



# PAKISTAN

## SELECTED ISSUES PAPER

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# PAKISTAN

## SELECTED ISSUES

December 4, 2015

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# UNLOCKING PAKISTAN'S REVENUE POTENTIAL<sup>1</sup>

*Despite recent progress under the program, Pakistan's tax revenue remains very low relative to comparator developing countries and the tax effort expected for the country's level of development. This reflects narrow tax bases, overgenerous tax concessions and exemptions, weak and fragmented revenue administrations, and structural features of the economy. This paper reviews Pakistan's tax regime, evaluates the level and composition of tax revenues, and estimates tax buoyancy and efficiency. The findings suggest that unlocking tax revenue potential requires broadening tax bases, strengthening revenue administration and taxpayer compliance, eliminating distortionary tax expenditures, and rationalizing tax policy for greater efficiency and equity through a comprehensive and front-loaded reform agenda.*

## A. Introduction

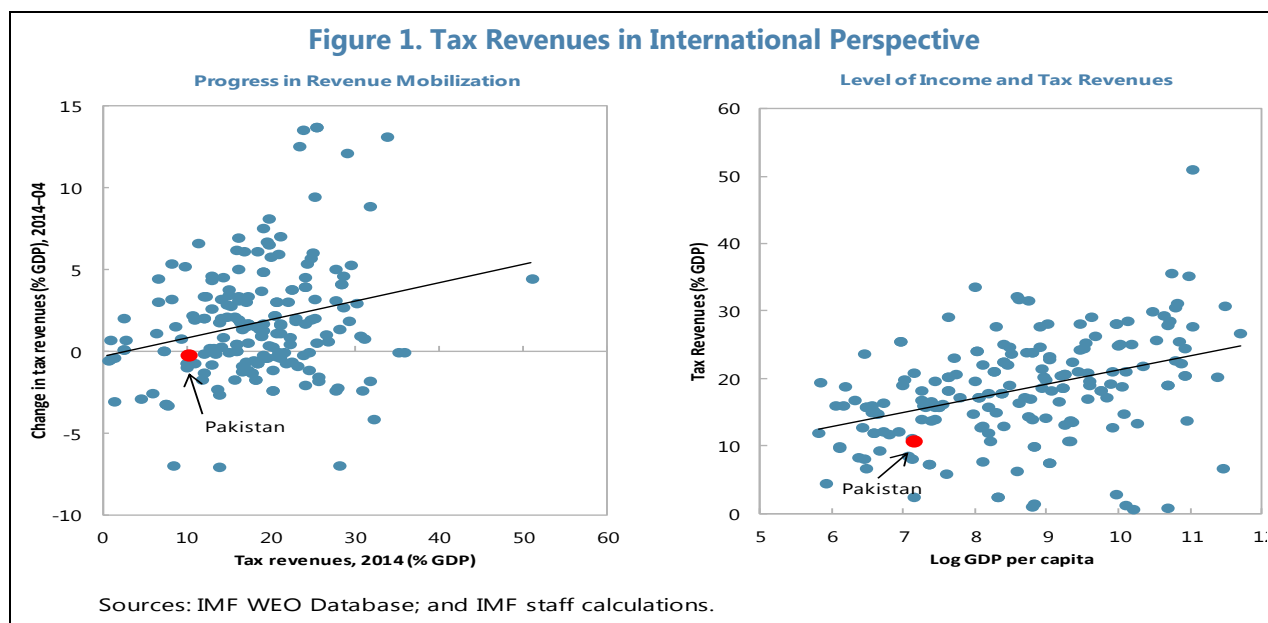
1. **Pakistan's revenue mobilization remains low compared to other developing countries and the tax effort expected for the country's level of development.** Pakistan faces significant challenges in realizing its tax revenue potential and thereby providing the much-desired fiscal space for growth-enhancing priority spending on infrastructure, education, healthcare, and targeted social assistance. While the tax revenue-to-GDP ratio has increased by 1.5 percent over the past three years to 11 percent in 2015, it remains significantly below comparator emerging market economies and the tax effort expected for the country's level of development (Figure 1). The historical development of tax ratios confirms underperformance in revenue mobilization, with the tax-to-GDP ratio currently 1.4 percentage points below its peak of 12.4 percent of GDP in 1996. Pakistan has the potential to mobilize additional tax revenues by an amount as much as, if not more than, it currently collects: its tax capacity is estimated to be 22.3 percent of GDP, which implies a tax revenue gap of more than 11 percent of GDP.<sup>2</sup> Although its estimated tax effort—the ratio between actual revenue and tax capacity—improved from 0.43 in 2011 to 0.49 in 2015, Pakistan is still significantly below the average of comparator developing countries (0.64) and high-income countries (0.76).

2. **The lackluster performance in mobilizing tax revenue is a result of a labyrinth of interconnected factors.** Narrow tax bases, the extensive use of tax concessions and exemptions, weaknesses in revenue administration, and low taxpayer compliance through informal economic activity and underreporting of formal income result in substantial loss of revenue relative to potential. While many developing countries struggle with similar challenges, the situation in Pakistan is further complicated by intergovernmental fragmentation in revenue administration. According to the constitution, provincial governments are responsible for taxation of agriculture, services and immovable property, which represent a significant share of economic activity and thereby a

<sup>1</sup> Prepared by Serhan Cevik (FAD).

<sup>2</sup> Fenochietto and Pessino (2013), estimate tax capacity—the maximum level of tax revenue that a country can collect—and tax effort with a stochastic frontier function, based on a panel of 113 countries, using economic, demographic and institutional characteristics as explanatory variables.

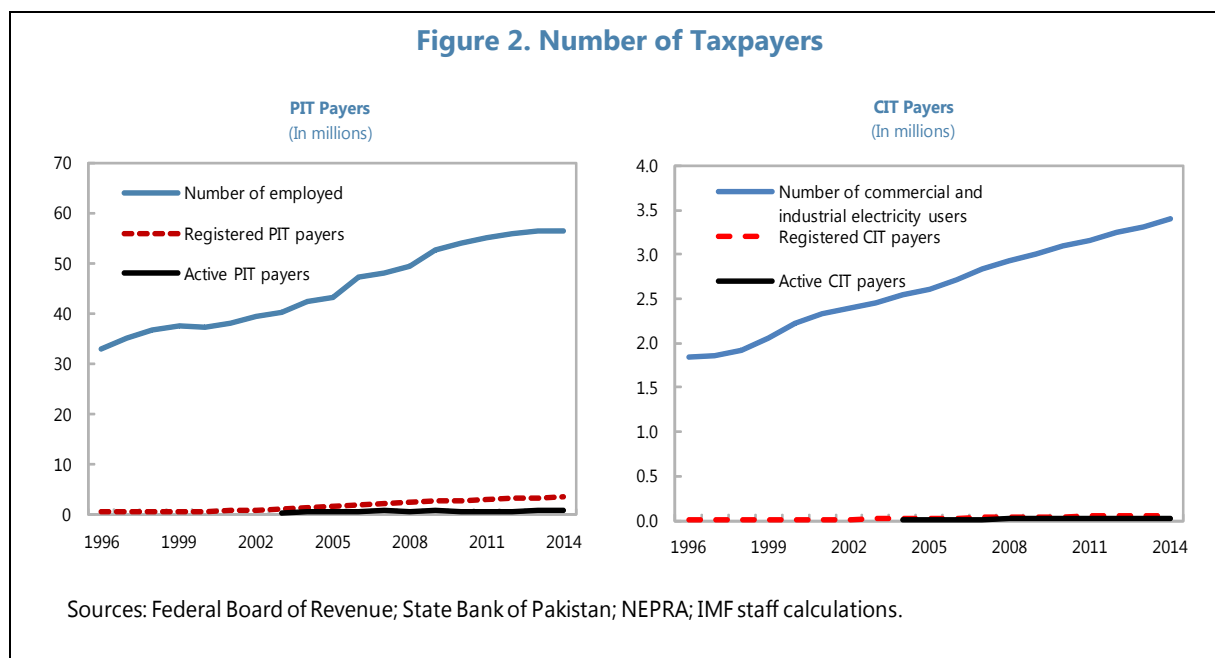
substantial pool of potential tax revenues. However, provincial governments appear to have inadequate administrative capacity and limited incentive for local revenue mobilization, as they rely on the transfer of shared revenues from the federal government.



3. **The government plans to increase the tax-to-GDP ratio to 14.5 percent by 2020 to reduce fiscal vulnerabilities and finance priority spending.** Public debt is almost 600 percent of tax revenues and development spending is significantly less than interest payments. The government plans to increase the tax revenue-to-GDP ratio to 14.5 percent by 2020 to strengthen debt sustainability and resilience to fiscal shocks, and finance the country's development needs. To this end, the Ministry of Finance established a high-level tax reform commission, and the Federal Board of Revenue (FBR) has implemented a series of reforms aimed at broadening the tax base and improving taxpayer compliance. These include the elimination of tax concessions and exemptions granted through the Statutory Regulatory Orders (SROs), introducing self-assessment for filing personal income tax (PIT) and the concept of differential taxation to reward compliance and penalize noncompliance, issuing more than 225,000 notices to potential taxpayers, rationalizing customs tariffs, integrating the National Tax Number (NTN) system with the Computerized National Identity Card (CNIC) database,<sup>3</sup> and issuing a policy directive requiring all government suppliers to be on the current list of active taxpayers to conduct business with government departments.

<sup>3</sup> The NTN system covers 3.6 million individuals (or less than 2 percent of population) compared to about 150 million people (or about 80 percent of population) covered in the CNIC database.

4. **Pakistan is heavily reliant on indirect taxes collected from very narrow tax bases and vulnerable to fluctuations in import prices.** The number of people employed and commercial/industrial electricity users provides an illustrative benchmark for potential PIT and CIT users, even though not every employed person or commercial/industrial electricity user is liable to file for PIT and CIT. The number of people registered for PIT increased from 752,695 in 2000 to over 3.6 million in 2014, but it is still very small compared to 56.5 million people employed in Pakistan (Figure 2). Furthermore, the number of active PIT filers is 982,525, significantly below the number of 5.7 million people reportedly earning above the income tax threshold.<sup>4</sup> Similarly, the number of corporate income tax (CIT) filers is 25,551 out of more than 60,000 companies registered for the CIT. Furthermore, the number of active CIT filers is a mere 0.8 percent of the number of commercial and industrial electricity users, which represent an illustrative pool of potential entities liable for taxation. Likewise, the number of entities registered for the General Sales Tax (GST) is 178,190 out of about 1.4 million retailers (and 3.4 million commercial and industrial electricity users). These underlying features of the tax landscape leave Pakistan with an unusually heavy reliance on indirect taxes collected from very narrow tax bases and vulnerable to fluctuations in import prices.



<sup>4</sup> To put it in a broader context, there are 15.6 million broadband internet subscribers and over 40 million individual bank accounts in Pakistan. From a cross-country perspective, the share of population filing for income tax in Pakistan is a mere 0.5 percent, compared to over 5 percent in India and 90 percent in Canada.

5. **Tax reforms aimed at improving tax morale and increasing efficiency can have a significant positive impact.** Unlocking Pakistan's tax revenue potential through reforms at federal and provincial levels can help achieve stable public finances, boost economic growth, employment and competitiveness, and contribute to a fair distribution of income.<sup>5</sup> The government's objective to raise the share of tax revenue in GDP to 14.5 percent by 2020 is consistent with various estimates of the country's tax revenue potential. Simply aiming to increase revenue by further taxing already compliant taxpayers would worsen inequalities, undermine tax morale and cause distortions in economic activity. Sustainable domestic revenue mobilization therefore requires a concerted agenda of well-defined reform efforts aimed at broadening tax bases, strengthening revenue administration and taxpayer compliance, eliminating distortionary and overgenerous tax concessions and exemptions, and rationalizing tax policy in an efficient and equitable manner. In this context, improving the perceived fairness of the tax system is a cornerstone of revenue mobilization efforts, as Pakistan ranks low on measures of corruption and has weak auditing procedures.

