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Labor Market Policies Under a Youth Bulge

David Robalino and Yoonyoung Cho

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**Labor Market Policies under a Youth Bulge
How to Benefit from Demographic Dividend in Pakistan**

David Robalino and Yoonyoung Cho

This chapter was prepared by David Robalino (Lead economist, HDNSP) and Yoonyoung Cho (Economist, HDNSP). Andreas Blom, Cem Mete and Jose Lopez-Calix provided useful inputs and guidance for this product.

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Summary

1. This paper assesses labor market trends and outcomes in Pakistan over the past decade. It shows that despite a high rate of employment growth, labor market outcomes have been disappointing: most jobs have been created in low productivity sectors/activities, and even if they provide a minimum level of income to often avoid poverty, they remain low quality jobs providing little or no protection to workers against shocks. In addition, female participation rates for women are very low and there are large income disparities between rural and urban areas, and across sectors. A fundamental part of the problem is the low level of education of the labor force.

2. Going forward, young demographics present challenges and opportunities. The economy has slowed down and if current trends are not reversed labor markets will not be able to absorb the large number of young workers entering the labor market. Around 1.5 million new jobs will be needed every year to keep unemployment rate at current levels. If the real GDP growth rate remains at the post-crisis level (around 3 percent), all things being equal, the unemployment rate by year of 2020 could be as high as 14 percent. Increasing female participation rates bring additional challenges. If the participation rates of women with primary/secondary education catches up with that of their less educated counterpart and the overall participation rate reaches 27 percent by 2020, additional 2.6 million jobs will be needed. In such case, with current employment-growth elasticity of 0.528, almost an extra one percentage point in economic growth will be needed to avoid an increase in unemployment. At the same time, if the economy is able to maintain high growth to absorb the new entrants it can realize a demographic dividend, benefiting from the high share of those working relative to the share of dependents and thus high income per capita and standards of living. To this end the economy would need to grow by 6 percent per year or more.

3. There are several types of interventions that the Government needs to consider to improve labor market outcomes. Much attention needs to be paid to the role of macroeconomic and regulatory policies, and the education system. Macroeconomic policies that promote stability, reduce the costs of doing business, and improve investment prospects—by facilitating the entry and exit of firms—are crucial to increase labor demand. Improving the level of education of the labor force through better primary, secondary and higher education is also a pre-condition to improve labor market outcomes.

4. Issues related to education policies include: expanding learning opportunities for the population especially those in rural areas; improving the quality of education at all levels by enhancing teachers' competences and incentives, upgrading curriculum, and increasing the use of textbooks and learning materials; and improving the governance of the education system at the province level. The main challenge to improve labor market outcomes over the long term is expanding primary and secondary schooling particularly among girls ensuring they acquire the basic cognitive and non-cognitive skills that are needed to ensure the acquisition of technical and job-specific skills later in their lives. The other area concerns improving the relevance of tertiary education so that it responds to rapidly changing demands for high skills in globalized markets. These policies, however, will have effects on labor markets mainly over the medium and long term.

5. Over the relatively short term, the focus in Pakistan should be on improving the labor market opportunities of those who are already in the labor force, either working in low productivity jobs or in transition from school or unemployment to a job—with particular attention to youth and women. The areas that require immediate interventions include targeted programs to improve skills and employability through active labor market policies (ALMPs) and to expand earnings opportunities through entrepreneurial support. In addition, a gradual reform is needed to enhance technical and vocational education and training system, and to protect workers' income and guarantee basic standards in terms of working conditions. These labor market policies need to be carefully designed according to the context and policy environment of each province given the heterogeneity of the labor market conditions and recent devolution.

6. Improving the skills and employability of the existing workforce as well as building skills for new entrants is a precondition to improving labor market outcomes. On-the-job trainings (OJT) and training-related Active Labor Market Programs (ALMPs) for targeted groups are useful tools for the existing workforce, while Technical and Vocational Education and Training (TVET) is relevant for new entrants. The challenge in Pakistan is to improve the TVET system and to introduce well designed OJT and ALMPs programs. Pakistan has already made considerable progress by having a Technical Education and Vocational Training Authority (TEVTA) that coordinates the design and implementation of TVET programs toward more private sector involvement and autonomous public training institutions. In line with this, introducing performance-based financing (e.g. Nepal's employment fund) or training vouchers (e.g. Kenya's Technical and Vocational Vouchers Program) allocated directly to individuals who can then choose providers will also lead to more relevant training. More efforts need to be made to provide opportunities to vulnerable youth and women in the informal sector, often school dropouts, not eligible for TVET. For them, targeted training programs fostering life and technical skills through private providers can be considered in order to facilitate transitions from unemployment to wage- or self-employment. Establishing a practice of monitoring and evaluation of these programs is of course a necessary condition to improve their performance over time.

7. Supporting self employment and entrepreneurship is critical given that wage employment is limited and a large number of jobs are being created from microenterprises. International evidence suggests that packages of entrepreneurship programs, such as combinations of business skills training, access to finance, advisory services, and microfranchising, can be effective in improving labor market outcomes. Such programs can be tailored to serve particular target groups including women and youth, and merit more support and resource allocation. Targeted interventions and investment that combines skills training and social services (e.g. family planning, child care and health services) with endeavors to address social norms and cultural factors are promising especially to increase female labor force participation. For instance, Pakistan's own National Rural Support Program (NRSP) reaches out to unskilled, uneducated rural youth living in poverty, taking advantage of an existing network of community organizers to identify eligible households in rural communities, and provides skills training, access to credit and advisory services.

8. In addition, public works and services are potentially effective interventions to directly create jobs. In the past, public works have become one of the primary instruments to provide transient work opportunities in response to crisis (e.g. Argentina in 2002, Republic

of Korea in 1997). However, the agenda is evolving as they increasingly aim to move beyond a temporary safety net during a crisis towards a spring-board that improves sustainable employment opportunities. More recent programs have incorporated a number of design and operational innovations to create a pathway out of poverty, linking beneficiaries to employment and community services, helping them increase earnings and build assets. Countries that have public works programs with these features include El Salvador (PATI), Ethiopia (Productive Safety Net Program) and Argentina (Jefes y Jefas). Programs can also target skilled workers and offer temporary job opportunities providing services to the community.

9. Finally, Pakistan needs to consider reforms in labor regulation and social insurance policies. Reforming labor regulation and social insurance aims not only to better protect workers by expanding coverage, but also to remove constraints that might be reducing incentives to create formal jobs. The Government needs to simplify the labor regulation and focus on core labor standards and working conditions, adopting more flexible regulations in hiring and dismissal procedures (including severance pay). Minimum wage policies would also need to be reviewed to set transparent adjustment rules reflecting the positions of employees, employers and the government and to reduce discretion that can penalize either employees or employers. Finally, regarding pensions, the main reform would be to move to a system based on defined contributions (that could remain pay-as-you-go), which guarantees portability of pension rights across provinces and enables an expansion of coverage to informal sector.

Introduction

10. Pakistan is currently in the midst of a demographic transition that is bringing a growing number of youth into the labor market. This youth bulge that is unwinding opens both challenges and opportunities. Challenges because of the need to create enough jobs to employ new entrants; Opportunities, because if this is done the country will enjoy a ‘demographic dividend’, as the share of those employed relative to the dependent increases, driving up income per capita and standards of living.¹

11. To date, although the number of jobs has increased rapidly, labor market outcomes have been disappointing. Over the past decade, employment in Pakistan has been growing at a rate faster than the average of other South Asian countries,² and at par with the growth in the labor force. However, many of the jobs created have been in low productivity agriculture and/or low productivity household enterprises that generate low earnings (even if not below the poverty line). Most jobs created also are unable to provide access to social insurance and appropriate worker protection.³ The movement of jobs from agriculture into industry and services has been very slow, and the share of wage employment has been declining. So, although the quantity of jobs so far does not seem to have been an issue and has increased as rapidly as labor force increase there are concerns about the quality of the jobs created and the perspectives for the future. Earnings vary significantly by education level and the type of employment, with large gaps between urban and rural areas, and across provinces. Moreover, women’s participation in the labor market is still very low (23.5 percent among women vs. 84.3 percent among men).

12. Labor market outcomes reflect in part the very low level of education of the work force and are particularly worrisome for youth and women. Despite major progress in the context of the Millennium Development Goals, still a third of youth has no schooling. On average, those in the labor force have only studied for 5.1 years and 43 percent have no education. Even those who received education may not have the skills necessary to succeed in the labor market, while opportunities for skills upgrading and development are limited.

13. There are several types of interventions that the Government needs to consider to improve labor market outcomes. A pre-condition is to have business environment conducive to the creation of new firms. Indeed, in low and middle income countries the creation of new jobs is driven in large part by the creation of new firms.⁴ Macroeconomic and regulatory policies that promote stability, reduce the costs of doing business and improve investment prospects—by facilitating the entry and exit of firms—and are thus critical to the creation of quality jobs. Improving the level of education of the labor force through better primary, secondary and higher education is also a pre-condition to improve labor market outcomes. In particular, more targeted and focused interventions are needed at both ends of the education system. On one hand, expanding opportunities for universal primary schooling with improved quality, especially among the disadvantaged girls in rural areas merits continued emphasis. On the other hand, improving the quality of tertiary education is crucial so that it is able to respond to rapidly changing demand for skills in globalized markets.

¹ For a discussion about the causes and economic impacts of demographic transitions, see Bloom et al. (2011).

² Average employment growth rates were 3.6% per year in Pakistan vs. regional average of 3.1% per year

³ Note that throughout the paper, ‘(unpaid) family workers’ and ‘household enterprises’ are interchangeably used.

⁴ Ayyagari et al. (2011)

14. Over the short-term, the focus in Pakistan should be on improving the labor market opportunities of those who are already in the labor force, either working in low productivity jobs or in transition to a job. Particular attention should be paid to youth and women who face special constraints to access good jobs. Overall, targeted interventions are needed to improve skills and employability; address constraints that affect the capacity of the self-employed or small entrepreneurs to increase their earnings; and expand access to systems that protect workers' income and guarantee basic standards in terms of working conditions.

15. This paper provides an in-depth assessment of labor markets in Pakistan and outlines policy recommendations in the areas of skills development, support to entrepreneurship and workers protection. The paper is based on a review of previous studies of the labor market (see Box 1) and new analysis of survey and administrative data, as well as discussions with policymakers and stakeholders. The policy recommendations take into account the ongoing devolution process, which transferred labor policy instruments from federal to provincial governments in July 2011.

16. The paper is organized as follows. The next two sections look at the supply and demand side of the labor market respectively. The paper starts by analyzing the evolution of labor force, the distribution of skills, where jobs have been created, and the implications for labor productivity growth. It then moves on to focus on the analysis of labor market outcomes at the individual level. It discusses the determinants of participation rates, unemployment, type of work, and earnings. Based on this analysis of trends and labor market outcomes the paper concludes by identifying key areas for policy interventions.

Box 1 Previous Studies on Youth in Labor Market of Pakistan

A large number of studies have examined various factors that could potentially affect labor market trends and outcomes in Pakistan. Many of them noted demographic changes as a main pressure of the supply side of labor which will eventually be a determinant of growth potential (World Bank 2011; Hussain et al. 2009; Nayab 2006). Increases in working age population and decreases in dependency ratio, due to declines in fertility rate and population growth, can provide a unique opportunity of development to reap 'demographic dividend' as evidence from East Asian countries suggests (Bloom et al. 1998; Bloom and Williamson 2000). However, abundant young workers without productive activities may be a source of social unrest by engaging in socially undesirable activities (World Bank 2011b). Pakistan is at this crossroad in managing the youth bulge.

Recent studies examined how the demographic factor manifested in the labor market in Pakistan taking advantage of micro data sets such as a series of regular Labor Force Surveys (LFS). They conducted descriptive analysis on the main labor market indicators including labor force participation, employment, and earnings, disaggregating them by gender, education and region (Nikitin 2011; World Bank 2011a; ADB 2008; ILO 2008). They pointed to the prevalent and persistent issue of labor market segregation, emphasizing the dire situation of youth as well as women and rural workers. The opportunities of employment for the disadvantaged workers are very limited (ILO 2008; Hou 2011; Naqvi and Shanaz 2002; Aslam 2009). Moreover, the overall job quality is low that informality prevails and labor earnings are hardly enough to move households out of poverty (Cnoblach and Salam 2011; Lloyod et al. 2010).

A few main constraints to creating more and better jobs that require long-term policy reforms include: low investment in human capital and skills development (World Bank 2007; Bloom et al. 2009; NAVTEC 2009; Jacoby and Mansuri 2011); poor business environment (Doing Business 2011); rigid labor market regulations (World Bank 2006; Pierre and Scarpetta 2007); and macroeconomic instability due to conflicts and natural disasters (World Bank 2010c). While all of these areas are relevant and should improve over time, more strategic action plans and options for policy interventions need to be delved in order to address the rapidly emerging youth issues in the labor market.

Dynamics of Labor Supply

17. This section first looks at the determinants of labor force growth: the size of the working age population⁵ and participation rates. It then looks at the distribution of skills and future prospects.

Demographics and Labor Force Participation

18. Over the past ten years, the labor force especially among youth has increased at a faster rate than the regional average (Table 1).⁶ Between 2000 to 2009, the labor force grew at 3.5 percent per year as a result of both an increase in working age population and participation rates. The youth workforce grew even faster at 3.9 percent per year, compared to a regional average of 2.7 percent.⁷

19. Pakistan is now in the midst of a ‘demographic bulge’, with the number of people entering working age expanding at a faster rate than the total population. This phenomenon will likely last at least for another ten years (See Figure 1). As fertility and mortality rates decline, the share of children is contracting while the share of working age population expands.⁸ The youth population (ages between 15 and 24) today is about 18 million, representing 36 percent of the working age population. Without changes in participation rates, the labor force is expected to grow by 2.7 percent per year, with around 1.7 million young workers entering the labor market each year. And if female labor force participation increases, the pressure for new jobs on the labor market would be larger.

