5	-18.3	15.7	18.7	20.3	10.9	17.6	-31.1			
Others	34.9	90.1	32.4	158.5	21.6	42.2	-76.0	15.9	33.6	-26.3	41.1	48.7	157.5	27.7	45.0	-32.7			
Total	**112.3**	**278.2**	**100.0**	**147.8**	**51.3**	**100.0**	**-81.6**	**47.5**	**100.0**	**-7.3**	**84.4**	**95.7**	**77.6**	**61.5**	**100.0**	**-27.1**			
As % of total exports	***1.3***	***3.6***			***0.6***			***0.5***			***0.9***			***0.6***					

Source: Various issues of Export Receipts, SBP.