## B. Tax Regime and Revenue Performance

6. **Pakistan's tax system does not promote efficiency and fairness and is complex and fragmented.** Under a federal system of governance, Pakistan's constitution divides the responsibility of income and property taxes and GST in goods and services between federal and provincial governments. While fiscal decentralization can be designed to improve the delivery of public services, it could hinder revenue mobilization by complicating tax administration and reducing the efficiency of the tax system. In Pakistan, revenue collection remains highly centralized with the federal government collecting over 93 percent of total tax revenues, while provincial governments' own revenues contribute the remaining 6.8 percent (or 0.8 percent of GDP). High levels of informality in the economy further constrains tax compliance and enforcement, especially given significant gaps in information gathering and sharing across all layers of government. In addition, institutional weaknesses in revenue administration, such as bureaucratic red tape and corruption, undermine tax morale and compliance. According to the World Bank's Doing Business survey, time spent preparing and paying taxes for a typical firm in Pakistan is more than 594 hours, compared to an average of 325 hours in South Asia and 175 hours in OECD countries.

7. **The composition of tax revenues is highly skewed towards indirect taxes, which account for about two-thirds of total tax revenue.** The main sources of tax revenue are income taxes (CIT and PIT) and indirect taxes (GST, customs duties and excises), contributing over 92 percent of total tax revenues (Table 1). Although trade liberalization and tariff rationalization have lowered revenues related to foreign trade, indirect tax collections continue to account for about 63 percent of total tax revenue at the federal level. The share of direct taxes, on the other hand, has increased from an average of 18.5 percent in the first half of the 1990s to 29 percent in 2000 and about 37 percent in recent years.

<sup>5</sup> Expenditure rationalization aiming to change the composition in favor of growth-enhancing social and infrastructure spending is also critical, but beyond the scope of this note.

The overall level of income taxes in Pakistan (3.8 percent of GDP), however, is still unfavorable compared to other developing countries, where direct taxes amount to about 5.5 percent of GDP and 55 percent of total tax revenue. Although the statutory CIT and PIT rates declined from 45 percent in 1990 to 35 percent and 20 percent, respectively, by 2007, Pakistan's low collection of direct taxes is mostly a result of weak compliance and enforcement and abundant concessions and exemptions. As a result, the greater reliance on indirect taxes relative to income taxes makes Pakistan's tax revenue performance highly vulnerable to fluctuations in import prices.

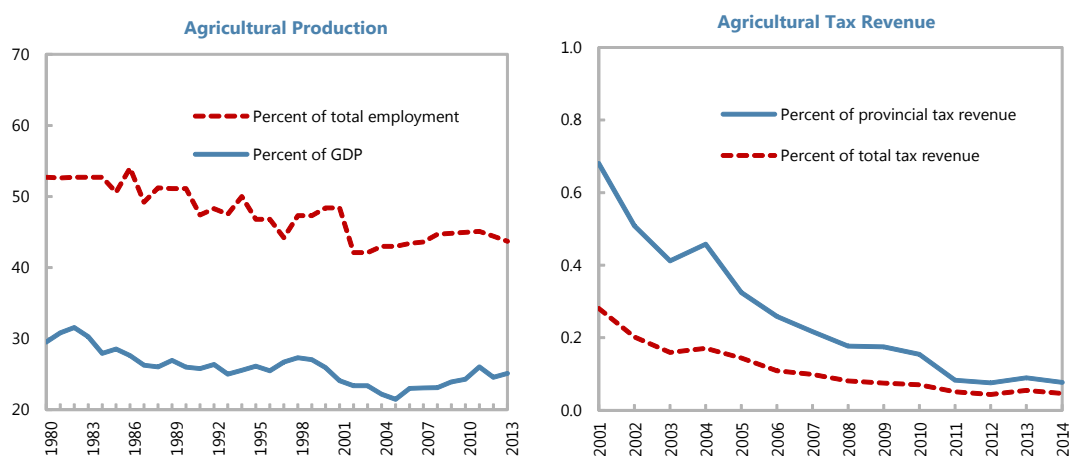
**Table 1. Composition of Tax Revenues**  
(In percent of GDP)

	2009	2010	2011	2012	2013	2014	2015
Tax revenue	10.1	10.1	9.5	10.4	10.0	10.5	11.0
Federal	9.7	9.7	9.2	9.8	9.3	9.8	10.3
FBR revenue	8.8	8.9	8.5	9.4	8.7	9.1	9.5
Direct taxes	3.3	3.6	3.3	3.7	3.3	3.5	3.8
Federal excise duty	0.9	0.8	0.8	0.6	0.5	0.6	0.6
Sales tax	3.4	3.5	3.5	4.0	3.8	4.0	4.0
Customs duties	1.1	1.1	1.0	1.1	1.1	1.0	1.1
Other	1.0	0.8	0.6	0.5	0.6	0.7	0.8
Provincial	0.3	0.4	0.4	0.5	0.7	0.8	0.8
Agriculture	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property	0.0	0.1	0.0	0.0	0.1	0.1	0.1
Other 1/	0.3	0.3	0.4	0.5	0.6	0.7	0.7

Sources: Ministry of Finance; and IMF staff calculations.

1/ Other provincial tax revenue includes excise and stamp duties, motor vehicle tax and GST on services.

**Figure 3. Agricultural Sector and Tax Revenues**



Sources: WDI; Ministry of Finance; and IMF staff calculations.



8. **Provincial tax revenues remain miniscule, mainly because agriculture, services and real estate remain largely untaxed.** The latest National Finance Commission (NFC) award, signed in 2010, advanced fiscal decentralization and increased the provincial share in federal tax revenues from 45 percent to 57.5 percent, even though provinces already have exclusive power to tax agricultural income, property and services and account for only about 35 percent of total general government expenditures. Consequently, provincial governments have little incentive to boost own source revenues and instead rely on transfers from the federal government. The agriculture sector, for example, generates less than 0.1 percent of total tax revenues under the purview of provincial governments, although it accounts for about 25 percent of GDP and employs 45 percent of the workforce (Figure 3). Furthermore, agricultural tax revenue registered a significant decline over time as a share of total tax revenues at provincial and federal levels.

9. **Agricultural taxation is based on the size of land holdings according to a fixed schedule of per acre rates, with no regard to actual earnings.** Farmers with land of less than 12½ acres are exempted from taxation, while those owning up to 25 acres of land pay PRs 100 per acre and the per acre rate increases to PRs 250 for land holdings between 26 and 50 acres and to PRs 300 for over 50 acres of land. Farmers with over 50 acres of irrigated land are also required to file for income tax. Since over 90 percent of farmers appear to have land holdings less than 12½ acres, agricultural income remains largely untaxed. Similarly, taxes on property and services under the purview of provincial governments generate a mere 0.04 percent and 0.6 percent of GDP, respectively. With changes in consumption patterns and sectoral composition of economic activity over time, taxation of services has become far more important for revenue mobilization in Pakistan.<sup>1</sup>

10. **The extensive use of tax concessions and exemptions results in a distortionary and unfair tax regime.** The overall cost of tax expenditures increased from 0.2 percent of GDP (or about 2 percent of tax revenues) in 2000 to the peak of 1.9 percent of GDP (or almost 20 percent of tax revenues) in 2014. Moreover, most of these concessions and exemptions have been granted under a variety of schemes and modalities, such as the SROs, with limited transparency and parliamentary oversight. As part of the fiscal consolidation and tax reform plans, the government has eliminated tax concessions and exemptions amounting to about 0.9 percent of GDP since 2014. In addition, parliament passed legislation that now limits the authorization for concessional SROs on a temporary basis in a number of exceptional circumstances by the Economic Coordination Committee of the cabinet. There is, however, further need for rationalizing overgenerous tax expenditures, which pose a considerable threat to the integrity of the tax system as a whole as it creates loopholes in legislation and distortions in economic activity (IMF, 2011).

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<sup>1</sup> Services make up over 52 percent of GDP, while industry and agriculture account for about 22 percent and 25 percent, respectively.

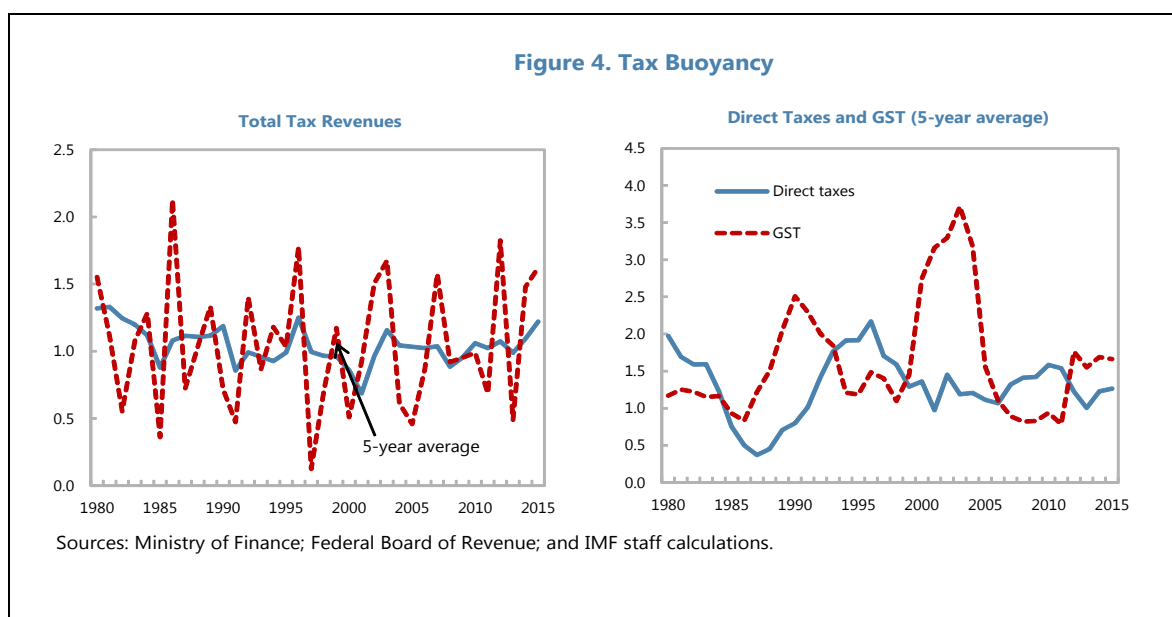
**Table 2. Cost of Tax Expenditures**  
(In billion rupees)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Income tax	46.5	69.6	82.4	96.6	83.0	45.0
Percent of GDP	0.3	0.3	0.4	0.4	0.3	0.1
GST	25.3	24.3	37.4	249.0	225.4	182.9
Percent of GDP	0.1	0.1	0.2	1.0	0.8	0.6
Customs duty	94.9	112.0	119.7	131.5	103.0	60.3
Percent of GDP	0.5	0.6	0.5	0.5	0.4	0.2
Total	166.7	205.9	239.5	477.1	411.4	288.2
Percent of GDP	0.9	1.0	1.1	1.9	1.5	1.0

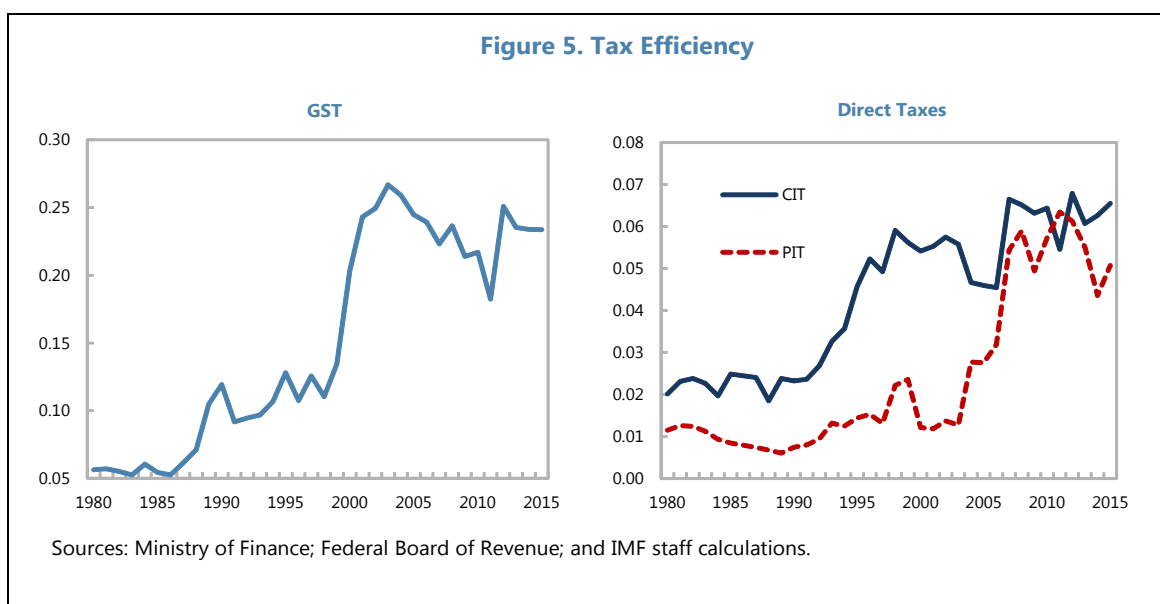
Sources: Ministry of Finance; and IMF staff calculations.