20. The outcome of this demographic transition will depend on the capacity of the economy to absorb new entrants to labor market. In principle, a higher share of working age population relative to the population of dependents leads to an increase in income per capita. And in case of Pakistan, to date, employment has been growing as fast as the labor force, even in the case of youth. Hence, the country has not experienced an increase in unemployment, and international migration does not seem to be an important factor in keeping the unemployment rate low given the size of net emigration (0.8 percent of labor force as of 2009).⁹ Looking forward, however, a large influx of workers can become a challenge. An increase in female labor force participation (from 16.7 percent in 2000 to 23.5 percent in 2009) will also add pressure to the quantity of jobs needed. In addition, as discussed above, there is a concern with the quality of jobs created. The abundant labor supply can also likely lower the bargaining power of workers vis-à-vis employers, leading to lower wage rates and investments in skills, and to limited worker protection.

⁵ Working age population in this article is defined as ages of 15 or above, and youth are those between 15 and 24.

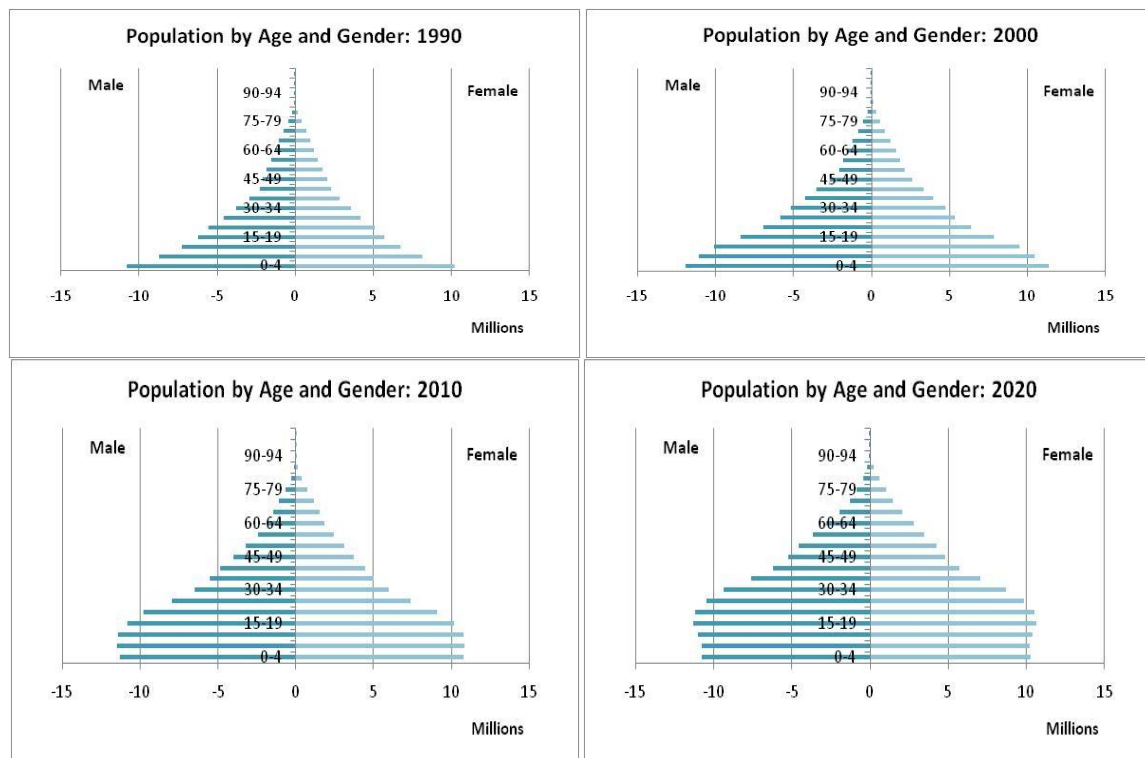
⁶ Note that we only specify the most recent year for simplicity when presenting data constructed over two years. For instance, we specify ‘2009’ when using the LFS 2008-09 data.

⁷ Note that Pakistan figures compare year 2000 and 2009, while regional average compares the period of 1995-99 to 2005-08 due to limited data availability.

⁸ Total number of births per woman steadily decreased since mid 1980’s from 6.5 to 3.9 in 2009 according to World Development Indicators.

⁹ According to Migration Factbook published from the World Bank, net emigration as of 2010 is 443 thousands, which is merely 0.8 percent of labor force. A high proportion (about 12 percent) of tertiary educated skilled workers are among those emigrated and about 6 percent of GDP came from remittances as of 2009.

Figure 1 Change of Demographic Structure: 1990-2020



Source: International Data Base by US census bureau (<http://www.census.gov/ipc/www/idb/country.php>)

Table 1 Labor Market Indicators of Pakistan Compared to Region Average

	Pakistan			Other SA countries
	2000	2009	Percentage change (%)	Percentage change (%)
Labor Force				
Population (million)	144.5	170.5	18.0%	17.6%
Labor Force (million)	43.0	57.9	34.7%	30.9%
Youth labor force (million)	12.7	17.7	38.7%	26.8%
Employment				
Employed (million)	40.0	55.0	37.6%	30.5%
Employed Youth (million)	11.2	16.2	44.0%	27.7%

Source: WDI, ILO-KILM, US Census Bureau.

Notes: Data for Pakistan comes from WDI and labor force surveys for 2000 and 2009. The regional average comes from a four-year average value of the period 2005-08 relative to the five-year average of values for the baseline period 1995-99 from WDI and ILO-KILM due to missing data

Skills

21. A major challenge facing Pakistan is the large stock of unskilled workers already in labor force and a flow of unskilled youth entering labor market. The general education level among employed workers in Pakistan has barely improved and about 40 percent have no education regardless of their geographic location (Figure 2).¹⁰ The average educational attainment of the working age population is quite low and there are wide gaps between

¹⁰ Figures related to education and labor market outcomes hereafter are calculated from the Labor Force Survey (LFS) unless mentioned.

genders (the average years of schooling are 6.5 for men and 3.5 for women in 2009). In this regard, there are large variations across urban/rural, provinces and income groups. Thus, the average years of schooling among the employed range from 4.7 in Balochistan to 5.4 in NWFP, and the education level in rural areas falls behind that of urban areas (the proportion of workers with primary and above education is about 71 percent in urban areas vs. 43 percent in rural areas).

22. Youth's education attainment is higher than the average of the working age population, reflecting improvements in education, but still about a third of youth have no education at all. The average years of schooling is 6.5 and 3.5 among male and female working age population respectively, while the figures for youth are almost 7.0 years for male and 5.3 years for female (Figure 3). This indicates a significant progress in education especially among women. Despite the progress, however, it is unlikely that Pakistan will meet UN's Millennium Development Goals in primary education.¹¹ As of 2009, the proportion of youth without any education is 20 percent among male and 41 percent among female, which is the lowest level among South Asian countries. Even among those who attend primary education, the completion rate is only 35 percent.¹² Gaps across provinces and between social groups (including Castes) are likely to persist.¹³

23. Literacy rates among the workforce again underscore the bleak situation. As of 2009, the literacy rates among female and male youth were only 61 and 79 percent respectively—again the lowest levels among South Asian countries. A little over a half of employed workers (58%) are literate—and only 48 percent in rural areas. This high level of illiteracy drastically limits workers ability to develop new skills and therefore their labor market opportunities.

24. Even among those who attended school there are concerns about the skills effectively acquired. Indeed, despite quantitative progress in school attainment, qualitative evaluations of students' learning are often negative. For example, a recent study looking at the quality of schooling in Punjab region, found that almost 80 percent of third graders cannot read first grade texts.¹⁴ The curriculums and textbooks are criticized to be unrealistic compared to students' cognitive abilities.¹⁵ The relevance of the skills acquired is also an issue. Thus, one third of graduates from tertiary education are in jobs that do not use the skills they acquired.¹⁶

¹¹ The United Nations' Millennium Development Goals (MDG) aims to ensure by 2015 that all children, boys and girls alike, should be able to complete primary schooling, and there have been worldwide efforts to achieve this goal

¹² See Robalino et al. (2011a).

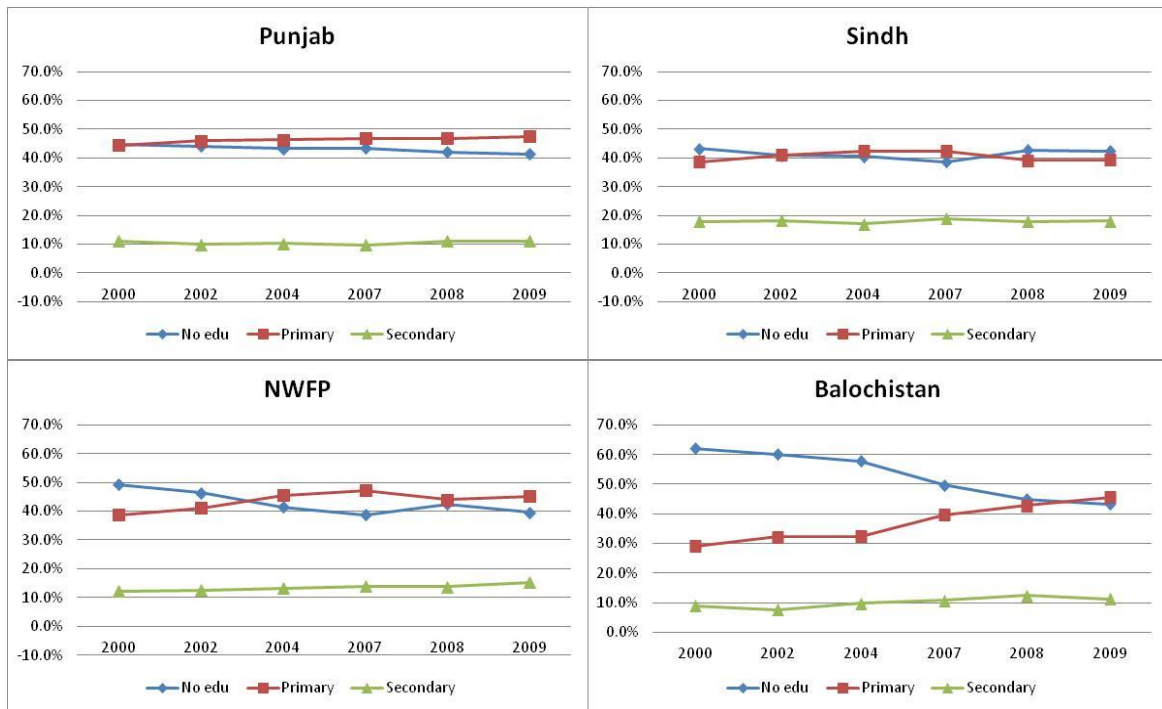
¹³ See Jacoby and Mansuri (2011).

¹⁴ See Andrabi et al. (2009).

¹⁵ Warwick and Reimers (1995).

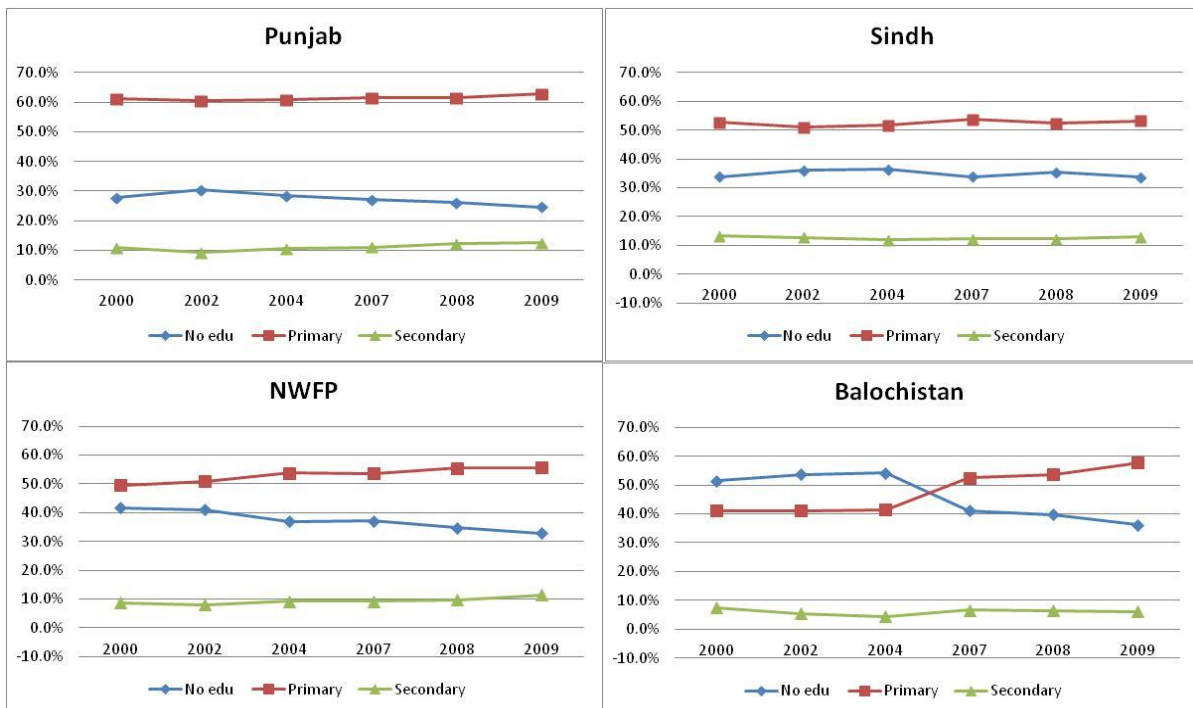
¹⁶ Farooq (2011).

Figure 2 Education Distribution among Workers Aged 15 to 64 by Province



Source: Authors' calculation from the Labor Force Survey: various years.

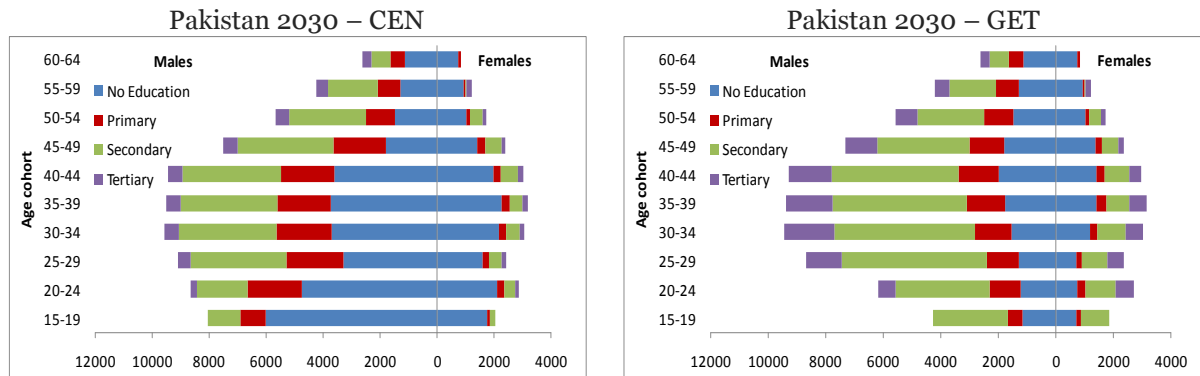
Figure 3 Educational Distribution of Youth Aged 15 to 24 Years by Province



Source: Authors' calculation from the Labor Force Survey: various years.