### C. Estimating Tax Buoyancy and Efficiency

11. **The institutional structure and policy parameters of the tax system determine its responsiveness to macro-financial developments.** One of the critical concepts is tax buoyancy, explaining how tax revenues vary with changes in the underlying tax base as measured by national income (Belinga, Benedek, de Mooji and Norregaard, 2014). Tax buoyancy is defined as the change in tax revenue in a given year, divided by the change in the tax base. A buoyancy of one would imply that an additional one percent of GDP would increase tax revenue also by one percent, which results in a neutral impact on the tax-to-GDP ratio. The objective of tax reforms is therefore to raise tax buoyancy above one in order to increase tax revenue collection by more than the extent of change in nominal GDP.



12. **Pakistan’s tax buoyancy has exceeded unity in recent years, but it remains extremely volatile.** Over the last two and half decades, Pakistan’s tax revenue-to-GDP ratio remained in a narrow range—oscillating between the low of 9 percent and the peak of 12.4 percent. Tax buoyancy, on the other hand, has exhibited a boom-bust pattern with high volatility that reflects not only tax policy changes, but also the impact of administrative challenges, political crises and economic difficulties on taxpayer behavior. In recent years, tax buoyancy has improved to well above unity from an average of less than one in the 1990s (Figure 4). The five-year moving average of aggregate tax buoyancy increased by 23.5 percent from 0.99 in 2013 to 1.22 in 2015. The analysis using disaggregated data at the federal level, however, indicates an underlying weakness in tax buoyancy. The GST buoyancy, for example, recovered in recent years with the elimination of exemptions, following a steep downward trend since 2000 when provinces agreed to the GST collection by the FBR. Similarly, the buoyancy of direct taxes shows no sustained improvement, except over the past few years with the elimination of concessions and exemptions. The buoyancy of customs duties and excises (which are generally structured as non-ad valorem) is another significant cause of limited progress and partly held back overall tax buoyancy because of loss of revenue caused by trade liberalization. This is consistent with cross-country experience. As shown by Baunsgaard and Keen (2010), developing countries tend to struggle in mobilizing domestic tax revenues to compensate for the loss of revenue caused by trade liberalization and tariff rationalization.



13. **Indicators of tax efficiency confirm the weakness of Pakistan’s tax system, due to distortionary policies and weaknesses in administration.** Tax buoyancy is a useful concept, but it does not help identify whether the tax system is efficiency and, more importantly, whether the degree of efficiency is improving over time. Accordingly, tax efficiency—measured as tax revenue as a percentage of GDP, divided by the standard tax rate—is an appropriate gauge of revenue mobilization efforts. The revenue efficiency of the GST showed an improvement from an average of

0.11 in the 1990s to the peak of 0.27 in 2003, but it declined to an average of 0.23 over the past three years (Figure 5). The rise in GST efficiency, however, was a result of the agreement between the provinces and the FBR to collect GST on their behalf. Furthermore, the GST efficiency in Pakistan is still significantly below the unweighted average of 0.28 in Africa and 0.44 in Asia Pacific.<sup>2</sup> Pakistan's relatively low GST efficiency partly reflects the recent increase in GST exemptions (from 0.1 percent of GDP in 2012 to 0.8 percent in 2015) and a limited progress in bringing retailers into the tax base. On the other hand, the productivity rates of the CIT and PIT regimes show a sustained improvement over the past decade with greater use of withholding taxes. Fundamentally, however, Pakistan's performance in CIT and PIT remains below those of other developing countries, owing to overgenerous tax concessions and exemptions, weaknesses in tax administration, and low taxpayer compliance through informal economic activity and underreporting of formal income.

#### D. The Way Forward

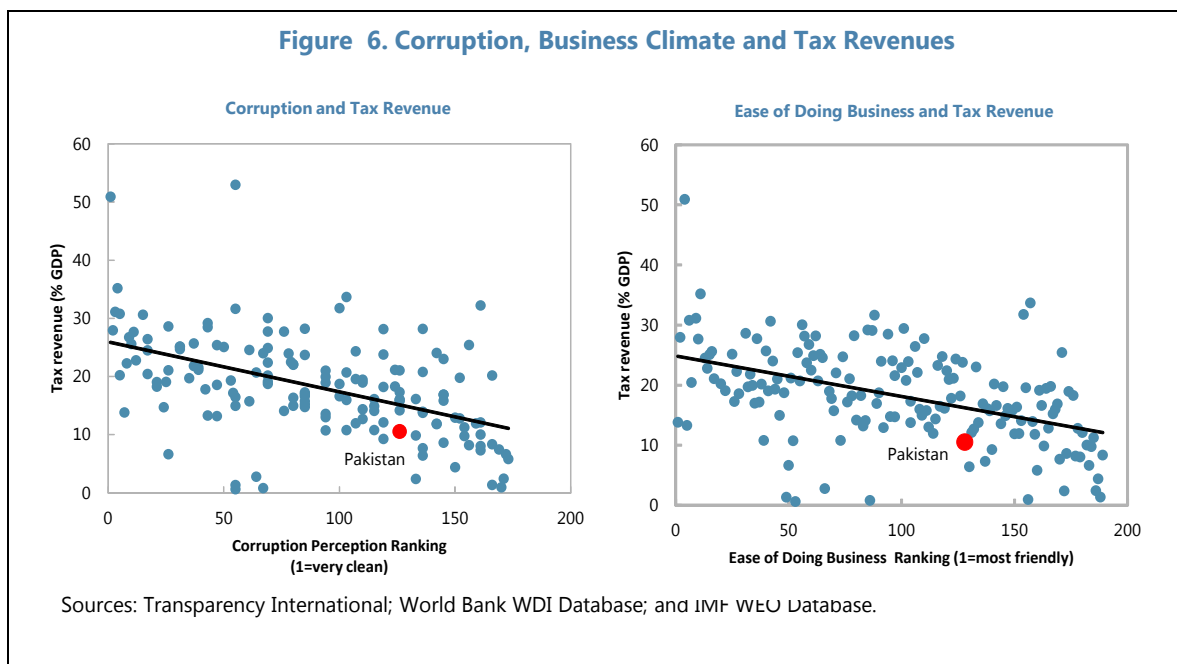
14. **Well-designed tax reforms at federal and provincial levels can unlock Pakistan's tax revenue potential.** Pakistan has the potential to double its tax revenue-to-GDP ratio, while improving the efficiency and equity of the tax system. To this end, revenue mobilization will require concerted and well-defined efforts aimed at broadening tax bases, strengthening tax compliance, eliminating distortionary tax expenditures, and rationalizing the tax system in an efficient and equitable manner.

15. **Strengthening tax administrations across all layers of government is key to sustainable revenue mobilization.** To improve taxpayer compliance and curb tax avoidance and evasion, reform efforts must aim to modernize and bolster the effectiveness of tax administrations at federal and provincial levels by reorganizing along functional lines, integrating databases and information technology, and requiring a tax identity number in all financial and immovable property transactions. This would also help deal with the potential problem of using remittance transfers as a mean of tax evasion. Cross-country figures indicate that there is also a strong relationship between the tax revenue-to-GDP ratio and business climate and corruption (Figure 6). Therefore, institutional reforms aiming to reduce the incidence of corruption and to improve the country's business climate will help boost tax revenue collections across all layers of government. From an operational point of view, the FBR and provincial revenue administrations should adopt and implement a risk-based auditing system focusing on taxpayer noncompliance risks, defined as the likelihood of yielding large amounts of audit adjustments and penalties, and increase tax fraud penalties and make tax evasion a criminal offense. In this context, fighting tax evasion should initially focus on a comprehensive list of high-wealth individuals and corporate entities they control and prohibit "benami" transactions, which are commonly used for tax avoidance and evasion.<sup>3</sup> At the same time,

<sup>2</sup> Alternative measures of tax efficiency, such as the ratio of the change in tax revenues to the change in tax rates, confirm these trends.

<sup>3</sup> In "benami" transactions, assets are held by or transferred to a person, but have been provided for, or paid by, another person.

it is important for the Ministry of Finance to enhance analytical capacity by establishing a tax policy research and analysis unit—outside the FBR—to improve revenue forecasting and upgrade the quality of fiscal policymaking.



16. **Tax policy reforms must aim to increase revenue yield, while improving the fairness of the tax regime.** Direct taxes can be designed better for enhancing efficiency and equity. In the case of PIT, the tax exempt income threshold is set at PRs 400,000 (or about US\$3,800). Since this is almost four times per capita income, a significant share of employed people does not pay any income tax at all. Accordingly, reducing the tax exempt income threshold, widening tax brackets, adopting more progressive and lower tax rates, and rationalizing concessions and exemptions would not only reduce distortions and increase revenue yield, but also improve the fairness of the tax system. This sense of social justice is key to boosting tax morale and thereby tax buoyancy. In this context, there is also need to strengthen the capital gains tax regime by adopting a common rate schedule for all financial assets and eliminating exemptions for real estate transactions. In the case of CIT, simplifying the system and reducing concessions and exemptions are necessary to pave the way for lower rates while enhancing revenue yields, which would also help on improving the economy's international competitiveness. With regards to agriculture—a difficult sector to effectively tax, a reasonable approach would be the introduction of presumptive taxes on turnover and land-based tax rates adjusted according to productivity characteristics of agricultural land on a progressive scale with an appropriate threshold to protect low-income farm households. Modernizing recurrent property taxes, on the other hand, can be achieved by establishing a central fiscal cadastre and a central valuation agency and adopting a market-based valuation methodology.

For greater efficiency in indirect taxes, Pakistan should integrate the GST collection system (goods and services) with a single statutory rate under one collection agent, and eliminate GST exemptions, zero-ratings, and special schemes. Simultaneously, the implementation of federal and provincial excises should be based on ad valorem rates to maximize the revenue yield, while better addressing negative externalities associated with some products such as tobacco.

## E. Conclusion

17. **The objective of tax reforms is not simply collect more from already compliant taxpayers, but to expand the tax base and improve tax morale.** The tax revenue-to-GDP ratio has rebounded in recent years, mainly owing to the elimination of concessions and exemptions, and improved to 11 percent in 2015. It is, however, still significantly below comparator developing countries and Pakistan's own tax potential. This reflects a plethora of factors including narrow tax bases, overgenerous tax concessions and exemptions, weak and fragmented revenue administrations, and structural features of the economy. Relative to comparator countries, Pakistan's tax system does not promote efficiency and fairness and is complex and fragmented. Although Pakistan's constitution assigns significant revenue responsibility to the provinces, provincial governments' own revenues contribute only 6.8 percent of total tax revenues. The composition of tax revenues is highly skewed towards indirect taxes, which account for about 63 percent of federal tax revenue, while the extensive use of tax concessions and exemptions results in a distortionary and unfair tax regime. Consequently, even though Pakistan's estimated tax effort—the ratio between actual revenue and tax capacity—improved from 0.43 in 2011 to 0.49 in 2015, it is still significantly below the average of comparator developing countries (0.64) and high-income countries (0.76). The findings presented in this paper suggest that a concerted agenda of well-designed federal and provincial policy adjustments and institutional reforms—aimed at expanding tax bases, reducing tax concessions and exemptions, addressing structural weaknesses in fragmented tax administrations, and improving tax compliance across all sectors of the economy—will not only boost revenue mobilization, but also improve the perceived fairness of the tax system in Pakistan.

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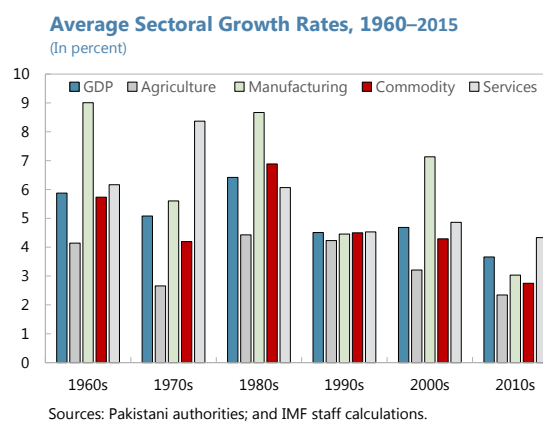
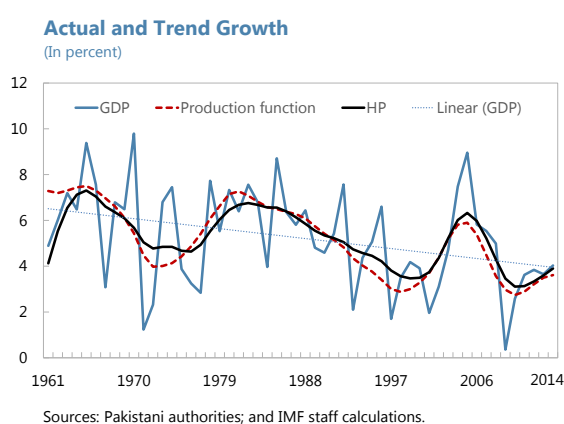
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# IMPROVING PAKISTAN'S COMPETITIVENESS AND BUSINESS CLIMATE<sup>1</sup>

Despite the recent increase in economic growth, the longer-term trend for growth rates has been declining, stressing the need for reforms that would enhance productivity and foster accumulation of physical capital. Structural policies that lead to a closing of the gap of Pakistan's competitiveness indicators with MENAP peers could help boost growth in the medium term significantly. These improvements, combined with increases in the variety and the quality of produced export goods and a real exchange rate at a level consistent with fundamentals would also help provide a much needed boost to exports.

## A. Increasing Growth through Higher Competitiveness

1. **Pakistan experienced solid growth rates with intermittent periods of high growth in the past but trend growth has been declining.** Average growth has decreased from about 6 percent in the 1980s, to 4.5 percent in the 1990s and 2000s, and 4 percent in more recent years. This decline is accompanied by a decrease in manufacturing growth, particularly worrisome because of the higher productivity and growth potential of this sector. Trend growth, calculated by two approaches—application of a Hodrick-Prescott (HP) filter and by means of a production function approach—indicates that potential GDP growth has gradually declined over the past decades.<sup>2</sup> Subject to considerable uncertainty under these approaches, both methods indicate that the output gap is nearly closed, being 0.4 percentage points in 2014 (production function approach) and 0.03 percentage points in 2015 (HP filter).



<sup>1</sup> Prepared by Robert Tchaidze and Andreas Tudyka.

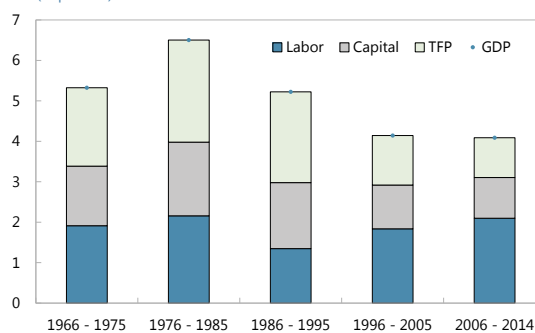
<sup>2</sup> We set lambda, the weighting factor that determines the degree of smoothness of the trend, to 6.25 following the Ravn-Uhlig (2002) rule for annual data.



## 2. The recent growth deceleration is mainly driven by a decrease in total factor productivity.

A growth accounting exercise in the spirit of Solow (1957)—which decomposes growth into its supply-side drivers labor, physical capital, and total factor productivity (TFP)—shows that labor has overshadowed TFP and capital accumulation in the recent past. While productivity contributed about 40 percent on average to the growth spurts of the mid-1960s to mid-1980s, its contribution in the past 10 years slowed to about 25 percent. In addition, capital accumulation's contribution to growth has also slowed markedly.

**Decomposition of GDP Growth**  
(In percent)

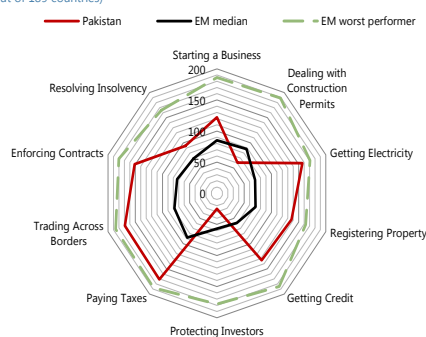


Sources: Pakistani authorities; and IMF staff calculations.

3. **Productivity is key to improve Pakistan's potential growth in the future.** Comparing the current contribution of productivity to real GDP growth rates to the past indicates that the contribution of TFP to overall growth can be substantial. Moreover, productivity does not face the same extent of diminishing returns as capital and labor accumulation and thus has the potential to boost growth for extended periods of time.

4. **An improvement in productivity requires a business-friendly environment where the government delivers basic services efficiently, promotes the rule of law, reduces corruption and fraud, and streamlines business regulations.** This is confirmed by an analysis by Mitra and others (2015), which identifies policies that eliminate gaps with emerging market and developing countries (EMDCs) in the business environment to be critical in promoting TFP and hence in unlocking long-term growth for Middle East, North Africa, Afghanistan, and Pakistan (MENAP) oil importers.<sup>3</sup> Pakistan currently ranks 138 out of 189 economies in the World Bank's Doing Business Report 2016 and 126 out of 140 in the World Economic Forum's Global Competitiveness Report (GCR) 2015-16. The latter, which uses a scale from one to seven, further indicates that Pakistan ranks below the MENAP comparator group in every subcategory but market size and worsened its score over the past 10 years—from 3.8 in 2006-07 to 3.4 in 2015-16—though some components of the index such as institutions, infrastructure and market size have improved in the recent past. The results of Mitra and others (2015) suggest that implementation of

**Doing Business Ranking 2016 1/**  
(Out of 189 countries)



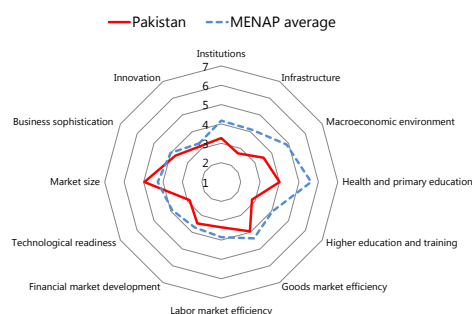
Sources: World Bank Doing Business 2016.

1/ Pakistan ranks 138 out of 189 countries for overall ease of doing business.

<sup>3</sup> Building on cross-country regression analysis using a large sample of EMDCs, Mitra and others (2015) investigate the most effective policies to unlock higher long-term growth through its determinants productivity, physical capital accumulation, and employment.

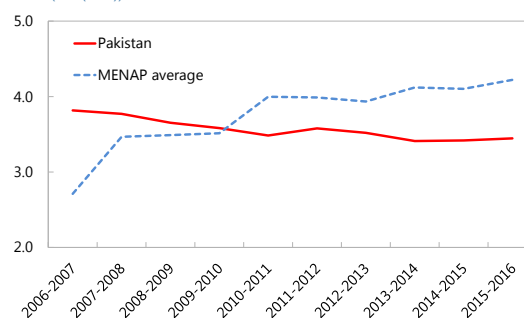
structural policies that lead to an improvement in the overall Global Competitiveness Index (GCI) score by one point can raise productivity growth by 1.4 percentage points. Overall, this indicates the great potential that growth-boosting policies may have in Pakistan as recognized by the action plan to improve the business climate, which was finalized in October 2014.

**Competitiveness Index, 2015-2016**  
(1-7 (best))



Source: WEF Competitiveness Database.

**Global Competitiveness Index**  
(1-7 (best))



Sources: WEF Competitiveness Database; and IMF staff calculations.

5. **A number of areas are lagging behind when compared with peer countries.** Based on the Doing Business Ranking, the areas which perform relatively well are protecting investors and resolving insolvencies. Getting credit and electricity, contract enforcement, paying taxes, and trading across borders on the other hand constitute the largest limitations. Overall, the country ranks below the emerging market average. According to the GCI, the country fares especially well in the overall sample in terms of market size, and comparably to other MENAP countries in the areas of financial market development, innovation, and business sophistication. The largest shortcomings are the overall macroeconomic environment, infrastructure, and health and education. Consequently, it is vital to improve security and power sector performance. Power sector reforms are currently being undertaken at high priority and improving education and health will require long-term engagement.

6. **The findings of Mitra and others (2015) indicate that improvements in structural factors—reflected in a higher GCI—could increase productivity and hence overall growth.** Technology transfer through FDI has been shown to diffuse new technologies and management methods to local firms, raising their competitiveness (OECD 2002; UN Conference on Trade and Development 2010). Accordingly, the results of Mitra and others show that an improvement in FDI technology transfer, reflected by an increase in the corresponding GCI score by one point, improves productivity growth by 0.6 percentage points. Similarly, an improvement in worker talent, especially the quality of education by one point, raises productivity growth by 0.7 percentage points.

7. **Identifying the drivers behind physical capital accumulation provides additional opportunities to improve Pakistan's growth.** Well-developed financial markets, public infrastructure, and trade openness—especially with large emerging markets—represent the largest drivers in the sample covered by Mitra and others (2015). An increase in public investment by one

percentage point of GDP raises physical capital accumulation rates significantly.<sup>4</sup> Financial Market Development fosters greater investment activity by facilitating access to funds and protecting investors. An improvement in the corresponding GCR score is associated with an increase in physical capital accumulation rates by 1.7 percentage points. Trade openness, especially trade that promotes increased connectedness with large emerging and advanced economies, is also influential. Its improvement, when reflected by a one point increase in the corresponding GCR score, increases physical capital accumulation rates by 3.5 percentage points.

8. **Implementation of structural policies that lead to an improvement in the aforementioned key indicators could lead to substantial gains in potential growth.** Based on the above results and Pakistan's current score in the GCR, we estimate the potential growth effect if Pakistan closed some of the gaps with peer countries over the coming five years.<sup>5</sup> In particular, average growth could increase to 6.5 percent on average in 2017–21 if Pakistan improved structural factors to reach average MENAP levels of the global competitiveness and FDI technology transfer indices, and increased the share of exports to fast-growing economies in total exports, and public investment as a share of GDP by one percentage point over the same period. Growth could improve further if the speed of reforms picks up or additional reform areas are improved.

## B. Policies to Unlock Potential Growth through Productivity and Capital Accumulation

9. **Several constraints on productivity and physical capital accumulation are especially binding and policies should concentrate on the tackling these.** For example, the ailing power sector negatively affects several of the aforementioned competitiveness sub-indices. Improving its performance could therefore yield substantial gains. Similarly, the overall security situation limits progress in several important areas. Implementation of the required policies will be difficult in the context of Pakistan's political situation, and most likely face judicial challenges. The following policies could be applied in the respective areas (Mitra and others, 2015):

10. **Fostering a competitive business environment which benefits physical capital accumulation and long-term productivity growth requires:**

- Privatization of large state-owned enterprises involved in sectors critical for businesses. In the case of Pakistan, the power sector constitutes the largest structural impediment and requires a far-reaching overhaul as do SOEs in other sectors. Against this backdrop, an SOE reform strategy has been formulated and begun to be implemented. In particular, financial advisors have been appointed for three better performing power distribution companies (DISCOS), and the governance of DISCOs, three generation companies, and the National Transmission and Despatch Company (NTDC) has been transferred to new boards of directors and management.

<sup>4</sup> This reflects both direct and indirect effects through the provision of more affordable and reliable inputs (especially for electricity) into production.