25. Projections show that, even under optimistic scenarios, there will only be limited improvements in the distribution of skills in the labor force. Under a Constant Enrollment Number (CEN) scenario, the share of unskilled workers would remain virtually unchanged by year 2030 (see Figure 4). A more positive scenario, Global Education Trend (GET), which assumes sufficient investments to allow enrollment in education to expand according to historical trends, shows a substantial increase in secondary education.¹⁷ But the share of workers with tertiary education would remain small. These results show the importance of policy interventions to improve the skills of workers who are out of formal education system.

Figure 4 Projections of Labor Force by Education, 2030



Source: Robalino et al. (2011b) Annexure 3.

¹⁷ The projections presented here are from Robalino et al. (2011b). Their model, based on Samir et al. (2010), includes differential fertility based on education. Constant Enrollment Number (CEN) scenario assumes that school enrollment of a new cohort of population remains constant without expansion, imposing most conservative scenario of population’s education. On the contrary, Global Education Trend (GET) scenario assumes that how rapidly school enrollment expands for each cohort is determined by a common global relationship between the overall enrollment rate and expansion. Using the global trend and country specific figures including initial education, population and fertility rate, GET model provides a plausible scenario of workforce growth and their educational attainment. For more detailed discussion see Samir et al. (2010).

Dynamics of Labor Demand

26. This section looks at the ‘demand side’ of the labor market, focusing on the quantity and types of jobs that have been created and in which sectors. It compares trends in job creation with trends in labor supply and discusses the challenges going forward in terms of GDP growth. It also analyzes the effects of employment creation patterns on labor productivity growth and its contribution to GDP per capita growth.

Employment Creation

27. Employment in Pakistan has grown as rapidly as the labor force due, in part, to strong economic growth which has averaged 5.2 percent annually over the past decade except for economic downturns in 2001 and 2009. However, due to recent global recession, Pakistan’s growth rate has declined to around 3 percent,¹⁸ which could have cost the country around 0.64 million jobs annually (See Box 2). If the real GDP growth rate remains at 3 percent, all things being equal, the unemployment rate by the year of 2020 could be as high as 14 percent.¹⁹ To absorb all the new entrants to the labor market without increases in participation rate and keeping the unemployment rate at the level of 2009 (5.1%), GDP would need to grow at least at 5 percent per year.²⁰

Box 2 Required Number of Jobs by Different Scenario

Based on the size of population by each gender and age projected by UN and making the following assumptions:

- The elasticity of employment with respect to output is from the regression coefficient (β_1) using data between 1999 and 2009 of the equation: $\log(\text{employed}) = \alpha + \beta_1 \log(\text{real GDP}) + \beta_2 \text{year} + \varepsilon$, estimated at 0.528, and assumed to remain constant;
- The gender ratio among the unemployed remains the same as 2009 where about 60 percent are male and 40 percent female;
- Labor force participation rate of men in 2020 will be at the same level as 2009 at 81.7 percent;
- Labor force participation rate of women in 2020 can be either at (i) the level of 2009—23.5% or (ii) a more optimistic level—27.4% that can be reached if the participation rate of those with primary and secondary education catches up with that of their less educated peers;

The size of male labor force by 2020 will be 59 million. Depending on female labor force participation rate, the size of female labor force will range from 15.9 to 18.5 million.

- If the unemployment was to remain around at 5.1% as in 2009, the number of jobs needed is 71.2 million to 73.8 million which requires annual GDP growth rate to be 5% to 6%.
- If the annual GDP growth rate were at 3% (actual level during the global crisis), the number of jobs created would be 64.6 million and overall unemployment rates would be 14% to 17% with 10.5-13.1 million unemployed workers.

¹⁸ An average of the real GDP growth rates among 3.68% (2008), 1.72% (2009) and 3.76% (2010) is 3.05%.

¹⁹ With constant employment-output elasticity, a 3 percent real GDP growth rate translates to 1.58 percent employment growth. This yields that employment to population ratio is 0.46, given the current number of employed and predicted population by 2020. Under current labor force participation at 53.1 percent, unemployment is calculated to be about 14 percent (unemployment rate = $1 - \text{emp2pop}/\text{lfp}$, where emp2pop presents employment-to-population ratio and lfp denotes labor force participation).

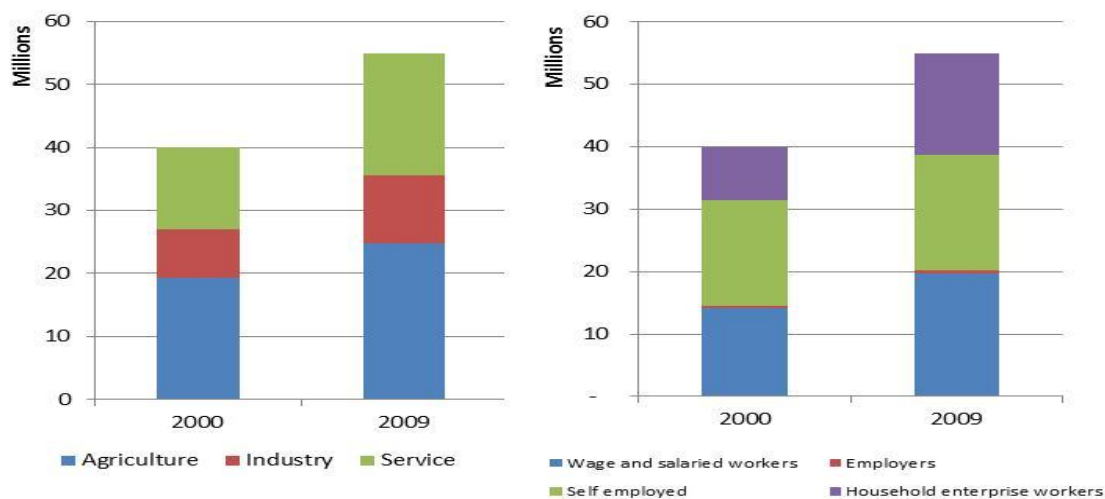
²⁰ To be consistent with National Statistics, we used the definition of unemployment as in the labor force survey: those who are available and seeking jobs but currently without work, or who are not currently available due to illness, temporary lay-off or apprenticeship.

28. When increases in women’s labor force participation are considered, the pressure to job creation becomes even greater. The UN projection of population shows that working age population in Pakistan by 2020 will be about 140 million. When the current labor force participation for each gender is applied, the projected size of labor force in 2020 would be about 75.1 million (59.1 million male and 16.0 million female). If female participation rates reach 27.4 percent by 2020, additional 2.6 million female workers would enter the labor force increasing the projected size of the labor force to 77.7 million.²¹ Assuming constant output-employment elasticity, almost an extra one percent of real GDP growth would be needed to keep unemployment rates as it is while absorbing increased female workers.

29. Not only the quantity of jobs, but also their quality poses a significant challenge to Pakistan. Between 2000 and 2009, 15 million ‘new jobs’ were created in Pakistan, but most were in low quality activities. First, still more than a third of jobs were created in the agriculture sector and 45 percent of workers engaged in agriculture (see Figure 5) even though its share of GDP decreased from 26 to 21 percent over the same period.²² The industrial sector provided 20 percent of the jobs and services—the remaining 44 percent. Overall, the share of employment in agriculture decreased due to an increase in service share only between 2000 and 2002, yet since 2002 the share of employment in the agriculture sector has been on an increase with that of industry being stagnant (see Figure 6).

30. Secondly, about sixty percent of the jobs created were in household enterprises and self employment which is usually considered to be low productivity (Figure 5). Over the last decade, the share of workers in family businesses increased by about 8 percentage points (from 21.4 to 29.6 percent). Wage and salary jobs created during the period constituted about 36 percent of the total. In fact, over time, the shares of wage employment and even self-employment have been on a downward trend.²³

Figure 5 Jobs Created Between 2000 and 2009

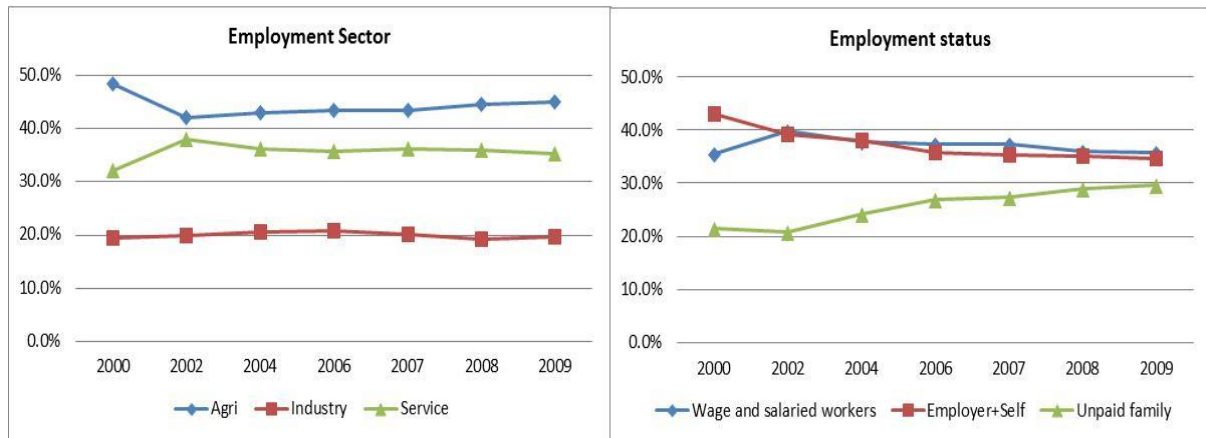


Source: Authors’ calculation from the Labor Force Survey 2000 and 2009

²¹ As of 2009, female labor force participation is lowest among those with primary and secondary education at around 14%. If the participation rate of these education group increases up to an average rate (23.5%) by 2020, the overall female labor force participation rate would be around 27%.

²² World Development Indicators.

²³ Employers and self employed are combined in this graph.

Figure 6 Employment Share by Sector and Status

Source: Authors' calculation from the Labor Force Survey: various years.

31. Finally, even when it comes to wage employment many of the jobs created were in the informal sector.²⁴ Among the 5.4 million wage jobs created over the past ten years about 76 percent were in informal sector, leaving the share of informal employment among wage employment slightly increased from 58.9 to 63.6 percent. Indeed, the share of individuals working in firms with any written contracts is barely 13 percent of the total employed.²⁵ This, to some extent, is not surprising given that the majority of individuals work in firms (95.9 percent) that are with less than 10 employees. The fact is, however, that the large majority of Pakistani wage earners is in lower productivity jobs and lacks an access to income protection systems.

Employment and Labor Productivity

32. Where jobs are created ultimately determines the dynamics of aggregate labor productivity and economic growth. As employment moves from low to high productivity firms within sectors, and from low to high productivity sectors/activities, overall labor productivity increases and so does income per capita. Here we look at the decomposition of GDP per-capita growth in terms of labor productivity growth, employment growth and the increase in share of working age population.²⁶ In addition, we examine how job creation within and across sectors affected employment and productivity growths.²⁷

33. In Pakistan the increase in GDP per capita between 2000 and 2009 was in large part due to an increase in the quantity of labor rather than labor productivity. Per capita GDP adjusted by PPP increased from 1,845 to 2,357 dollars over the period at an average of 3.1 percent per year. About 37 percent of this increase, however, was explained by an increase in labor productivity approximated by output per worker (see Table 2). Increases in

²⁴ Informal workers are broadly defined as those who work as a family worker, casual wage workers paid by piecemeal, worker at firms without contracts, workers at small firms (below 10) and agricultural workers.

²⁵ When asked about written contracts, in LFS, they answer "yes", "no", and "don't know." These figures are calculated based on the proportion of "yes" and should be interpreted with caution. For example, the share of firms with written contracts increase over time, which may reflect improved knowledge not so much as an increase in written contracts.

²⁶ There are a few caveats in this approach worth mentioning: this is descriptive and accounting based, and does not draw causal inference between the productivity and growth per capita; the measure of productivity here (GDP per worker), being roughly calculated, may not fully capture the actual hourly productivity of a worker; and depending on the GDP measures (Purchase Power Parity terms or CPI adjusted real terms) the results can differ.

²⁷ See Annexure 1 for a technical detail.

employment and the share of working age population contributed 27 and 36 percent respectively to GDP per capita growth. Thus, much of the improvements in income per capita are explained by demographic factors rather than increased output per capita.

Table 2 Decomposition of GDP per capita Growth between 2000 and 2009

Outcomes	2000	2009	Contribution	Change (\$)
GDP per capita (PPP)	1,845	2,357	100.0%	512
Output per worker	6,671	7,307	37.3%	191
Employment ratio	47.2%	50.4%	26.6%	136
Working age population share	58.6%	64.0%	36.1%	185

Source: Size of population, labor force, and workers, and GDP (PPP) from WDI

Table 3 Decomposition of Growth in Employment Ratio by Sector between 2000 and 2009

Of working age population	2000	2009	Difference	Contribution	Change (\$)
Agriculture workers ratio	22.8%	22.7%	-0.11pp	-3.6%	-5
Industry workers ratio	9.2%	9.9%	0.72pp	22.6%	31
Service workers ratio	15.2%	17.8%	2.59pp	81.0%	110
Total (Employment ratio)	47.2%	50.4%	3.20pp	100.0%	136

Source: Sector share of contribution to GDP from WDI

34. The slow growth in labor productivity is explained by the little enhancement in sector productivity and slow structural transformation (see Tables 3 and 4). Among the increase in the overall employment ratio between 2000 and 2009, about 81 percent is explained by the increase in employment in service which experienced merely 2.59 percentage points increase in employment ratio over this period. Transition from agriculture to higher productivity industry and service is very slow, and still about 45% of the employed are in agriculture.