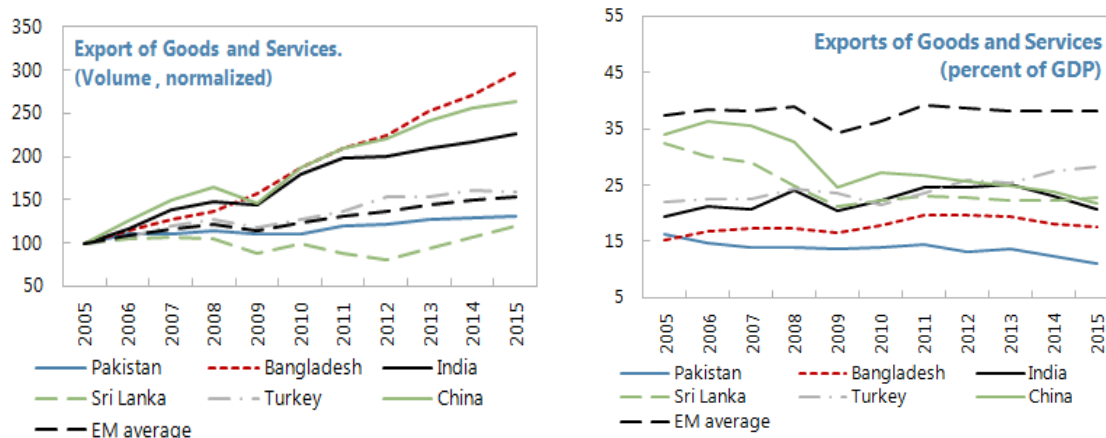
<sup>5</sup> Based on the methodology proposed by Mitra and others (2015). The calculations are based on point estimates and are thus rather indicative. Nevertheless, all estimation results point to a significant improvement in potential growth.

- Streamlining business regulations, tax codes, and bureaucratic red tape to reduce the cost of doing business, level the playing field, and raise efficiency of government services. Some progress such as the introduction of a Virtual One Stop Shop for new business registrations has been made, and further efforts to simplify business registrations and processes for paying taxes are necessary. Efforts are underway, including at the sub-national level, to strengthen these areas.
- Promoting the rule of law through concerted efforts to discourage corruption and fraud. Improving governance in tax administration and legislation preventing “benami” transactions are steps in the right direction.
- Improving the quality and quantity of public infrastructure investment requires efficient investment management and more financing. A broader tax base will be key in that regard. Moreover, power sector subsidies have been reduced from 0.8 percent of GDP to 0.4 percent of GDP over the last year, and a further reduction of subsidies in the energy sector could mobilize additional financing resources. CPEC projects will provide a boost for urgently-needed infrastructure.
- Financial market development is vital for physical capital accumulation. Promoting access to finance and ensuring adequate protection of legal rights are imperative to advancing its development. Increased public borrowing from banks risks crowding out productive private investment. These issues are being gradually addressed through continued reduction of the fiscal deficit and efforts to strengthen financial development, including through the National Financial Inclusion Strategy (NFIS).
- Increased non-commodity trade that promotes increased connectedness with large emerging markets, has strong ties to physical capital accumulation in MENAP (Mitra and others, 2015). The recent appreciation of the real effective exchange rate may thus have negative repercussions on this channel.

### C. Export Competitiveness

11. **Pakistan’s exports of goods and services are low when measured in percent of GDP and compared to those of regional peers, such as India, Sri Lanka, Bangladesh, China, or Turkey.** Over the last decade, they have declined from 16 percent of GDP in 2005 to 12 percent in 2014, while the lowest level observed in the group of five peers is 18 percent and the average level in the Emerging Market countries is 38 percent. Although China and Sri Lanka have seen sizeable declines in these ratios, they remain above 20 percent. In the other three countries, the exports-to-GDP ratios have been rising.

12. **A similar picture is observed when examining the growth rates.** The growth rates of Pakistan's real exports have mostly been among the three lowest over the last decade, on average constituting just above 4 percent, compared to 12 percent in Bangladesh and 10 percent in India. In terms of dollar values, Pakistan's exports fall behind the growth rate of global exports on average by one percentage point a year.

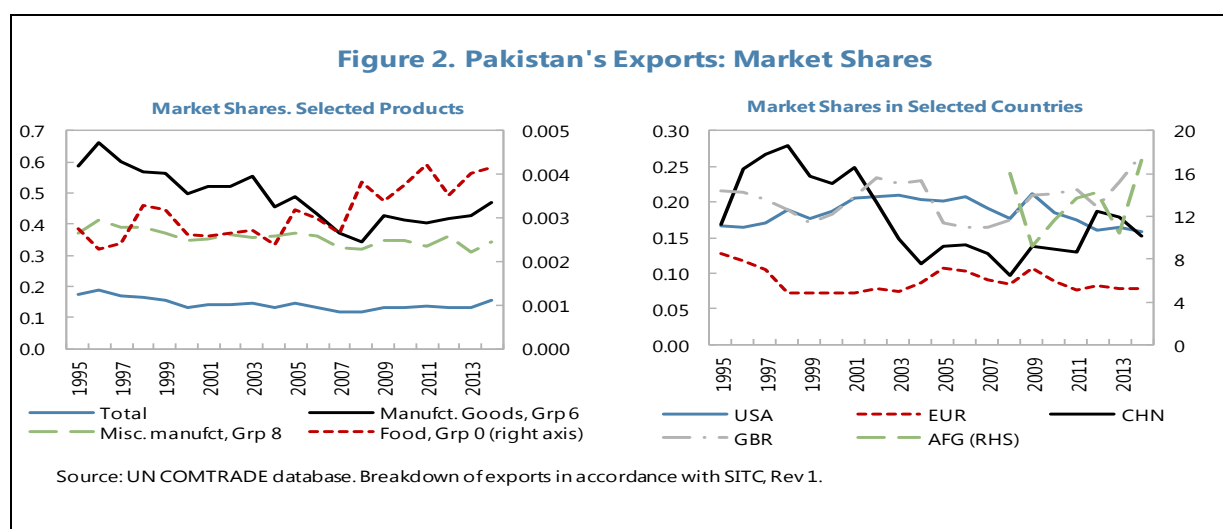
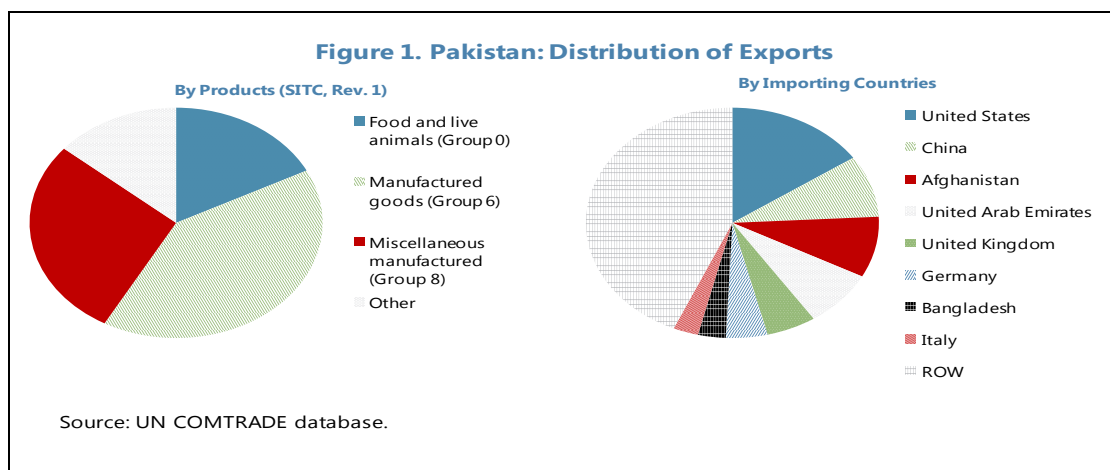


13. **These patterns may be reflective of quality and diversity of Pakistan's exports.** Pakistan mainly exports goods that fall into three groups of products by SITC, revision 1 classification: Food and live animals (group 0, 17 percent), Manufactured goods (group 6, 41 percent, dominated by exports of textile yarn and fabrics at more than 30 percent), and Miscellaneous manufactured articles (group 8, 28 percent, dominated by exports of clothing items at more than 20 percent). Main destinations for Pakistan's exports are the United States (15 percent in 2010–14), China and Afghanistan (9 percent each), UAE (8 percent), and UK (6 percent). The euro area countries altogether account for some 18 percent. Most of the relevant market shares are either stagnant or declining. Longer-term trends show that while Pakistan's export diversity is average relative to regional comparators with a gradual decline since the 1990s and export quality has been stagnant and gradually fallen behind comparators.<sup>6</sup> Lack of diversification is driven by a limited number of exported products and by their heavy concentration. Looking at quality indicators, one observes that in groups of products that constitute bulk of Pakistan's exports, regional peers have over time improved quality of their exports surpassing Pakistan.

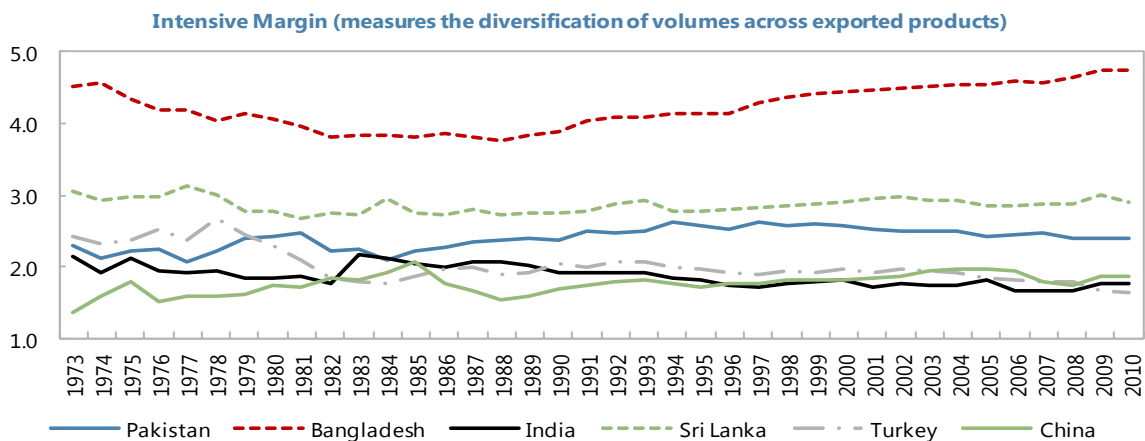
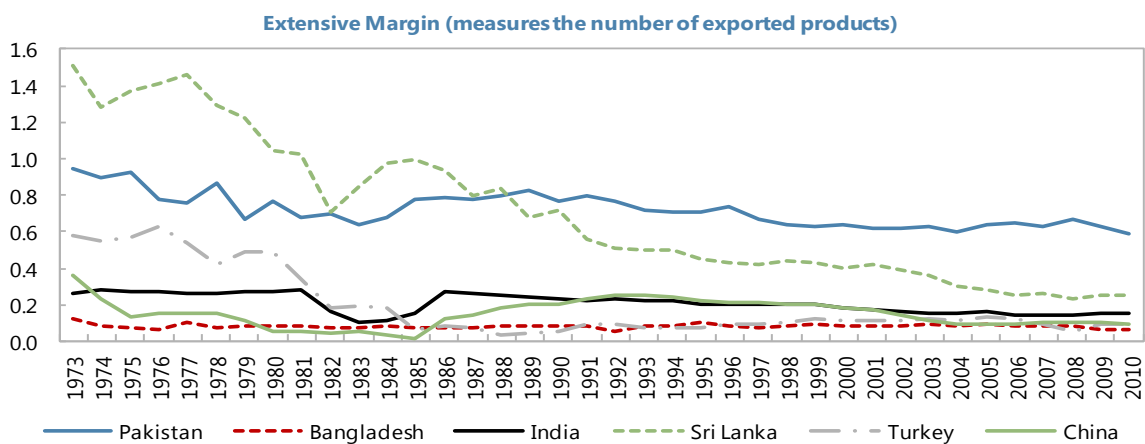
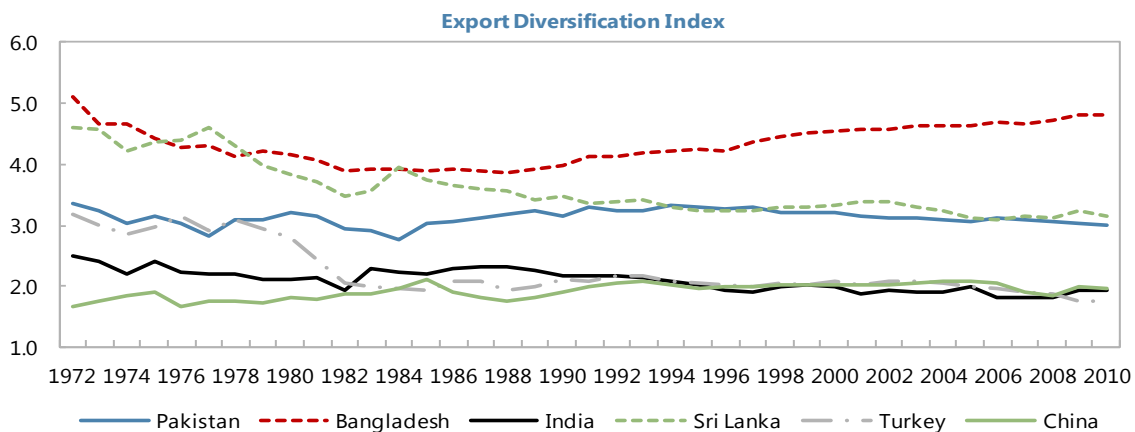
<sup>6</sup> Although the IMF dataset on quality and diversity of exports covers only the period until 2010 (<https://www.imf.org/external/np/res/dfidimf/diversification.htm>), consistency in trends observed since the early 1970s still allows for tentative conclusions. Diversification is measured using the Theil indices and is a sum of intensive and extensive margins, where the extensive margin measures the number of different export sectors and the intensive margin represents the diversification of export volumes across active sectors. Hence, diversification can occur through introducing new product lines (the extensive margin) or through exporting a more balanced mix of existing products (the intensive margin). The quality measure is based on unit values and a quality-augmented gravity equation, initially specified for each product with a subsequent aggregation.

14. **These factors alone, however, cannot fully explain the lagging performance of Pakistan’s exports.** Indeed, they have not prevented Bangladesh, a country with similar diversification and quality difficulties, from increasing its export capacity, while Sri Lanka, a country with low diversification as well, even though not having achieved high export growth rates in the last decade, was able to sustain a relatively high export-to-GDP ratio. An important consideration for Pakistan is that it has been operating under distressed conditions, with security concerns leading to higher capital costs and making it less attractive for foreign investors. Other obstacles include high trade costs and an overly complex tariff regime, which creates an anti-export bias (Reis and Taglioni, 2013b).

15. **The constant market share analysis (CSMA) allows isolating different factors affecting growth in exports.** The idea behind the CSMA is as follows: if a country is more (less) specialized in exporting products to markets, where demand is strong (weak) in comparison to other products and markets, than its aggregate export share will increase. Algebraic manipulation allows decomposing the growth differential into two factors:



**Figure 3. Pakistan and Selected Peers, Export Diversification**

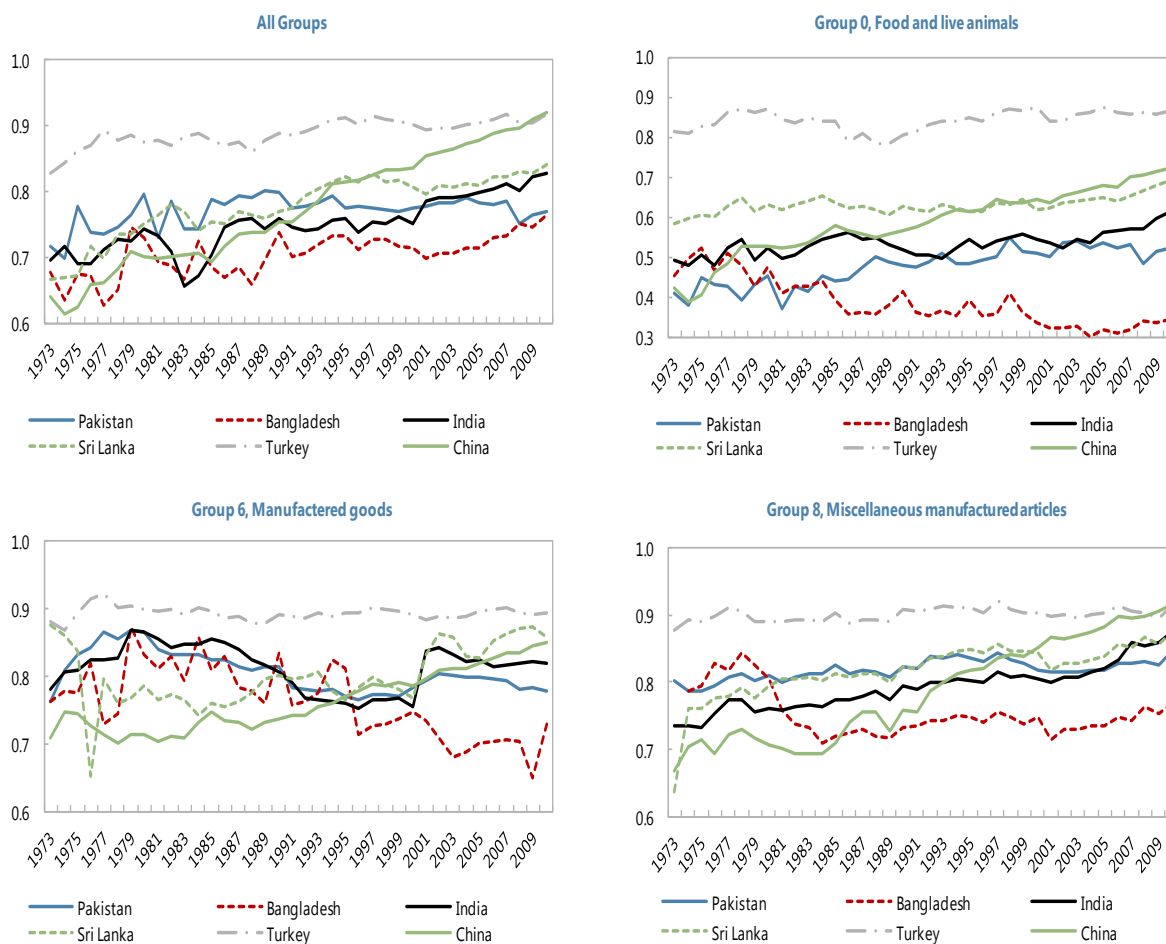


Source: IMF's Diversification Toolkit: Export Diversification and Quality Databases (Spring 2014)

<https://www.imf.org/external/np/res/dfidimf/diversification.htm>

NB: Higher values for the all three indices indicate lower diversification.

Figure 4. Pakistan and Selected Peers: Export Quality by Products (SITC, Rev. 1)



Source: IMF's Diversification Toolkit: Export Diversification and Quality Databases (Spring 2014)

<https://www.imf.org/external/np/res/dfidimf/diversification.htm>

NB: Higher values for the quality indices indicate higher quality levels.



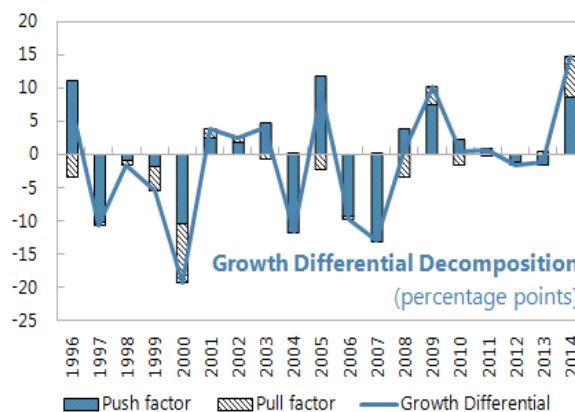
$$\begin{aligned}
 g - g^* &= \sum_{j,k} (\theta_{j,k} g_{j,k} - \theta_{j,k}^* g_{j,k}^*) = \sum_{j,k} (\theta_{j,k} g_{j,k} - \theta_{j,k} g_{j,k}^* + \theta_{j,k} g_{j,k}^* - \theta_{j,k}^* g_{j,k}^*) \\
 &= \sum_{j,k} \theta_{j,k} (g_{j,k} - g_{j,k}^*) + \sum_{j,k} (\theta_{j,k} - \theta_{j,k}^*) g_{j,k}^*
 \end{aligned}$$

where  $g$  is the growth rate of total Pakistan's exports (in value terms),  $g_{j,k}$  is the growth rate of exports of a product  $j$  to country  $k$ , and  $\theta_{j,k}$  is a share segment in Pakistan's exports in the same product/country segment. Variables with asterisks refer to global exports.

16. **The first factor reflects competitiveness gains.** It is defined as a sum of the growth differentials in various product/geographical market segments times share of the market/product segment in Pakistan's exports. It is positive if Pakistan's exports are concentrated in products and geographical market segments, where growth of Pakistan's exports exceeds growth of the world exports, which can be happening because of improvements in Pakistan's competitiveness broadly speaking (e.g., via exchange rate and labor costs) or because of improvements in the quality of exported goods, better marketing strategies, as well as conclusion of trade deals that expand or deepen access to geographical markets (such as granting a Generalized System of Preferences Plus status to Pakistan by the European Union).

17. **The second factor reflects the existing export structure.** It is a hypothetical change that would have occurred in the aggregate exports if individual shares were to remain constant and is defined as a sum of the share differentials times growth rate of the global exports across all the market/product market segments. It is positive if Pakistan's exports are concentrated in segments with higher global export growth and is more reflective of external, pull factors, such as strength of foreign demand and its composition.

18. **Applying the CSMA methodology to the case of Pakistan does not provide a very clear picture.** On average Pakistan's export grew in the last 20 years by about a percentage point slower than the world exports (6½ percent against 7½ percent). Decomposition of this differential using four product groups described earlier<sup>7</sup> suggests that on average competitiveness factor plays an important though somewhat limited (about a quarter) role in explaining the growth differential. Moreover, a closer look shows periods



<sup>7</sup> Groups 0, 6, and 8 of the SITC, Rev 1 classification, and everything else.

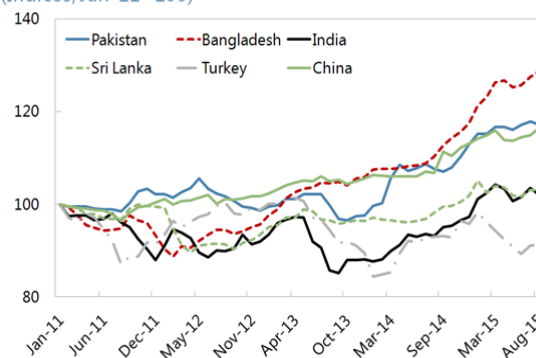
with rather large competitiveness losses that are subsequently offset by years with large competitiveness gains.<sup>8</sup>

19. **Two sets of factors can explain export performance.** One of them is a set of structural factors (such as business environment, energy supply, quality of inputs, etc)<sup>9</sup> that affects supply of exportable goods and which were discussed in the first part of the paper. The other is a set of macroeconomic variables (such as real exchange rate and demand in trading partners) that affects demand for a country's exports. Of course, both sets of factors can simultaneously be at play.

20. **Pakistan's real exchange rate has proved to be somewhat rigid downwards.**

Since 2011, it has appreciated by more than 17 percent, more than currencies in most of its regional peers. Specifying the level of any currency misalignment is subject to model specifications and significant general uncertainty, with existing models used within the Fund estimating overvaluation of the rupee of between 5 and 20 percent (Box 1).

**Real Effective Exchange Rate 1/**  
(Indices, Jan-11=100)



21. **Several empirical studies have looked into estimating responsiveness of Pakistan's exports to changes in demand and relative prices.** Most of them find that changes in the REER impact exports, though there is a significant range in the estimates.

- Siddiqi et al., (2012) and Khan et al., (2013) estimate the long-run relationship between the variables using cointegration analysis. The first paper, using annual 1971–2009 data for exports of textile and clothing, finds that price elasticity of these exports is low (around 0.3) and that the world demand is the main determinant. The second paper, making use of 1981–2010 annual aggregate data, also finds insignificant price elasticity and foreign demand being a dominating factor.