35. There exists a large gap across sectors in the level of output per worker. The productivity of agriculture in 2000 was about a third of that in services and the gap has been widening. Indeed, labor productivity in agriculture decreased by 2.3 percent between 2000 and 2009, whereas it increased in the industry and services by 12.8 and 6.7 percent, respectively (see Table 4). Overall, Pakistan's worker productivity improved by a meager 9.5 percent—this is the lowest level of labor productivity even for the developing world.²⁸ As an illustration, if intersectoral shifts from the agriculture to industry sector take place so that the employment share of agriculture and industry becomes 30% and 35% respectively, output per worker (productivity) would be around 1,565 instead of 636 dollars (See the 7th column in Table 4).

²⁸ See Cho et al. (forthcoming) for the summary of labor productivity trends by the type of countries defined in the paper. Even the group of countries that made slow progress in labor productivity increased GDP per worker by 15 percent over 10 years from 1995-99 to 2005-09.

Table 4 Changes in Labor Productivity (Output per Worker) by Sector

	2000		2009		Actual Productivity change	Contribution	Hypothetical scenario
	Share (1)	Output/ worker (2)	Share (3)	Output/worker (4)	difference[%] (5)	Dollars [%] (6)	
Agriculture	48.4%	3,574	45.1%	3,492	-82.3 [-2.3]	-38.8 [-6.10]	Agriculture: 30% Industry: 35% service: 35%
Industry	19.4%	8,021	19.6%	9,046	1024.5 [12.8]	199.6 [31.4]	358.6 [22.9]
Service	32.2%	10,514	35.3%	11,216	702.7 [6.7]	237.1 [37.3]	245.9 [15.7]
Intersectoral shift						237.8 [37.3]	985.4 [63.0]
Average (total)	100.0%	6,671	100.0%	7,307	635.7 [9.5]	636 [100]	1,565 [100]

Source: Employment share of each sector from LFS; GDP (PPP) and the number of workers from WDI

36. In summary, the demographic changes that are reducing the number of dependents per working age individuals generate a window of opportunity to increase income per capita. To make this happen, the growing workforce needs to be involved in productive activities. Unfortunately, over the past decade the share of workers in each sector leveled and sector productivity improved little, leading to a meager change in income per capita. Today government efforts should focus on two fronts: (i) increasing productivity within each sector especially in agriculture; and (ii) expanding non-agricultural job opportunities and facilitating transitions into these jobs.

Youth and Labor Market Outcomes

37. This section analyzes how labor market outcomes in Pakistan vary as a function of individual characteristics. The focus is on labor force participation and unemployment rates, type of job and sector, and earnings. The results show that there are important variations across regions and that unskilled workers, women and youth tend to be more vulnerable and display worse labor market outcomes.²⁹

Youth in Labor Force Participation and Unemployment Rates

38. Among men, education is the most important predictor of labor force participation both in urban and rural areas.³⁰ Except for the group with less than primary education, higher education is associated with higher participation rates relative to lower secondary and pre-university education (see Figure 7A).³¹ Overall, labor force participation for men is quite high and stable over time across all education levels. Adult workers and those who are married are more likely to participate in the labor market than young or single men.

39. Women show different and more complicated patterns of labor force participation. They are much less likely to participate than men. Indeed, despite some progress observed over time, overall women's labor force participation is still the lowest level in the region.³² Education is an important predictor of labor force participation; women with higher education are less likely to enter the labor force than women with no education except for the group with pre-university and above education in urban areas. While being married is positively associated with labor force participation for men, the opposite is true for women. The number of children, however, does not seem to have an effect on labor force participation. Like in the case of men, other things being equal, younger women are less likely to participate.

40. In terms of unemployment, similar factors affect both men and women although the extent of correlation varies (see Figure 7B).³³ Higher education is associated with higher unemployment rates particularly in rural areas where the demand for highly educated workers may be low. Being married is significantly correlated with lower unemployment, especially for men, suggesting that the responsibility to support their families upon marriage may reduce the reservation wage to reduce unemployment. Youth unemployment rate is higher than that of adults for both men and women, even controlling for the fact that younger workers have higher education. In year 2009, youth unemployment experienced a particularly high increase as the economic downturn affected them more than adults.³⁴

²⁹ For summary statistics for the analysis, see Annexure 2A and 2B.

³⁰ See Annexure 3A and 3B for labor force participation rate, employment ratio and unemployment rate by gender and education.

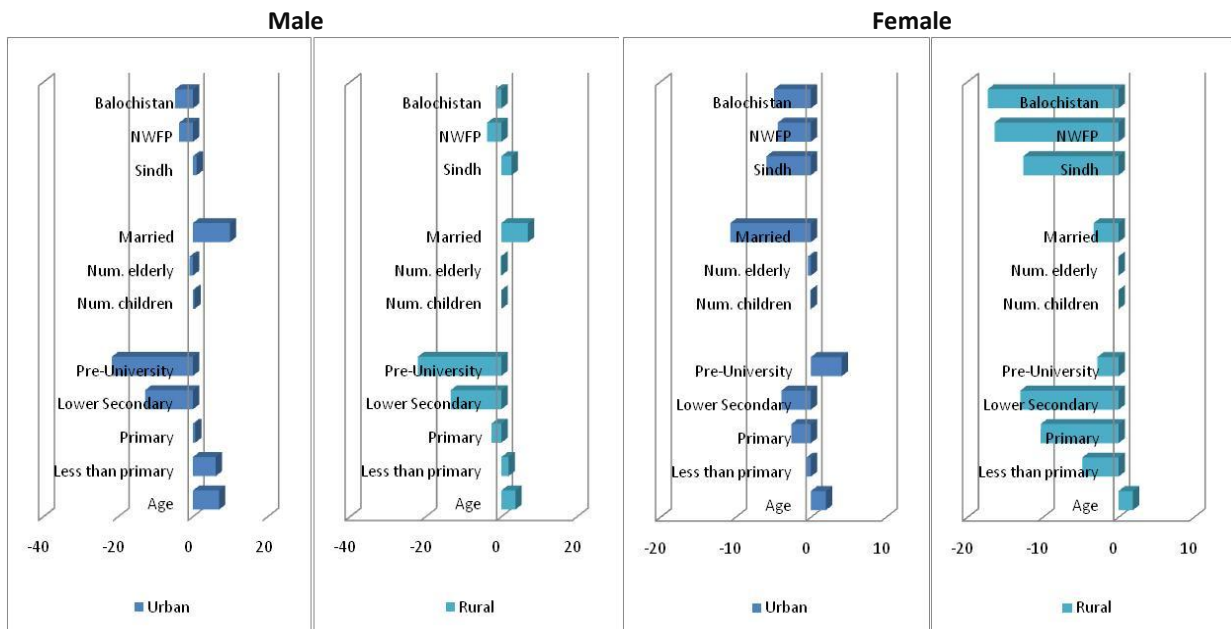
³¹ See Annexure 4A for regression results of the determinants of labor force participation by gender and region.

³² The region's average female labor force participation during 2005-08 was 46.3% while that of Pakistan was 20.7%. Only the MENA region has a lower level female labor force participation (26.9%) than that of South Asia region, and all the others show significantly higher rates (EAP: 58.4%, ECA: 52.0%, LAC: 48.9%, and AFR: 63.8%, see World Development Indicators).

³³ See Annexure 4B for regression results of the determinants of unemployment by gender and region.

³⁴ When regressed with the interaction of indicators of youth and year 2009, the coefficient of unemployment showed significantly negative values suggesting a large hit from the economic downturn. This is consistent with the finding that the recent great recession has disproportionately affected youth across developing countries. See Cho and Newhouse (2011).

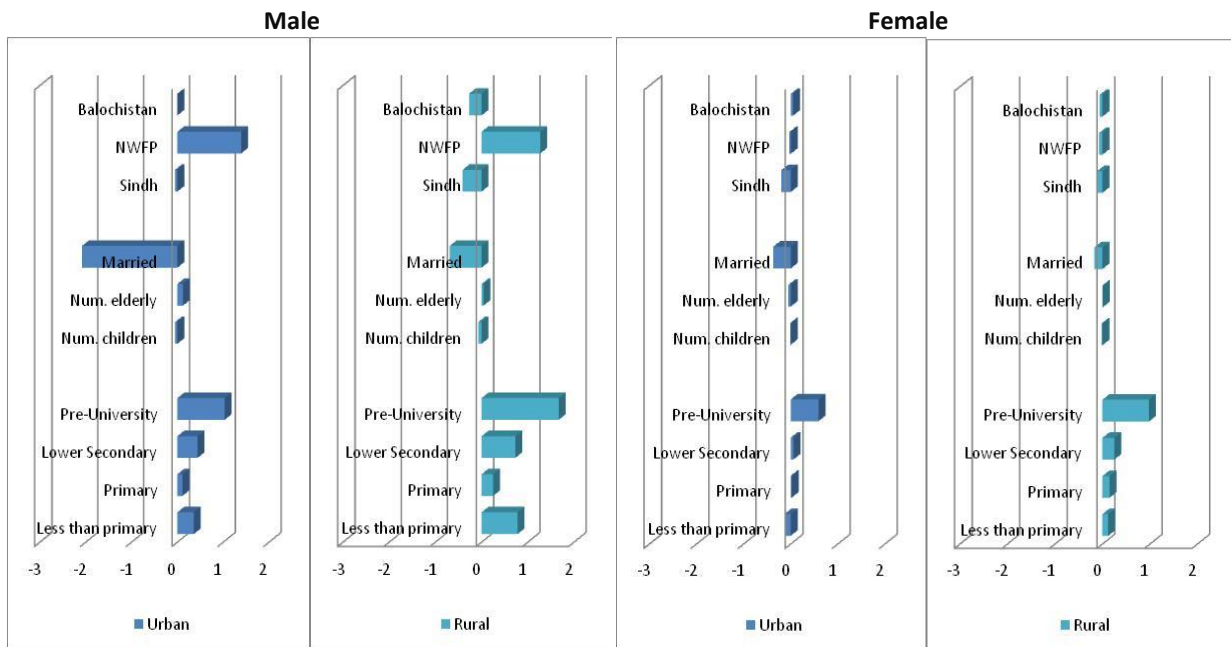
Figure 7A Contribution of Major Variables to LFP by Gender



Source: Author's regression based on LFS various years. See Annexure 3A for the regression results.

Note: Each bar represents relative (to omitted category) contribution to the labor force participation rate (in percentage points).

Figure 7B Contribution of Major Variables to Unemployment by Gender



Source: Author's regression based on LFS various years. See Annexure 3B for the regression results.

Note: Each bar represents relative (to omitted category) contribution to the unemployment rate (in percentage points).

Types of Jobs

41. Education is a significant factor determining what type of jobs—regular wage employment, casual wage employment, self employment and family workers—people get.³⁵ Workers with higher education (secondary and tertiary education) are generally concentrated in regular wage employment and then self employment, while less educated workers tend to work more frequently as casual or family workers. Casual wage employment provides work opportunities particularly for less educated men and youth, while family work mostly absorbs low educated women as well as youth. The effect of education in determining access to wage employment is stronger for women. Not surprisingly, the regression results indicate that women are more likely to be working on household enterprises if they are married and/or have children.

42. It is important to observe that the overall economic slowdown in 2008-09 had an effect on the types of jobs that people get. The analysis suggests that while labor force participation changed little—except for rural female workers—there were shifts across different employment status: regular wage employment and self employment significantly declined relative to family workers. Men tended to work more as casual employees, and family work increased for females.

43. Individual characteristics including education and age are also significantly correlated with the sector where individuals work.³⁶ Not surprisingly, workers with high levels of education generally work less in agriculture, construction and manufacturing and more in public sector or in services. Men and adult workers are more likely to be in higher productivity and higher paying jobs than women and youth. In general, workers' distribution across sectors varies widely across regions. The likelihood of being in a 'good' job is higher in urban areas and high income provinces.

44. Finally, formal sector employment is highly correlated with individual characteristics.³⁷ Although the definition of formality varies—it can be working on a registered firm, having a labor contract, or contributing to social security), it usually has implications on job quality. Workers in informal sector, in most cases, earn less, are exposed to abrupt job loss without security, and have limited access to social insurance and worker protection. In Pakistan, like in other developing countries, men are much more likely to have a formal sector job than women. Youth, regardless of gender, on the contrary, are more likely to work in the informal sector. And, consistent with the previous results, education is a key predictor of the quality of the job. Skilled workers are more likely to land jobs protected by labor regulations and that offer access to social security.

³⁵ See Annexure 5 and Annexure 6.

³⁶ See Annexure 7 and Annexure 8.

³⁷ See Annexure 8.

Earnings and Returns to Education

45. Individual earnings vary considerably by sector and there are important gaps (see Table 5). Monthly earnings are highest for the service sector and lowest for agricultural workers. Workers in service sector jobs earn almost twice the amount than those in agriculture. The gap between public and private sector is also high and persistent. This is consistent with the finding in Section 4.2 that workers with high levels of education generally work less in the agriculture, construction and manufacturing and more in public sector or in services.

Table 5 Contribution of Major Variables to Unemployment by Gender

Year	2000	2002	2004	2006	2007	2008	2009
Average	4,697.4	4,328.3	4,640.9	5,094.4	5,478.5	5,288.5	5,280.6
Agriculture	2,716.3	2,387.6	2,682.1	2,567.2	2,966.8	3,060.8	3,114.9
Industry	4,393.1	3,736.8	3,914.9	4,348.2	4,626.6	4,755.9	4,684.5
Service	5,298.3	5,015.2	5,427.7	6,091.8	6,444.5	6,015.5	6,045.1
Private	3,985.3	3,587.9	3,799.8	4,088.4	4,513.8	4,393.7	4,323.0
Public	6,153.0	6,172.3	6,966.5	7,947.0	8,128.9	7,495.6	7,636.1

Source: LFS of various years

Notes: Earnings are in real terms—2005 Pakistan Rupees deflated using the CPI. Earnings information is limited to paid workers.