<sup>8</sup> The CMSA methodology is not very robust as a different breakdown of exports into product/country segments may lead to different results. At least one alternative breakdown has resulted in a very similar picture, although the average impact of the push factor was larger. Another notable weakness of the methodology is that it is based on evaluation of exports measured in the US dollars.

<sup>9</sup> Reis and Taglioni (2013a) point to Pakistan's internal problems with trade-related incentives, business environment, and governance that together with external constraints are important factors behind exports' mediocre performance.

- In contrast, Hussain (2010) using disaggregated annual 1988–2009 data shows that most of the categories of exported goods are responsive to world demand and relative prices, with the degree of responsiveness dependent on share of value added, lower for primary and low value added products (e.g., relative price elasticity of 0.5 for rice exports) and higher for high value added products (e.g., relative price elasticity of 1.6 for textile articles).
- Likewise, Zada et al., (2011) using aggregate annual 1975–2008 data demonstrate exports to have elasticity close to unity and argue that for devising a viable strategy towards exports growth, more attention should be paid to demand side determinants instead of focusing only on the removal of supply-side constraints.
- Zakaraia (2014) using aggregate 1981/82–2007/08 quarterly data shows that Pakistan’s exports show significant price and income elasticities (with the point estimates reaching in some specification 2.9). Moreover, he argues that both were stimulated by trade liberalization that has been happening since the 1980s.

22. **Cross-country studies also confirm an empirical relationship between the REER and exports.** For instance, cross-country empirical relationships estimated by Fund economists suggest that a 10 percent real appreciation has a negative effect on exports of about 7 percent and a positive effect on imports (i.e., displacing domestic production) of about 9 percent, which would accrue over time. For Pakistan, this would translate into a loss in the trade balance of \$6½ billion and a negative impact on GDP of about 2¼ percent (accruing over time) from exports lost to competitors and from imports replacing domestic production.

23. **In conclusion, the poor performance of Pakistan’s export seems to be reflective both of structural impediments and competitiveness losses stemming from the REER appreciation.** Structural impediments—poor business environment, lagging quality and diversification of exportable products—will need to be tackled continuously and will take time to show results. In parallel, the marked appreciation of the real effective exchange rate over the last two years points to a need for continued structural reforms and supportive monetary, fiscal, and financial sector policies to maintain a competitive real effective exchange rate, supporting exports and import-competing industries and thereby growth.

### Box 1. Estimating Real Exchange Rate Misalignment

The Fund economists have been working on models that would allow evaluating the real exchange rate misalignments for several years. This work has led to development of the so-called External Balance Assessment (EBA) Methodology, summarized in Phillips and others, 2013.

The EBA methodology is based on three approaches, two of which are econometrical. These two methods are based on cross-country regressions where either current account balances or REER levels are linked to a set of fundamentals, allowing estimation of equilibrium levels and subsequently, deviations from them or misalignments (positive in the case of overvaluation). Trade elasticities, estimated in a cross-country setting are used to convert the CAB misalignments into the REER ones. The third method seeks a level of a current account that allows stabilizing a net foreign asset position in percent of GDP.

Two features of the EBA methodology are worth emphasizing. Firstly, the fundamentals used in these regressions are measured in relation to countries' trading partners and during calculations adjustments are made to ensure global consistency of the estimates. The second feature is that EBA methodology allows decomposing misalignments into two parts, with one of them reflecting deviations of policies (such as fiscal stance, credit growth, reserve accumulation) and the other reflecting factors beyond the fundamentals.

For a selected group of countries (that includes Pakistan), the Fund conducts estimations on a regular basis. In addition, modified templates (so-called EBA-lite) are made available to economists working on low- to middle-income countries. These templates are based on modified sets of fundamentals, including variables such as remittances and foreign aid.

The latest estimates are as follows: 4.6 percent (EBA CAB), 4.9 percent (EBA REER), 10 percent (EBA-Lite CAB), and 20 percent (EBA-Lite REER). Decomposition of the residual indicates that despite recent progress, the still higher than desirable budget deficit and the still incomplete reserve accumulation are factors affecting the appreciation of the currency.

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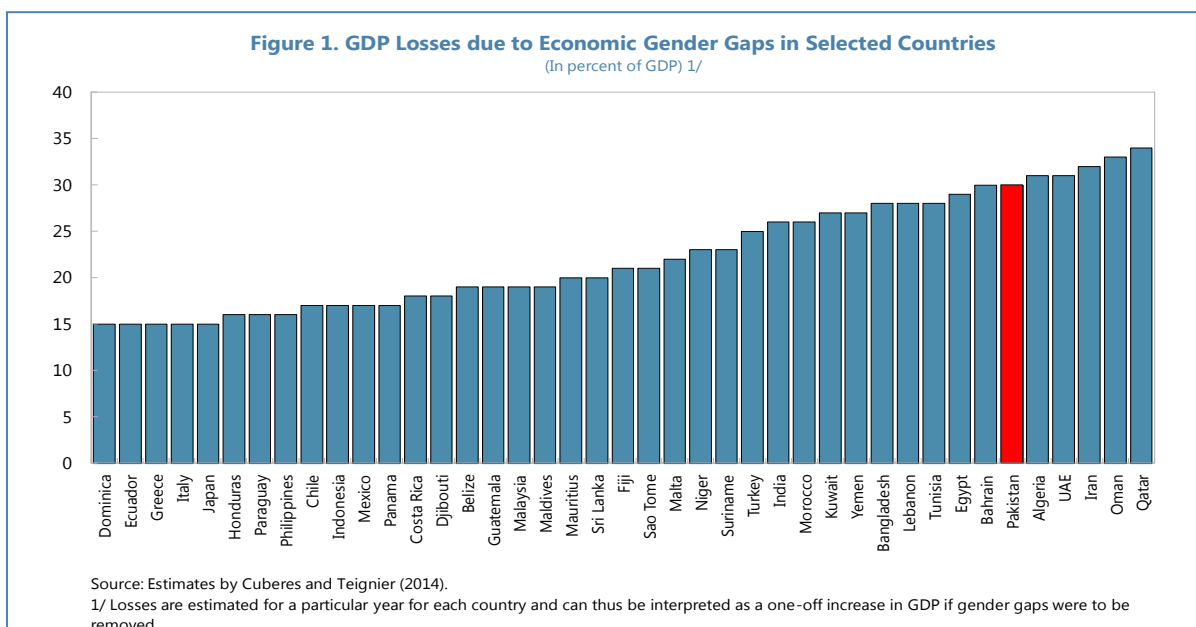
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# MACROECONOMIC GAINS FROM RAISING FEMALE LABOR FORCE PARTICIPATION IN PAKISTAN<sup>1</sup>

## A. Background

1. **Women make up half of Pakistan's population; however, their contribution to income is far below its potential.** With the roots of gender inequality lying to a large extent in Pakistan's cultural context, addressing the issue will continue to be a gradual process. Nonetheless, the potential gains from greater inclusion of women in the economy are large: closing the gender gap in Pakistan could boost GDP by about 30 percent (Chart 1).<sup>2</sup>

2. **Pakistan has made significant progress over the last decade in promoting gender equality** (Chart 2). Female labor force participation increased by around 10 percentage points since 1990. That said, there remains ample scope for further progress. Pakistan's female labor force participation (FLFP) in 2012 remains low at 24 percent (32 percent in South Asia, 69 percent in low-income countries).<sup>3</sup>

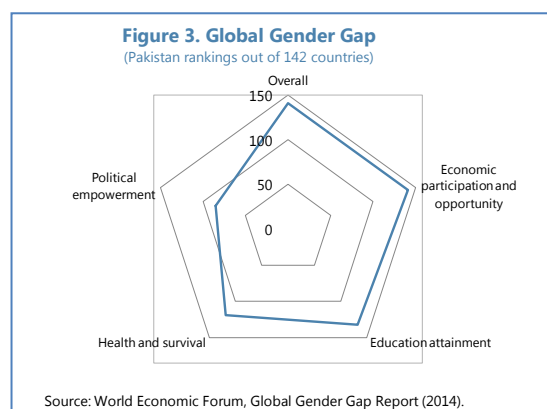
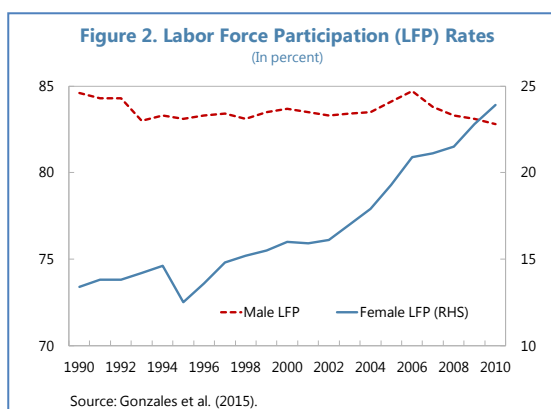


<sup>1</sup> Prepared by Ferhan Salman (MCD) with research assistance from Hiba Zaidi and Yi Liu (both MCD).

<sup>2</sup> Cuberes, D., and M. Teignier (2014).

<sup>3</sup> World Bank Development Indicators (2014).

3. **Historically female labor force participation has remained lower than male participation.** Despite an increase in the participation rates, women account for most unpaid work (64 percent of female employment is in unpaid family work, double the South Asia average). They also face significant wage differentials—18 percent—vis-à-vis their male colleagues (WEF, 2014).



4. **Pakistan ranks second to the last in global gender gap index.**<sup>4</sup> The Index looks into the gap between men and women in four categories: Economic Participation and Opportunity (labor for participation, wages, senior managerial and technical positions), Educational Attainment (literacy and educational enrollment), Health and Survival (Sex ratio at birth and healthy life expectancy) and Political Empowerment (parliament seats, ministers and length of heads of states). Gender gap in Pakistan is particularly stark in economic opportunities and participation, education, and health.<sup>5</sup>

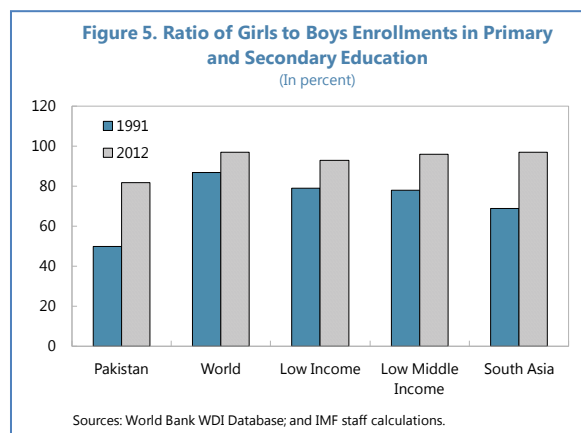
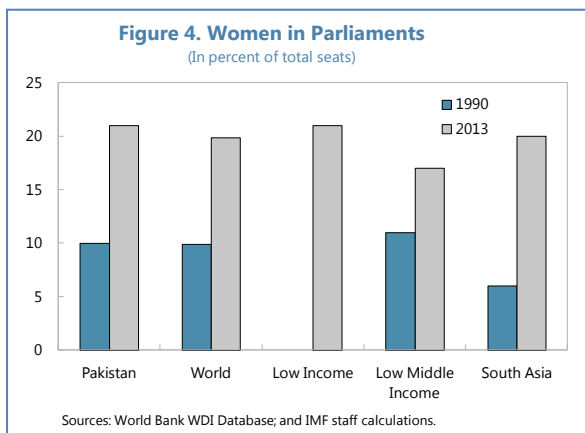
5. **Gender gap is large in Pakistan's public service. Total female legislators, senior officials, and managers is only 3 percent of the total (World average is 29 percent).** However, female representation in Pakistan National Assembly has increased (thanks to quota) in line with the increasing trend in the World—outperforming World Average and the South Asian countries (Chart 4).

6. **Gender gaps in education have been declining in Pakistan** (Chart 5). The ratio of girls to boys in enrollment in primary and secondary education is 82 percent. However, there is room for improvement as Pakistan still remains well below the low income country average of 93 percent.

<sup>4</sup> The Global Gender Gap Index was first introduced by the World Economic Forum in 2006 as a framework for capturing the magnitude of gender-based disparities and tracking their progress (WEF, 2014).

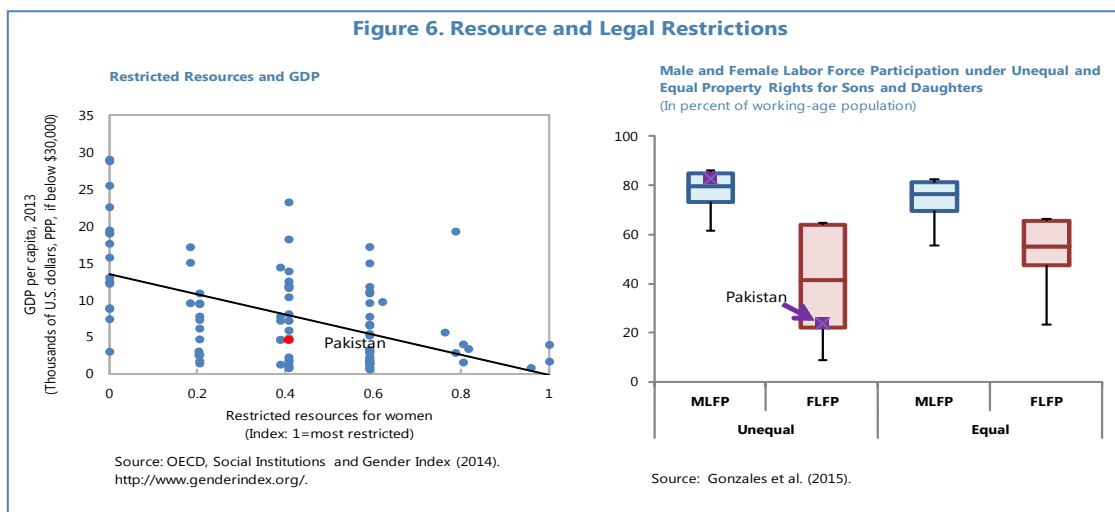
<sup>5</sup> World Economic Forum, Global Gender Gap Report (2014).





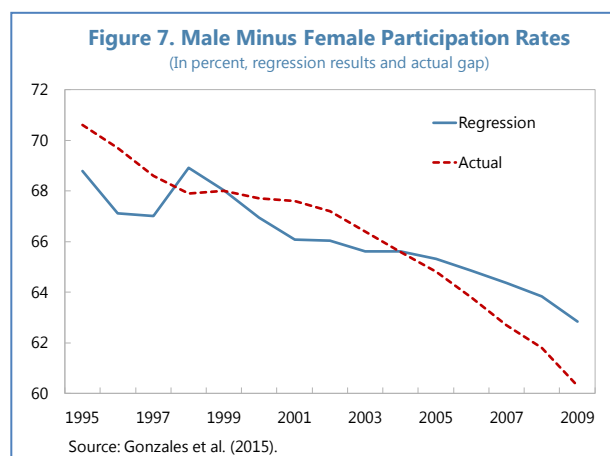
## B. International Evidence for FLP Determinants

7. **Legal and resource restrictions negatively affect FLP and growth rates across countries.** Based on the World Bank and OECD,<sup>6</sup> restrictions on women’s rights to inheritance and property, as well as legal impediments to undertaking economic activities such as opening a bank account or freely pursuing a profession, are strongly associated with larger gender gaps in labor force participation.



<sup>6</sup> The World Bank’s Women, Business and the Law Database comprises 143 countries identifying legal and regulatory barriers to women’s economic participation and entrepreneurial activity. The focus of the database is on seven indicators of gender-related differences in the legal and institutional framework. OECD’s social institutions and gender index has 160 countries that combines both the de jure and de facto discrimination of social institutions, through information on laws, attitudes and practices. Discriminatory social institutions are defined as the formal and informal laws, attitudes and practices that restrict women’s and girls’ access to rights, justice and empowerment opportunities (OECD, 2014).

8. **Recent empirical work has identified demographic and legal characteristics as drivers of female labor force participation.**<sup>7</sup> Building on the simple associations given in [17], Gonzales et al., (2015) estimated panel regressions on 90 emerging and developing countries<sup>8</sup> over the 1995–2010 period. The regression provides a good fit for Pakistan (Chart 7). As expected fertility, educational attainment, daughter inheritance rights, being the head of household and guaranteed equality provide a good fit at predicting male-female gender gap. Higher fertility rate is associated with higher labor force participation gaps. On the other hand, higher female educational attainment, the presence of daughters' inheritance rights, being the head of the household and guaranteed equality help reduce the gap.



9. **Recent work also highlighted that availability of infrastructure and access to finance help increase FLFP.** Availability of transportation, better roads and mobile networks help women access work.<sup>9</sup> Presence of support networks among female entrepreneurs and availability of finance help raise the productivity of female owned/managed enterprises.<sup>10</sup>

### C. Evidence from Pakistan's Micro Data

10. **Pakistan Social and Living Standards Measurement and Household Integrated Economic Surveys provide useful information to explore Pakistan's FLFP determinants.** Cross section data is constructed through 2011/12 survey results. Of the total 25486 observations, 18 percent of women (within the 15–49 age group) are employed, with only 11 percent in paid work. Roughly half the population lives in rural areas. Average household size is eight (with two children on average per household). Average age of women is 28, with 63 percent married, and only 4 percent are heads of household. Average education of women is three years. Half the population owns a car, 85 percent owns a computer or a cell phone, 86 percent own a house and 88 percent own land. Average household income is PRs 174000.

11. **The following probit regressions are estimated:**

$$FLFP(1,0) = \alpha + \text{Demographics} \times \beta + \text{Control} \times \gamma + \text{error}$$

<sup>7</sup> Gonzales et al., (2015).

<sup>8</sup> Including Pakistan.

<sup>9</sup> Elborgh-Woytek et al., (2013) and Koolwal and van de Walle (2013).

<sup>10</sup> OECD (2012), World Bank (2011), and Blackden and Hallward-Driemeier (2013).

FLFP is the female labor force participation that takes values (1,0) for employed and unemployed, respectively. Demographics is a vector of variables to represent years of education, age, household size, marital status, women's head of household status, number of children, and who in household decides whether a female member can seek or continue to remain in paid employment. Household income, ownership of computer and cell phones, number of home appliances, ownership of transport, home, land are used as control variables. Regressions are run to differentiate between urban or rural life and variation across provinces.

12. **Results show that income, education, marital status, household size and being the head of household are good predictors of FLFP.**<sup>11</sup> Log income is used as control variable and negatively correlated in line with the U-shaped pattern across countries i.e. with higher household income and increasing social protection; women can withdraw from the market in favor of household work and childcare.<sup>12</sup> In those families with higher household income and large household size, FLFP declines in both urban and rural areas. More educated women are more likely to participate in the labor force in urban areas; however this correlation is negative in rural areas. Marital status however is only significant in rural areas where married women are less likely to work. Female head of the household status makes it more likely for higher FLFP rates as women are the main breadwinners of the households. The table below summarizes the results. The assessment is robust to different use of control variables and the choice of FLFP to include only paid employment.

VARIABLES	(1)	(2)	(3)	(4)
	FLFP determinants Urban	FLFP determinants Rural	FLFP determinants Urban	FLFP determinants Rural
Income	-0.19*** (0.031)	-0.02 (0.015)		
Marital Status	-0.04 (0.071)	0.29*** (0.033)	-0.17*** (0.032)	0.20*** (0.025)
Head of Household	0.87*** (0.227)	0.75*** (0.108)	0.36*** (0.082)	-0.04 (0.056)
Education (yrs)	0.05*** (0.006)	-0.05*** (0.004)	0.03*** (0.003)	-0.03*** (0.003)
Household Size	-0.04*** (0.010)	-0.03*** (0.004)	-0.03*** (0.005)	-0.03*** (0.003)
Constant	1.07*** (0.355)	-0.04 (0.164)	-1.08*** (0.047)	-0.54*** (0.034)
Observations	2,273	7,565	11,217	14,260

Note: Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>11</sup> Results are in line with international evidence.

<sup>12</sup> Elborgh-Woytek et al. (2013).

13. **Attendance to higher education<sup>13</sup> in both urban and rural areas significantly affects higher FLFP.** However, the impact is double in urban areas compared to rural areas. In urban areas, primary and secondary education attainment is not correlated with FLFP, however, in rural areas below high school education makes it more likely for women to stay out of labor force.

VARIABLES	(1) High School and Above	(2) Below High School	(3) High School and Above Urban	(4) Below High School Urban	(5) High School and Above Rural	(6) Below High School Rural
Education (years)	0.13*** (0.018)	-0.07*** (0.007)	0.20*** (0.026)	0.00 (0.016)	0.10*** (0.026)	-0.07*** (0.007)
Income	-0.15*** (0.033)	-0.08*** (0.013)	-0.17*** (0.049)	-0.26*** (0.040)	-0.14*** (0.047)	-0.06*** (0.015)
Constant	-0.71* (0.419)	0.51*** (0.152)	-1.38** (0.608)	1.65*** (0.449)	-0.37 (0.601)	0.39** (0.166)
Observations	1,558	8,280	802	1,471	756	6,809

## D. Policy Recommendations

14. **A range of revenue, expenditure and legal measures could be used to promote greater FLFP.** An integrated set of policies is needed to help FLFP that has significant prospective growth and development implications.<sup>14</sup> In this respect, comprehensive policies can be effective in boosting women's economic participation.<sup>15</sup> Fiscal consolidation will free up resources for higher infrastructure spending<sup>16</sup> and higher investment in education, and business climate reforms will help financial inclusion for women.

15. **Among expenditure measures, increased social spending under the BISP provides unconditional cash transfers to women.** The transfers will promote continued female school attendance through conditional cash transfers.<sup>17</sup> Budgetary resources could be allocated to provide access to comprehensive, affordable and high-quality daycare services<sup>18</sup> which would free up

<sup>13</sup> Attendance to high school grades and above.

<sup>14</sup> Sen (2001).

<sup>15</sup> Revenga and Shetty (2012); Aguirre and others (2012); Duflo (2012).

<sup>16</sup> Kochhar et al., 2013.

<sup>17</sup> section C, World Bank (2011).

<sup>18</sup> Jaumotte (2003).

women's time for caring young and elderly and facilitate and increase in female labor force participation.<sup>19</sup> In addition, publicly financed parental leave schemes,<sup>20</sup> promoting parity in paternity and maternity leave and flexible work arrangements<sup>21</sup> can also complement policies to balance family and work responsibilities.<sup>22</sup> Rural infrastructure spending on access to clean water and transportation could also reduce the time women spend on domestic tasks and facilitate their access to markets.<sup>23</sup>

**16. Impediments to access to finance for women could be removed to help to raise the productivity of enterprises owned and managed by women.** Pakistani women are entitled to obtain bank loans and other forms of credit, and a number of credit institutions target women. However, their access is limited by their inability to provide the required collateral.<sup>24</sup> In order to raise the productivity of women-owned and -managed enterprises, access to finance should be improved and training and support networks among female entrepreneurs should be developed.<sup>25</sup> In this regard, swift implementation of credit bureau would be crucial.

**17. Efforts to mitigate resource restrictions can increase FLFP in Pakistan.** Finding opportunities to strengthening female inheritance rights on immovable property can enhance economic opportunity to women.

**18. Quotas for senior positions could help boost FLFP.** In both private and public sectors, targeted search for female candidates for senior positions can provide opportunity and acceptance for female leadership.<sup>26</sup>

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<sup>19</sup> Gong, Breunig, and King (2010), Kalb (2009), and Anatonopoulos and Kim (2011).

<sup>20</sup> Jaumotte (2003).

<sup>21</sup> Aguirre and others (2012).

<sup>22</sup> World Bank (2012).

<sup>23</sup> Koolwal and van de Walle (2013).

<sup>24</sup> Section 18 of the Constitution grants all citizens the right to conduct any lawful trade or business, and the government reported that all of the services of the formal banking sector are available to women.

<sup>25</sup> OECD (2012); World Bank (2011); Blackden and Hallward-Driemeier (2013).

<sup>26</sup> Barsh and Yee (2012).

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