46. Individual characteristics, in particular gender, age and education affect the types of jobs that people get and therefore their earnings. In Pakistan, like in other countries, more educated workers earn more, so do men relative to women and adult workers relative to young workers. The average difference in wages between those with primary education and no education is around 14 percent for men and 44 percent for female. Men earn, on average, 36 percent more than women. And, other things being equal, earnings increase by around 4 percent with an additional year of schooling.³⁸

47. But investing in education is not always a good idea.³⁹ Internal rates of return are high for primary education (relative to no education) but significantly lower for higher education (See Table 6). For example, acquiring some education compared to no education at all, on average, yields 23 percent of return, whereas completion of primary education (versus some primary), secondary (versus primary) and tertiary (versus secondary) only yield 0.6, 3.4, and 8.0 percent respectively. This suggests that having some education may help workers learn basic literacy and numeracy skills that make a big difference in the labor market, but that the additional education does not yield much, unless it is higher education. This is explained, in part, by the traditional structure of the economy where a majority of

³⁸ This is based on a Mincerian regression pooling both urban and rural areas, and men and women without addressing selectivity.

³⁹ This finding is based on individuals' perspective. While the results on high return of primary schooling emphasize the importance of basic education, this does not automatically imply that public resources should be moved away from higher education. From the social point of view, of course, there are positive spillover effects associated with higher education—i.e. the presence of secondary school can have positive effects on enrollment rate of primary school and tertiary education would not be possible without secondary education.

workers engage in low-skills/labor-intensive sectors such as agriculture where higher skills are not well utilized.

Table 6 Internal Rate of Return to Education

	Some primary vs. No education	Primary completion vs. Some primary	Secondary vs. Primary	Tertiary vs. Secondary
Overall	23.2%	0.6%	3.4%	8.0%
Male	9.8%	0.6%	3.1%	7.8%
Female	114.2%	0.5%	6.6%	11.3%
Urban	10.3%	1.0%	4.1%	8.1%
Rural	34.2%	0.4%	3.2%	7.9%
Agriculture		-2.6%	3.8%	11.5%
Industry	75.2%	4.5%	4.5%	9.1%
Utilities/Transportation	19.7%	3.4%	3.5%	8.1%
Construction/Commerce	3.0%	1.9%	1.7%	5.3%
Other Services	13.8%	1.1%	4.5%	6.9%
Informal	23.2%	0.5%	3.4%	8.2%

Source: Robalino et al. (2011a). Calculations from Household Survey Data of 2007/08.

48. The returns to some primary education relative to no schooling experienced a large increase over time (from 2000 to 2008), while those for higher education slightly decreased.⁴⁰ The sustained growth in internal rate of return to some primary education versus no education implies that the supply of labor with primary school level has been growing at a slower rate than the demand. The contrary is true for tertiary education. Either the demand for high skilled workers has been growing at a slower rate than the supply, or university graduates are not meeting the demands of employers. The latter would imply that among university graduates there are two types: those who graduate from prestigious universities for whom employers compete and who have seen their earnings increase, and those who end up in jobs that do not use their skills where they compete with lower skilled workers and who have seen their earnings stagnate or decline.

49. The relative returns to education vary widely by gender, industry and region. Returns are generally higher for women than for men, particularly when it comes to some education versus no education. In terms of sector, education of all levels tends to be valued more in industry, in the utilities and transportation/finance sectors while it pays little in construction and commerce. In terms of regions, some primary education is valued significantly more in rural than urban areas, although there exists little difference in the returns to other levels of education.

⁴⁰ See Robalino et al. (2011a) for detailed discussion on the internal rate of return to various education levels.

Policy Agenda

50. As discussed in previous section, Pakistan is facing serious problems in terms of employment creation. A large share of working age population, mainly women, is not participating in the labor force; those who are in labor force work for the most part on low productivity activities or are unemployed—including educated workers. Youth are particularly vulnerable and because their number is increasing fast, things can further deteriorate. The current situation is explained, at least in part, by very low level of education of the labor force. Addressing these problems requires interventions at various levels. First to facilitate the creation and expansion of business and establishments that will be their main source of jobs. Second, to incentivize and enable individuals to access these jobs.

51. Much attention needs to be given to the role of macroeconomic and regulatory policies that promote stability, reduce costs of doing business and improve investment prospects. As discussed in other parts of the CEM, these policies include balanced budgets, competitive exchange rates, investments in infrastructure and urban and agricultural development. These policies will determine the capacity of the economy to create jobs.

52. Another area that merits careful long-term planning is education. Improving the level of education of the labor force through better primary, secondary and higher education is a pre-condition to improving labor market outcomes. Today, two issues need urgent intervention. One is expanding universal primary schooling with improved quality, especially to the disadvantaged children in rural areas where returns to primary education are particularly high (See section 4). One type of intervention to achieve this is cash transfers contingent upon children's schooling.⁴¹ A recent study in Pakistan shows promising mid-term results (after 4 years) particularly among girls.⁴²

53. The other issue is to improve the relevance of tertiary education so that it is able to respond to rapidly changing demands for high skills in globalized markets. As discussed previously, the returns to tertiary schooling are relatively low today, suggesting that graduates are not acquiring skills that significantly improve their job opportunities. The Government of Pakistan established the Higher Education Commission (HEC) in 2002 and has been involved in reforms to improve quality, enrollment and coverage, and governance.⁴³ Continuing with these efforts, the government needs to invest more in improving the quality of public research and teaching while allowing a stronger participation from the private sector.⁴⁴

54. The effects of many of these interventions, however, will emerge in decades. In order to address the problems identified in the previous sections over relatively short term, the Government of Pakistan would need to consider interventions in four areas: (i) skills development among unskilled workers; (ii) support to entrepreneurship both for new entrants and those who are already working, often in low productivity activities; (iii) public works and service that can create a large scale job opportunities, and (iv) workers protection

⁴¹ See Fiszbein and Shady (2009).

⁴² See IEG (2011).

⁴³ Tertiary education expenditure as a percentage of GDP increased from 0.09 percent in 2001/02 to 0.29 percent in 2005/06, and the share of tertiary education expenditure among total education expenditure increased from 5.9 to 15.7 percent over the same period.

⁴⁴ This figure comes from 2008/09 Pakistan Education Statistics.

systems, aiming to adapt current institutions to labor market realities and expand their coverage. This section presents policy recommendations at each of these levels (See Annexure 9 for summary of policy recommendations).

Skills Development

55. Skills development beyond formal education system is achieved usually through TVET (Technical and Vocational Education and Training), OJT (On the Job Training) and training related ALMPs (Active Labor Market Policies).⁴⁵ These programs complement one another to address key market failures in the skills development: employers might not have sufficient incentives to invest in their workers due to poaching externalities; workers themselves might not invest in training because they do not have access to finance or information; and there can be coordination failures between individuals and employers.⁴⁶ However, in practice, the design and implementation of these programs are often limited to address these failures.

56. Like in other countries, Pakistan skills development policies face problems in terms of design and implementation. Pakistan's TVET system, where public intervention is concentrated, is characterized by a fragmented and supply-driven governance structure benefiting only a very small segment of the population and struggling to remain relevant. There is little understanding of training needs and investments among employers and thus no clear vision regarding policies to promote OJT. Finally, training related ALMPs, albeit relatively prevalent, are ad-hoc and rely on NGO's and international organizations operating with little or no coordination (see Annexure 10).

57. Technical Vocational Education and Training (TVET) system in Pakistan is managed by multiple ministries and organizations, yet covers only a small fraction of the labor force.⁴⁷ Enrollment has increased from 75,000 in 2001-02 to 238,000 in 2005-06⁴⁸ and more programs (such as BBSYDP, Benazir Butto Shaheed Youth Development Program, See Box 2) are being introduced. However, given that almost 1.5 million youth join the labor force in Pakistan every year, this access is very limited.⁴⁹ In addition, admission is quite restrictive since TEVTA programs require secondary or higher education which less than 11 percent of

⁴⁵ See Almeida et al. (forthcoming) for more detailed discussion.

⁴⁶ Individuals might not invest in training because there are not enough jobs for skilled workers and employers might not create these jobs because there are not enough skilled workers. Such case is referred to coordination failures.

⁴⁷ The Ministries of Labor and Manpower, Education, Social Welfare and Industries as well as the office of the Primer Minister administer training centers. At the federal level, two autonomous organizations, the National Vocational Training and Education Commission (NAVTEC) and the Skills Development Council (SDC), aim to regulate and coordinate activities. At the provincial level, provincial Technical Education and Vocational Training Authorities (TEVTA) operate and deliver programs while the provincial branches of federal institutions independently implement their own programs. In addition, many other government training institutes and NGO's (e.g. National Rural Support Program, NRSP) partnering with international organizations and donor agencies, take part in provision of training. Each institution widely varies with their network of trainers and private sector partners, target groups, fee structure, curriculums and pedagogical methods and accreditation system.

⁴⁸ See Blom et al. (2009).

⁴⁹ Recall that the proportion of youth who have ever received any vocational training in year 2007 is less than 1 percent.

youth have.⁵⁰ Thus, less than 1.4 percent of working age population enrolled in TVET during the period of 2000-07.

58. The performance of TVET programs and their impact on labor market outcomes are a cause of concern. Some of the problems include outdated or irrelevant courses, poor infrastructure and resources, little exposure to industry and a misalignment between demand and supply of skills.⁵¹ A tracer study of the BBSYDP program, for example, found that only 27 percent of participants were engaged in economic activities and 56 percent of them were still unemployed and looking for jobs after training.⁵² The program requires training institutes to achieve only about 30 percent of job placement rates. The study showed that 20 percent of participants considered job placement services requiring most improvement. Although some institutes (e.g. SDC) argue that job placement is part of the service provided to the trainees, there is no tracer study still less a rigorous evaluation on the impacts of training on participants' employment opportunities and earnings.⁵³

59. Looking forward, the government needs to consider reforms to improve governance and accountability; expand the role of private sector; and review financing mechanisms and payment systems:

- *Improving governance and accountability.* Regardless of financial dependency and supervision from government, it is recommended that the training institution and its board retain an autonomy in selecting target groups of trainees and training agencies, and types of professions and curriculum. Training agencies should be selected based on their competency which manifests through placement results, trainees evaluation, and employers' satisfaction, as well as resources and teachers' qualification. For a fair competition among training agencies, the institution should develop a transparent assessment system. Tracer studies that track trainees and their performance and the open dissemination of results can help. The training programs from the SDC suggest a promising model for good governance although a better evaluation system and practice is needed for further improvement (See Box 3): they have autonomous governance structure, being independent from government in financing and operating.
- *Expanding the role of private sector.* Private sector involvement in skills development is crucial and closely related to the efficiency of an institution. The main role of private sector in skills development lie in developing relevant training contents, delivering training services and also providing internships. Representatives from employers should be on the governing bodies of different training agencies. The government needs to give an equal chance to both public and private providers and design incentives to increase the number of private sector providers of training.

⁵⁰ While the coverage of TVET programs is limited, few other options exist for skill development of labor force; every year, Punjab NSC issues about 75-80 thousand certificates to those who take accreditation test including 20-25 thousand trainees. Training from NRSP covers only about 5,500 participants at a time. Finally, on the job training and apprenticeship is very limited.

⁵¹ See Blom et al. (2009); Janjua et al. (2010).

⁵² See ILO (2010).

⁵³ See Janjua (2008).

- *Reviewing financing mechanisms and payment systems.* The government has an important role in financing TVET to address some of the market failures including liquidity problems facing low income individuals. To the extent possible, limited public resource would need to be targeted to the most vulnerable population groups. And in order to improve the performance of public and private providers it is necessary to review payment systems, moving away from fixed budget allocations. One alternative is to use performance-based payment systems, which should be particularly relevant for public sector providers. Another alternative is to gradually move towards a system of vouchers that individuals use to purchase training from public or private providers.⁵⁴ Recent evaluations show that vouchers improve choice and the quality of training.

Box 3 **BBSYDP (Benazir Bhutto Shaheed Youth Development Program)**

The BBSYDP is a youth TVET program that the Government of Sindh initiated in 2008 to address youth unemployment and skills shortage issues, in collaboration with international organizations including the Bank and the ILO. This program targets youth ages between 18 and 35 giving particular attention to female and unemployed youth. The majority of participants have secondary and above education (97%). The training is provided for almost 90 professions based on the preference of participants for 2-3 months, with monthly stipend (PKR 2,500 or USD 29) as well as mobility allowance (PKR 4,000 or USD 470) for long commuters. The training is provided from private and public institutes that participated through open competition and were selected based on inputs such as adequacy of faculty, facilities, financial situation, and so on. See ILO 2010.

The job placement of participants is not satisfactory: more than half of the graduates (56%) were still unemployed and looking for jobs and 14% of graduates pursued further education, while only about a quarter of them engaged in economic activities. Even among those who work, only 26 percent were full time workers while the remaining graduates were part time, seasonal or on call basis workers. Also employment was heavily concentrated in education sector. The self reported reasons why the graduates remained unemployed were because they were unable to find a job and found needs to further develop skills before getting a job. This suggests that the BBSYDP should focus on improving their placement results.

⁵⁴ See Almeida and Cho (2011) and Johanson (2009) for the practice of voucher programs and training fund for the selected developing countries. For example, Brazil, Chile, Malaysia, Mexico and Singapore collect payroll levies and use the funds to encourage firms to invest in on the job training.

Box 4

Second Chance Training Programs: Skills Development Council (SDC)

The SDC, established in 1980's, significantly upgraded their activities since 2002, when the current form of Tripartite (Employers, Employees and Government) was formed in partnership with international organizations (The Bank and ILO) and Employers' Federation of Pakistan (EFP). The SDC's main responsibilities include regionally delivering training programs and developing National Vocational Qualification under the approval of National Training Board. The SDC has been providing training and awarding nationally recognizable certificates for those who pass their qualification tests including their trainees.

The main differences of SDC Lahore's training from that of Punjab TVETA (Technical and Vocational Education and Training Authority) lie in the areas of target group, private sector involvement and employment placement. Unlike TVETA that requires 8 to 10 years of education, SDC's training programs are focused on uneducated population. Their curriculum and pedagogical methods are accommodated for a large number of illiterate participants. The type of occupation under their training program tends to focus on, though not limited to, manufacturing. Depending on the profession and participants' proficiency, the duration of training can vary from one month to one year. SDC is an autonomous body and its financing is based on fee for training and accreditation, independent from government subsidies. Their role in providing training is to facilitate private sector (associations of particular industries or professions) participation in identifying skills gap and designing training programs, to invite private training institutes to participate in fee-based training programs, and to link the trainees to employers. As a result, their programs are known to have high employment placement compared to other training institutions.

60. Integrated ALMPs targeted to youth and women. Given the limited coverage of TVET programs and multiple constraints facing youth and women, the government can consider targeted programs that combine counseling, training, job-search assistance, intermediation and subsidized internship. Evaluations show that this type of integrated package can have positive impacts on labor market outcomes while being cost-effective (see Jovenes programs in Latin America and Malawi Youth Employment Program).⁵⁵ The following recommendations in terms of design and implementation can be taken into account:

- *Delivery.* The proposal is to have a system that operates through 'one-stop shops' that could be public or private employment offices—including NGOs. These would be the interface between applicants, counselors and training providers to provide assistance on job search, skills training and counseling according to participants' needs and competency. The offices, in some cases (e.g. the case of unskilled, low income youth), would be expected to develop outreach activities to bring individuals into the programs. It would be important that the training or counseling is tailored to each applicant, training packages (combination of technical and life skills, for instance) are designed as needed, and training providers are selected based on competency.
- *Governance.* In terms of governance, it is important to avoid excessive centralization, give local offices the flexibility to manage their programs, and outsource

⁵⁵ For example, Chile's Joven program increased female youth's employment by 21 percent and Colombia's Jovenes en Accion increased participants' earnings by 18 percent (men) to 35 percent (women). See Sanchez-Puerta et al. (forthcoming).

implementation to public and private companies through contracts that reward performance. The latter should meet clearly defined standards regarding the qualifications of staff, particularly for counselors, and abide by certain protocols regarding the methods to assess competencies and aptitudes, provide career advice and identify training needs.

- *Financing and payment systems.* The assumption has usually been that training-related ALMPs are to be financed exclusively through governmental subsidies. This can be the desired arrangement in the case of low-skill/low-income workers with no or limited savings capacity and for whom capital market restrictions or information constraints are particularly severe. Like in the case of TVET, payments to providers would be made on the basis of services delivered and placement results. Introducing performance-based financing (e.g. Nepal's employment fund) or training vouchers (e.g. Kenya's Technical and Vocational Vouchers Program) allocated directly to individuals who can then choose providers, will also lead to more relevant training.
- *Administration.* The administrative complexity of well designed training related ALMPs should not be underestimated. Key processes include: registering applicants; contracting employment offices and training providers; setting up tariffs; managing individual contributions and/or credit lines; reimbursing providers. It is thus indispensable to build institutional capacity within the public agencies in charge of the management of the system at the central and local levels. Strengthening institutional coordination and the ability to manage multi-service programs can be important for reducing operational costs.

Supporting Entrepreneurship

61. As discussed above, self-employment and micro-entrepreneurship will continue to be an important source of jobs in Pakistan. The government needs to consider interventions to both, support those who are already working in order to improve the productivity and earnings of their activity—or help them transit into a different activity if the current one is not economically viable, and support those transiting into self-employment for the first time.

62. Unfortunately, interventions which are more relevant for supporting self-employment and entrepreneurship have received less attention and relatively little is known about their effectiveness. These policies attempt to influence: motivation and risk tolerance (via cultural and social norms); technical and non-cognitive skills; information about production technologies, best management practices and prices; access to value chains and markets; and liquidity constraints. Interventions of this sort include business and life skills training, advisory services, networking, improving access to finance and micro-franchising.

63. It is difficult to extract reproducible lessons from the evidence given the large heterogeneity of programs and the fact that they typically comprise a package of interventions. Randomized control trials carried out on a sample of microfinance clients in Peru⁵⁶, Tanzania⁵⁷, Bosnia-Herzegovina⁵⁸, Dominican Republic⁵⁹ and Pakistan⁶⁰ found that business training improved business knowledge and business practices, but there is little evidence of an impact on sales, profits or survival rates. Moreover, introducing microfinance in new areas affects the creation and ownership of new business but not employment among current businesses.⁶¹ Evaluations of youth programs that provide entrepreneurial skills show that much depends on curriculum, pedagogical approach and whether participants have to actually start a business or not.⁶² For example, an evaluation of Argentina's Microemprendimientos Productivos, which targeted welfare beneficiaries from a large safety net intervention, reports that the intervention failed to increase income for the average participant in the short-run.⁶³ Some evaluations of matching grants for SMEs in Argentina⁶⁴ and Tunisia show positive results on employment creation but the results are less straightforward in Mauritius.⁶⁵ Mentoring for SMEs in Mexico led to large, but imprecisely measured, increases in profits and sales, but no increase in employment over one year.⁶⁶ Counseling to improve management practices in India increased productivity by 11 percent and annual profits by over USD 200,000 per firm, but induced no significant change in employment in the first year.⁶⁷ In general, most results measure impacts over the short run; little is known about the medium-term impact of these programs.

64. There are nonetheless some promising interventions especially for youth. A recent meta analysis using 37 impact evaluation studies on the entrepreneurship programs found that the impacts of different combinations of interventions vary depending on the outcomes of interest and target groups.⁶⁸ But among youth, access to finance tends to have larger impacts than other interventions in improving labor market activity, while business training can contribute to increased earnings and better business practices. Interventions that focus on increasing the productivity, integration, resistance to shocks and competitiveness of the agricultural sector also merit more attention. Some of the interventions targeting this sector include programs that promote access to finance, facilitate the adoption of new technologies, help upward movements in the value chain, improve the use of fertilizers and seeds, provide information about prices and quality standards, ease access to insurance to manage risk, provide assistance for the formation of producer networks and promote skill development.⁶⁹

⁵⁶ See Karlan and Valdivia (2011).

⁵⁷ See Bjorvatn and Tungodden (2010).

⁵⁸ See Bruhn and Zia (2011).

⁵⁹ See Drexler, Fisher and Schoar (2011).

⁶⁰ See Mansuri and Gine (2011).

⁶¹ See Banerjee, Duflo, Glennerster and Kinnan, 2009.

⁶² For the case of the Netherlands see Oosterbeek, Van Praag and Ijsselstein (2010). For Botswana, Ethiopia, Kenya, South Africa and Tunisia, see Africa Competitiveness Report (2011).

⁶³ See Almeida and Galasso (2009).

⁶⁴ See Castillo et al. (2010).

⁶⁵ See Biggs (1999)

⁶⁶ See Bruhn, Karlan and Schoar (2011).

⁶⁷ See Bloom, Eifert, Mahajan, McKenzie and Roberts (2011).

⁶⁸ See Cho and Maddalena (2012).

⁶⁹ See World Bank (2007c).

65. Pakistan's own National Rural Support Program (NRSP) provides a good example of successful entrepreneurship program that targets youth (See Box 4). The NRSP reaches out to unskilled, uneducated rural youth living in poverty, taking advantage of an existing network of community organizers to identify eligible households in rural communities. In recognition of their mobility constraints, NRSP provides full accommodation at the nearest city center so that the participants can fully concentrate on training during the training period lasting up to three months. This gives equitable opportunities to women and consequently half of the participants are female in the NRSP. The program provides vocational training in diverse occupations as well as life skills training, and additionally accommodates business skills training and microfinance for those who aim to become entrepreneurs. The Small and Medium Enterprise Development Authority (SMEDA) can be also benchmarked to promote growth of micro and small enterprises (See Box 5)—and after evaluation could be expanded.

66. These entrepreneurship interventions as well as targeted ALMPs are promising especially to increase female labor force participation when tailored to address their specific needs. Programs can combine skills training, mentoring and psychosocial support as well as social services such as family planning, child care and health services, for example. An impact evaluation study on the Adolescent girls' initiatives implemented in Liberia found that entrepreneurial training combined with mentoring and life skills training significantly improved their employment rates (68 percent for treatment group vs. 34 percent for control group). Also programs targeted for female microcredit clients and entrepreneurs in the region such as Bangladesh and Sri Lanka appear to be effective in empowering women through improving their earnings opportunities.⁷⁰ Targeted investment in child care through publicly subsidized centers can also increase women's participation.⁷¹

Box 5 National Rural Support Program (NRSP)

The National Rural Support Program has a great potential to reach out to the majority of vulnerable youth who are uneducated, unskilled and mobility constrained. It provides a fast track (5 to 90 days) vocational and technical training to members of families living in poverty in rural areas. Currently, they provide training for about 90 different trades that are identified through market survey and feedback from partners.

There are a few distinguishable features of this program. First, due to the expansive nature of rural support program, they take advantage of network of community organizers (COs) to identify eligible households and individuals, facilitate their participation in the program, and conduct monitoring and evaluation of the results. This enables the program to better reach the needy households than passively waiting for them to approach. Second, the program provides a full boarding and lodging during the training period as well as transport service between the hostels and the training centers. For this reason, about a half of participants are women who otherwise would have been constrained in their mobility. Also, because they receive intensive training with little absence during their stay in the program, the participants can develop skills within a fairly short period of time. Third, the program combines vocational training with entrepreneurship and life skills training in order to open a possibility toward self employment. Finally, in recognition of credit constraints as a main barrier to self employment, they provide guidance and microcredit for potential entrepreneurs. The organizational structure of the NRSP that includes separate training and microfinance institutes made it possible for those who receive training to benefit from entrepreneurial support and finance.

⁷⁰ See Pitt et al (2006) for entrepreneurship program in Bangladesh; De Mel et al. (2008) for Sri Lanka.

⁷¹ Examples include Estancias Infantiles in Mexico and Hogares Comunitarios in Colombia.

Box 6 SMEDA's Industry Cluster based Public Private Partnership

The Small and Medium Enterprise Development Authority (SMEDA) under the ministry of Industry and Production, established in 1998, has been delivering comprehensive SME services throughout all the regions in Pakistan. The services include training, business plan development, accounting and financial services, legal contracting and consulting, and so on.

The distinguishable and promising features of SMEDA's activities are that they provide customized support based on each industry cluster and area. Each cluster, be they agribusiness, carpet, food, furniture or livestock, strategizes its own business based on market feasibility analysis, which examines the marketability and connectivity of a certain business activity as well as general profiles of employment, skills, and facilities at district level. Individual businesses are often matched with others for partnership and joint venture through SMEDA's matchmaking services. Then SMEDA facilitates access to information, technology, market, training and finance so that enterprises in each cluster and business community can collectively execute their business plans.

This approach seems to be effective to take advantage of economies of scale in addressing major constraints to SME business, to strengthen the value chain linkages within industry and to diversify business activities. Similar service can further be expanded to microenterprises to benefit the large majority of companies.

67. Looking forward, the following efforts should be further made to promote entrepreneurial activities, particularly for youth, by which more and better jobs can flourish in Pakistan:

- Identify appropriate target groups (e.g. youth, women, microfinance clients with limited knowledge, off farm workers in rural areas and low productivity firms) and examine the constraints they face.
- Design intervention tools and entrepreneurship programs to address the specific constraints of targeted group.
- Strategize the plan for rigorous evaluation of a program before its onset and identify implementation issues that determine the success of the program.
- Assess the cost effectiveness of the program and consider alternative design or modifications for a more effective program.

Public Works and Services

68. Pakistan should consider direct interventions to create jobs both for unskilled and skilled workers. Programs to create jobs for low income/unskilled workers through Public Works are quite common in middle and low income countries, and proved important to mitigate the impacts of the recent financial crisis.⁷² Less is known about programs that target the high-end of the skills spectrum. These would include jobs for social workers, teachers, health service providers, or IT specialists offered directly by the governments or through NGOs. Relative to the other two types of interventions public works and services can have a much larger effect on employment.

69. Among the programs targeted to low skilled workers budgets have ranged between 0.5% and 4% of GDP reaching up to 18% of the labor force. India's National Rural

⁷² See Banerji, Newhouse and Robalino (forthcoming).

Employment Guarantee scheme (NREGS)⁷³ for instance, accounts for 2.3 percent of total central government spending and 0.3 percent of GDP. Between April 2007 and March 2008, the program created an average of 50 days of work for 33.7 million households, or roughly 25 percent of all rural Indian households.⁷⁴ Ethiopia established the Productive Safety Net Program (PSNP) in 2005, of which the primary component was a rural public works program. This is one of the larger safety net programs in Africa, as it reached more than 7 million people—about 18 percent of the labor force—over two years with an annual budget of nearly \$500 million, or about 4 percent of GDP. An evaluation finds that participants, compared to similar controls, were slightly more likely to start a non-farm business.⁷⁵ Another example is Argentina's *jefes y jefas*, introduced in response to the economic crisis in 2002. The program benefited roughly 2 million households by late 2002. The total cost of the program amounted to about 1 percent of GDP. The program was estimated to increase employment by about 1.7 percent of the population and 2.6 percent of the labor force, about half of whom were previously inactive.⁷⁶

70. In the past decade, public works programs have become one of the primary instruments that provide transient work opportunities in response to crisis (e.g. Argentina in 2002, Republic of Korea in 1997). However, the agenda is evolving as they increasingly aim to move beyond temporary safety nets during crisis and to contribute to sustainable employment opportunities. More recent programs—public works plus—have incorporated a number of design and operational innovations to create a pathway out of poverty, linking beneficiaries to employment and community services and helping them increase earnings and build assets. These programs include public works in Ethiopia, Tanzania and Bangladesh among others. These examples, as well as India's NREGS, show the potential of public works program as a means to create large number of jobs and build community assets and infrastructure.

71. Two examples of programs targeted to skilled workers that have been evaluated are found in the US (Americorps) and Canada (Youth Service). These programs provide a small stipend to skilled participants in return for the opportunity to contribute to national or community development. Evaluations of Americorps show mixed results, although selected projects had a substantial net benefit, including in terms of more positive attitudes towards employment.⁷⁷ Youth Service in Canada reportedly had positive effects on post-program employment.

⁷³ This provides 100 days of unskilled wage employment per year, working on small-scale road construction, water supply, flood protection and similar public projects.

⁷⁴ See Ravi and Engler (2009).

⁷⁵ See Gilligan, Hoddinot and Taffesse (2009).

⁷⁶ See Galasso and Ravallion (2004). Note that estimates only apply to 27 urban areas to preserve comparability with the labor force survey in Argentina.

⁷⁷ See Frumkin et al (2009).

Workers Protection

72. Labor regulations and social insurance programs are important public policy instruments for protecting workers from abuse, discrimination and various social and economic risks. Labor regulations provide legislative requirements that employers and employees must comply with for commencing or terminating, as well as during the period of employment. They are designed to give balanced bargaining power between employers and employees; they also establish rules to prevent practices that society considers abusive and unacceptable. Thus, they aim to protect workers from arbitrary, unfair, or discriminatory actions by their employers, while protecting employers against arbitrary industrial action by workers and their unions.⁷⁸ Social insurance (SI) programs, on the other hand, cover risks such as health, disability, unemployment or longevity. The rationale for having these programs is for individuals to collectively cope with the risks because many individuals may not have the ability to adequately self-insure against these risks due to ‘myopia’, liquidity constraints and imperfections in capital and insurance markets.⁷⁹

73. Pakistan’s both labor regulations and social insurance programs face problems in terms of design that reduce their effectiveness as well as creating distortions that can affect the expansion of formal sector. This section discusses some of the main problems and solutions focusing on hiring and dismissal procedures, minimum wages and pensions.

74. Hiring and Dismissal Procedures: Pakistan has been involved in important reforms aiming to integrate and simplify labor regulation⁸⁰ and make them more business friendly, but with the process of devolution they have come to a halt. The provinces are now responsible for devising their own regulations (each of them, for instance, is developing its own Industrial Relations Act, IRA), and for the time being the legislation that was supposed to be reformed continues to apply. Provincial IRAs do not necessarily adopt the ILO conventions, although the government of Pakistan ratified them.

75. Overall, Pakistan has very rigid labor regulation when it comes to hiring and dismissal procedures.⁸¹ Employers have little flexibility in choosing the type of contract. The use of fixed term contracts for permanent activities, for instance, is forbidden in Pakistan whereas only 20 percent of EAP countries and 30 percent of other SA countries prohibit this. Also, the maximum lengths of fixed term contracts are lower than other countries in the region. This means that employers have to make decisions between a lay-off and change of the contract to an open-ended one only after 9 months of experience. The cost of dismissal related to severance pay seems to be particularly serious for Pakistan. The cost of dismissing an employee with 10 years of tenure, for example, is to pay 43 weeks of salaries, which is substantially high compared to only 14 weeks in ECA or 18 weeks in MENA. The high and steep severance payment schedule, rapidly increasing with the tenure of workers in Pakistan, may make labor mobility and transitions even harder. Also, the overall worker protection

⁷⁸ The main aspects of labor regulations include: (i) entry into employment contract (mandatory provisions of employment contracts, probation period); (ii) terms of employment contract, including fixed-term contracts, part time employment, and working hours; (iii) paid and unpaid leave, maternity leave, and family leave; (iv) wages and benefits including minimum wages; and (v) contract termination, including notification and approval by a third party, advance notice, mandatory (re)training and severance payments.

⁷⁹ See Barr (2004).

⁸⁰ The proposal was to consolidate from 70 to 5 simplified laws.

⁸¹ See Annexure 11 and 12 for comparison of labor regulation across South Asian countries and other Low Middle Income Countries.

measures show that Pakistan's regulation is poorly designed especially in providing employment protection and personal and gender needs when compared to other Lower Medium Income Countries (LMICs) (See Annexure 12).

76. Rigid regulation can increase transaction costs, reduce incentives to invest, and thus discourage job creation. International evidence shows, though arguably, that labor regulations aimed at providing job security reduce turnover, lead to creation of fewer jobs, and may slow productivity growth.⁸² For example, studies from Latin America (Colombia, Brazil and Peru) show that job protection is correlated with lower turnover⁸³, and longer job tenure more generally. Also, there is growing evidence that rigid labor regulations can negatively affect productivity growth by increasing the cost of labor adjustments and reducing the incentives that firms have to innovate and adopt new, especially labor-saving, technologies.⁸⁴ Therefore, ensuring flexibility of labor law, without harnessing firms' incentive to invest in human capital and hire more workers while promoting basic worker protection, is needed.

77. Minimum Wage (MW): Pakistan introduced the national minimum wage for unskilled workers in 1992 at 1,650 PKR (about 27 USD) per month.⁸⁵ The mechanism to adjust the minimum wage is discretionary, which imposes uncertainty on both employees and employers. Since its inception the minimum wage has been increased only five times.⁸⁶ Today Pakistan's minimum wage as a share of value added is close to the median of the international distribution.⁸⁷ However, the minimum wage (PKR 6,000 as of 2008) is almost 71 percent of the average monthly earnings (PKR 8,508) and 95 percent of the median monthly earnings (PKR 6,300). This level of the minimum wage is quite high and is likely forcing several firms to evade (or reduce formal employment). This, in a way, would make the minimum wage irrelevant.

78. Low coverage and enforcement of the minimum wage adds obscurity in the relevance of the system. The proportion of wage and salaried workers below the minimum wage is about 42 percent, but widely varies by sector and workers' characteristics (See Annexure 14).⁸⁸ For example, even among formal sector workers, only 11 percent of public administration workers are below the minimum wage while almost 40 percent of those

⁸² See Kuddo (2009) for a review of literature.

⁸³ Kugler (1999), Gonzaga (2003) and Saavedra and Torero (2000).

⁸⁴ See Hopenhayn and Rogerson (1993) for an analysis using a general equilibrium model of job search; Cappelli (2000) and Hobjin and Jovanovic (2001) for analyses of the impact on the cost of labor adjustments; and Scarpetta and Tressel (2004) for direct effects on productivity growth.

⁸⁵ The minimum wage in Pakistan is governed by the Minimum Wage Ordinance in 1961 and West Pakistan Minimum Wages for Unskilled Workers in 1969. Although they were enacted in 1960's, they did not make any efforts to set or adjust workers wages according to the living standard and there was no specified national minimum wage until 1992. See Irfan (2008).

⁸⁶ During the recent five years, the minimum wage has been increased almost every year: PKR 4,000 in 2006, PKR 4,600 in 2007, PKR 6,000 in 2008 and PKR 7,000 in 2010. According to the Minimum Wage Ordinance in 1961 which lays out the rule for minimum wage, whenever there are changes in economic conditions and cost of living, Minimum Wage Board can convene and adjust the level of the minimum wage and recommend it to the provincial government. Board members comprise independent chair, representatives from employers and employees respectively and are appointed by provincial government.

⁸⁷ Pakistan's minimum wage is about 30 percent of average added value by a worker, and is placed at about 30th percentile. See Annexure 13.

⁸⁸ Given that the minimum wage applies only to regular unskilled workers in formal firms, the proportion of workers below the minimum wage is disaggregated by regularity, formality and education. Regular workers are those with monthly payment vis-à-vis casual workers whose payment is piecemeal. Formal workers are those who work in registered firms, and low educated workers are those with no education.

working in manufacturing have wages lower than minimum wage. When plotted, the wage distribution for each sector does not reveal any discontinuity around the minimum wage, which suggests that the policy is not applied or enforced for the majority of workers (See Annexure 15).

79. Pensions: Like in the case of many developing countries, Pakistan's pension system faces challenges in terms of coverage, financial sustainability and labor market incentives. The system was introduced in 1976 under the Employees' Old age Benefits Institute (EOBI).⁸⁹ ⁹⁰ It is a pay-as-you-go system where employers with 5 and more employees are required to enroll (participation is voluntary for smaller firms and the self employed). For each registered worker, the employer is required to pay 5 percent of the minimum wage and the worker pays its 1 percent; a self employed worker pays 6 percent of the minimum wage for his or her benefits.⁹¹ Then the benefit is calculated based on the minimum wage and the number of years of contribution, and can be disbursed after minimum 15 years of service at retirement age of 60 (55 for female workers).⁹² Due to a large informal economy, today, about 84 thousand firms and 4.7 million workers (out of 46 million workers) are registered in pension program, and 3.8 million workers are receiving benefits as of June, 2011. As the contribution and benefits are set at the national minimum wage at the time of transaction which creates uncertainty in their benefits compared to the contribution, there is little incentive to comply to participate in the system or to work hard to increase their wage rates for the sake of higher pension benefits. In addition, although about PKR 200 billion is accumulated under EOBI fund, and demographic structure is still favorable to pay-as-you-go system, implicit liability is larger than the currently projected revenue.

80. To complicate things more, the devolution of July 2011 supposedly conveys the administration of pension to each provinces and the transferability of pension system across provinces is unclear. While the devolution was timed, as of June 2011, concrete plans to establish pension agencies in each province, ensure transferability of pension for labor mobility, and manage pension funds according to each province's labor force and demographic structure were not yet defined. With different size of labor force and economic situation across four provinces, the current plan that envisages independent management of the pension system is likely to reduce the size of the risk pool of the system.

81. In order to provide and expand worker protection the following policy reforms should be considered:

- *Labor Regulations:* Beyond pursuing flexibility, there is a need for integration, simplification and better enforcement. In most developing countries, inspection offices do not have the capacity to enforce the many regulations found in different pieces of legislation. Societies thus need to prioritize the areas where labor markets need to be regulated and try to extend these basic rights to informal sector wage earners. These priorities would include, for instance, the enforcement of core labor

⁸⁹ See Mahmood and Nashir (2008) for the history of the social security system in Pakistan.

⁹⁰ In addition to the pension system administered by the EOBI, there are other small scale programs provided for formal sector workers; workers welfare fund, provincial social security, and workers' profit participation fund. For more information, see World Bank (2007b).

⁹¹ For simplicity of administration, the EOBI uses the national minimum wage as a reference wage level for all workers.

⁹² Separate rules are applied for disability and survival pension benefits.

standards (freedom of association, no forced labor, no child labor and no discrimination) and working conditions (work schedules, health and safety). Lower priority areas might be regulating contracts or dismissal procedures beyond requiring appropriate advance notice. While relaxing restrictions in the use of short-term contracts and dismissal procedures Pakistan could gradually introduce a system of unemployment benefits that replaces severance pay.

- *Minimum Wage:* The mechanism to set the minimum wage needs to be reexamined.⁹³ The main objective is to reduce discretion by giving the mandate to periodically adjust the minimum wage to an independent Technical Commission (TC)—similar to the recently created Minimum Wage Commission in Malaysia. The TC would comprise technical experts and representatives from employees, employers and the government. Its mandate would be to adjust the minimum wage at pre-determined dates based on a given formula taking into account considerations such as the cost of living, productivity growth, and the share of workers and firms affected. The recommendations from the technical commission would still need an approval by the government to take effect. However, the government cannot impose a minimum wage that is not agreed by the TC.
- *Social Insurance:* The main reform in the case of pensions would be to move to a system based on defined contributions—even if it remains pay-as-you-go—that guarantees the portability of pension rights across provinces. All plan members would have individual accounts that register the contributions they make and the interest they accrue. Upon retirement, the funds registered in the individual account would be transformed into an annuity that depends on life expectancy. To protect individual with limited saving capacity the government should introduce targeted subsidies to top up their benefits and/or contributions. The rate of return on the individual accounts would depend on the structure of the assets that back the liabilities—a combination of financial assets (including tradable government bonds) and pay-as-you-go assets (the present value of future contribution net of the benefits accruing from those contributions). The proposed system has two virtues. First it is expandable to the informal sector because the link between contribution and benefits gives flexibility regarding the level and frequency of individual payments—without compromising financial sustainability. Second, it gives flexibility to the provinces to decide how assets are invested and the level and forms of the subsidies are allocated to the system (although ideally would be defined by the federal government to avoid the potential fragmentation of labor markets).

⁹³ See Cho et al. (forthcoming).

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Annexure 1 – Decomposition of GDP per Capita⁹⁴

The first part comes from a decomposition of GDP per capita growth into the growth in productivity, employment and working age population. Let GDP per capita, denoted by y be the GDP divided by total population: $y = Y/N$ where Y and N presents GDP and population respectively. The following equation shows how the decomposition can be expressed:

$$(1) \frac{Y}{N} = \frac{Y}{E} \frac{E}{W} \frac{W}{N}$$

where E and W represents the employed and working age population, respectively. Then the output per worker, $\frac{Y}{E}$, denotes labor productivity, the employed over working population, $\frac{E}{W}$, denotes employment ratio, and the working age population over total population, $\frac{W}{N}$, denotes the proportion of working age population.

Taking log of each side of the equation (1) gives:

$$(2) \log\left(\frac{Y}{N}\right) = \log\left(\frac{Y}{E}\right) + \log\left(\frac{E}{W}\right) + \log\left(\frac{W}{N}\right)$$

which means that the percentage growth in GDP per capita over a period is linearly decomposed with the percentage growth in output per labor, employment ratio and share of working age population. This yields Table 2 in the text.

When it comes to the number of employed, E , note that this is a sum of each sector workers (E_i): $E = \sum_{i=1}^{n_s} E_i = \sum_{i=1}^{n_s} s_i E$ where s_i is a sector share and n_s denotes the number of sectors of consideration (in our case 3: agriculture, industry, and service). Let e denote the overall employment ratio (E/W) and α_i denote share of workers in sector i among working age population $\alpha_i = E_i/W$, then $e = \sum_{i=1}^{n_s} \alpha_i$. This translates into $\Delta e = \sum_{i=1}^{n_s} \Delta \alpha_i$. The percentage points increments of employment ratio is simply the sum of increments of each sector share among working age population, which yields Table 3.

Output per worker, $\frac{Y}{E}$, can be also decomposed taking sector productivity ($\frac{Y_i}{E_i}$) and sector share ($s_i = \frac{E_i}{E}$) into account. Note that $\frac{Y}{E} = \sum_{i=1}^{n_s} \frac{Y_i E_i}{E_i E}$. Let $\omega = \frac{Y}{E}$ and $\omega_i = \frac{Y_i}{E_i}$ denote overall and sector-specific labor productivity. Then the following equation holds for any points of a period:

$$(3) \quad \omega = \sum_{i=1}^{n_s} \omega_i s_i.$$

Using the shapely decomposition, taking the difference of equation (3) over two time points yields

$$(4) \quad \Delta \omega = \sum_{i=1}^{n_s} \{\Delta \omega_i \bar{s}_i + \bar{\omega}_i \Delta s_i\}.$$

The first term of the right hand side of equation (4) shows the counterfactual productivity change under constant sector distribution only explained by sector specific productivity

⁹⁴ For a detailed explanation, refer to World Bank (2006) and Shorrocks, A. F. (1999).

changes. The second term shows the contribution of sectoral reallocation holding the sector specific productivity constant. Therefore overall productivity change can be disaggregated into changes of sector-specific productivity and changes in sectoral shares due to inter-sectoral mobility. The counterfactual of column (4) of Table 4 shows productivity changes assuming sector distribution at the average share of each sector over the two periods.

Annexure 2A – Summary Statistics – Urban Areas

Urban Areas	<u>All</u>			<u>Employed</u>													<u>Wage employed</u>
	LFP	Employment	Unemployment	<u>Formality</u>			<u>Employment status</u>			<u>Employment sector</u>							Monthly earnings (PKR)
				Informal	Regular wage	Casual wage	Employer	Self Employed	Family Workers	Primary	Manufacturing	Construction	Commerce	Transportation and finance	Public	Other service	
ALL	47.2%	44.1%	6.6%	74.3%	36.2%	18.8%	3.1%	30.3%	11.6%	5.8%	23.7%	7.1%	31.3%	9.8%	13.9%	8.5%	5,809.5
MALE																	
No education	93.4%	88.8%	4.9%	86.8%	23.0%	33.0%	1.5%	35.6%	6.9%	8.8%	23.6%	14.1%	31.3%	11.5%	5.2%	5.6%	4,143.5
Less than Primary	96.2%	92.9%	3.4%	90.1%	19.7%	26.9%	2.1%	40.3%	11.0%	5.4%	24.4%	11.7%	38.6%	10.6%	5.1%	4.1%	3,841.0
Primary	75.6%	71.5%	5.5%	81.8%	30.6%	19.2%	3.2%	34.0%	13.1%	4.3%	25.3%	6.9%	39.4%	9.7%	8.7%	5.7%	4,645.1
Secondary	68.0%	63.9%	6.1%	58.4%	48.8%	5.1%	5.0%	27.7%	13.4%	2.6%	16.8%	3.1%	37.9%	9.0%	23.7%	6.9%	6,669.8
Tertiary	87.9%	84.0%	4.4%	35.5%	67.3%	3.0%	6.4%	18.0%	5.4%	1.0%	16.5%	3.1%	19.3%	14.4%	37.6%	8.1%	11,768.1
FEMALE																	
No education	12.6%	10.5%	16.5%	93.1%	22.6%	24.9%	0.0%	18.9%	33.7%	31.0%	36.8%	2.2%	4.6%	0.4%	4.6%	20.6%	2,028.0
Less than Primary	13.4%	9.7%	27.3%	88.3%	7.8%	18.9%	0.0%	48.0%	25.2%	11.8%	55.9%	6.2%	6.3%	3.8%	8.2%	7.9%	1,821.4
Primary	7.8%	6.3%	19.5%	80.1%	32.3%	19.6%	0.4%	28.6%	19.1%	7.4%	51.0%	1.1%	6.1%	1.1%	13.0%	20.3%	3,022.2
Secondary	11.7%	9.2%	21.7%	55.0%	70.0%	4.0%	0.1%	17.5%	8.4%	1.5%	6.2%	0.0%	3.9%	3.5%	31.7%	53.3%	3,867.7
Tertiary	27.7%	24.3%	12.4%	36.7%	81.1%	7.9%	1.2%	7.2%	2.7%	0.0%	3.7%	0.2%	0.5%	5.8%	46.8%	43.0%	7,992.7
YOUTH																	
No education	49.6%	45.4%	8.5%	89.7%	24.0%	39.8%	0.3%	15.1%	20.7%	10.5%	35.4%	12.5%	25.6%	5.9%	2.0%	8.1%	3,076.2
Less than Primary	69.9%	64.1%	8.4%	92.6%	19.3%	32.9%	0.4%	22.3%	25.2%	4.2%	31.6%	12.0%	36.0%	8.5%	3.6%	4.1%	2,859.9
Primary	34.2%	30.2%	11.9%	87.4%	29.7%	25.9%	0.4%	18.1%	26.0%	4.7%	33.1%	7.5%	37.6%	7.1%	3.0%	6.9%	3,462.3
Secondary	22.3%	18.8%	15.9%	66.1%	50.7%	9.0%	0.2%	14.0%	26.1%	4.5%	17.8%	3.2%	32.9%	6.7%	14.3%	20.7%	4,519.0
Tertiary	42.5%	34.7%	18.4%	55.4%	64.6%	11.8%	2.0%	8.1%	13.5%	0.0%	12.7%	2.7%	20.3%	12.0%	19.2%	33.0%	7,265.1
ADULTS																	
No education	40.2%	37.7%	6.1%	87.1%	22.8%	28.8%	1.6%	38.5%	8.2%	13.2%	22.7%	12.0%	26.9%	11.0%	6.3%	7.9%	4,182.0
Less than Primary	61.1%	59.1%	3.3%	88.1%	18.9%	22.5%	3.1%	52.2%	3.4%	6.7%	22.9%	11.1%	36.8%	11.4%	6.4%	4.6%	4,516.1
Primary	59.2%	57.1%	3.4%	78.7%	31.3%	16.0%	4.3%	41.2%	7.2%	4.3%	23.8%	6.1%	37.2%	10.2%	12.0%	6.4%	5,187.8
Secondary	61.4%	58.1%	5.5%	55.6%	51.3%	3.8%	5.8%	30.4%	8.7%	1.9%	15.2%	2.6%	34.9%	8.7%	27.7%	9.0%	6,852.2
Tertiary	68.9%	66.4%	3.6%	32.6%	70.6%	2.7%	6.0%	17.0%	3.7%	0.9%	14.6%	2.6%	15.3%	13.1%	42.1%	11.3%	11,552.7

Note: Based on LFS 2009. Statistics are for working age population

Annexure 2B – Summary Statistics – Rural Areas

Rural Areas	All			Labor Force		Employed											Wage employed
	LFP	Employment	Unemployment	Formality			Employment status			Employment sector							Monthly earnings (PKR)
				Informal	Regular wage	Casual wage	Employer	Self Employed	Family Workers	Primary	Manufacturing	Construction	Commerce	Transportation and finance	Public	Other service	
ALL	58.3%	55.8%	4.4%	91.1%	13.3%	15.7%	0.4%	36.0%	34.5%	59.9%	8.6%	6.9%	10.3%	4.9%	6.0%	3.3%	4,163.8
MALE																	
No education	95.3%	92.8%	2.5%	95.9%	8.8%	21.0%	0.3%	49.7%	20.2%	63.5%	7.4%	10.2%	9.0%	5.6%	1.9%	2.3%	3,771.9
Less than Primary	96.3%	92.7%	3.7%	93.3%	12.5%	21.8%	0.9%	41.6%	23.3%	50.0%	11.2%	11.1%	13.5%	7.5%	3.4%	3.3%	3,631.0
Primary	80.2%	77.0%	4.0%	88.9%	17.5%	15.9%	0.6%	40.7%	25.2%	45.8%	10.1%	9.2%	17.4%	7.7%	6.5%	3.4%	4,366.8
Secondary	76.8%	72.7%	5.3%	62.7%	41.4%	5.6%	0.7%	36.0%	16.4%	30.1%	6.6%	3.7%	15.3%	5.2%	32.4%	6.8%	5,738.5
Tertiary	90.0%	86.3%	4.1%	38.3%	64.6%	2.5%	2.1%	22.8%	8.0%	15.6%	3.3%	0.8%	9.5%	4.4%	56.2%	10.3%	7,645.8
FEMALE																	
No education	33.9%	32.0%	5.5%	99.6%	1.2%	10.6%	0.0%	12.4%	75.7%	89.8%	7.1%	0.2%	0.9%	0.0%	0.1%	1.7%	1,885.2
Less than Primary	28.2%	26.0%	7.7%	97.8%	3.3%	12.6%	0.0%	16.0%	68.2%	77.2%	19.0%	0.6%	0.7%	0.0%	0.9%	1.6%	1,519.9
Primary	18.6%	16.4%	11.8%	91.9%	9.8%	11.9%	0.1%	16.3%	62.0%	68.2%	17.0%	0.5%	2.8%	0.2%	7.2%	4.0%	2,634.5
Secondary	23.2%	18.8%	18.8%	55.1%	65.1%	5.7%	0.9%	13.6%	14.8%	13.8%	9.0%	0.0%	0.0%	0.0%	42.2%	35.0%	3,525.7
Tertiary	46.5%	35.8%	23.1%	35.0%	76.8%	1.2%	0.8%	11.6%	9.5%	6.3%	2.1%	0.0%	0.6%	0.0%	53.3%	37.6%	5,558.3
YOUTH																	
No education	54.3%	52.2%	3.8%	97.9%	5.6%	20.4%	0.0%	9.6%	64.3%	72.4%	9.7%	7.5%	5.3%	3.0%	0.4%	1.8%	2,835.4
Less than Primary	69.2%	64.8%	6.4%	96.2%	11.0%	24.1%	0.0%	19.1%	45.8%	52.3%	16.4%	10.1%	11.4%	5.9%	0.6%	3.4%	2,956.5
Primary	45.0%	41.1%	8.7%	93.7%	12.5%	19.3%	0.2%	18.0%	50.0%	52.3%	13.4%	9.6%	13.8%	5.8%	1.9%	3.1%	3,429.6
Secondary	38.1%	32.3%	15.3%	81.3%	31.9%	8.5%	0.2%	25.9%	33.6%	37.6%	10.7%	4.6%	14.2%	5.9%	12.6%	14.3%	3,197.9
Tertiary	51.2%	39.7%	22.6%	62.8%	55.1%	4.8%	0.7%	16.9%	22.5%	18.9%	4.3%	0.2%	11.1%	6.1%	25.6%	33.8%	3,920.2
ADULTS																	
No education	55.6%	53.7%	3.4%	97.1%	6.0%	16.0%	0.2%	42.6%	35.2%	74.3%	6.5%	6.0%	6.0%	3.6%	1.5%	2.2%	3,605.8
Less than Primary	75.4%	73.4%	2.7%	92.0%	11.6%	18.5%	1.3%	51.5%	17.1%	54.3%	9.2%	9.7%	11.6%	7.2%	5.1%	2.9%	3,977.2
Primary	76.9%	75.1%	2.3%	86.5%	19.5%	13.4%	0.8%	50.1%	16.2%	45.0%	9.1%	7.7%	17.5%	7.7%	9.3%	3.6%	4,731.0
Secondary	82.3%	79.8%	3.1%	54.0%	48.8%	4.5%	0.9%	36.4%	9.4%	24.4%	5.3%	2.6%	13.6%	4.1%	42.0%	7.9%	6,089.2
Tertiary	86.7%	83.1%	4.2%	33.7%	68.2%	2.0%	2.1%	21.9%	5.9%	13.4%	2.9%	0.8%	7.8%	3.4%	60.8%	11.0%	7,775.6

Note: Based on LFS 2009. Statistics are for working age population

Annexure 3A - Determinants of Labor Force Participation by Gender & Region

VARIABLES	Male		Female	
	(1) Urban	(2) Rural	(3) Urban	(4) Rural
Age	0.0705*** (0.000)	0.0365*** (0.000)	0.0201*** (0.000)	0.0186*** (0.000)
Age squared	-0.0009*** (0.000)	-0.0005*** (0.000)	-0.0003*** (0.000)	-0.0002*** (0.000)
Less than primary	0.0611*** (0.000)	0.0187*** (0.000)	-0.0059*** (0.000)	-0.0483*** (0.000)
Primary	0.0057*** (0.000)	-0.0262*** (0.000)	-0.0264*** (0.000)	-0.1031*** (0.000)
Lower Secondary	-0.1283*** (0.000)	-0.1343*** (0.000)	-0.0388*** (0.000)	-0.1295*** (0.000)
Pre-University and above	-0.2174*** (0.000)	-0.2208*** (0.000)	0.0412*** (0.000)	-0.0275*** (0.000)
Sindh	0.0102*** (0.000)	0.0269*** (0.000)	-0.0591*** (0.000)	-0.1256*** (0.000)
NWFP	-0.0370*** (0.000)	-0.0380*** (0.000)	-0.0439*** (0.000)	-0.1637*** (0.000)
Balochistan	-0.0480*** (0.000)	-0.0146*** (0.000)	-0.0485*** (0.000)	-0.1731*** (0.000)
Num. of children	0.0040*** (0.000)	-0.0003*** (0.000)	-0.0007*** (0.000)	-0.0000 (0.000)
Num. of elderly	-0.0093*** (0.000)	-0.0021*** (0.000)	-0.0044*** (0.000)	-0.0003*** (0.000)
Married	0.0989*** (0.000)	0.0695*** (0.000)	-0.1066*** (0.000)	-0.0303*** (0.000)
year 2002	0.0215*** (0.000)	0.0016*** (0.000)	0.0282*** (0.000)	0.0080*** (0.000)
year 2004	0.0157*** (0.000)	0.0092*** (0.000)	0.0269*** (0.000)	0.0527*** (0.000)
year 2007	0.0295*** (0.000)	0.0138*** (0.000)	0.0215*** (0.000)	0.1149*** (0.000)
year 2008	0.0243*** (0.000)	0.0109*** (0.000)	0.0083*** (0.000)	0.1334*** (0.000)
year 2009	0.0248*** (0.000)	0.0137*** (0.000)	0.0252*** (0.000)	0.1464*** (0.000)
Pseudo R squared	0.312	0.264	0.082	0.068

Standard errors in parentheses

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

Notes: Probit regression is estimated separately by gender and region. Omitted variables include 'no education group', 'Punjab province', 'non-married', and 'year 2000'. The numbers represent the marginal effects with standard errors in parentheses.

Annexure 3B – Determinants of Unemployment by Gender & Region

VARIABLES	Male		Female	
	(1) Urban	(2) Rural	(3) Urban	(4) Rural
Age	0.0016*** (0.000)	0.0003*** (0.000)	0.0006*** (0.000)	0.0003*** (0.000)
Age squared	-0.0000*** (0.000)	-0.0000*** (0.000)	-0.0000*** (0.000)	-0.0000*** (0.000)
Less than primary	0.0036*** (0.000)	0.0078*** (0.000)	-0.0013*** (0.000)	0.0012*** (0.000)
Primary	0.0011*** (0.000)	0.0025*** (0.000)	0.0002*** (0.000)	0.0015*** (0.000)
Lower Secondary	0.0044*** (0.000)	0.0073*** (0.000)	0.0006*** (0.000)	0.0025*** (0.000)
Pre-University and above	0.0103*** (0.000)	0.0167*** (0.000)	0.0059*** (0.000)	0.0098*** (0.000)
Sindh	-0.0005*** (0.000)	-0.0041*** (0.000)	-0.0020*** (0.000)	-0.0011*** (0.000)
NWFP	0.0139*** (0.000)	0.0127*** (0.000)	-0.0003*** (0.000)	-0.0007*** (0.000)
Balochistan	0.0000 (0.000)	-0.0027*** (0.000)	0.0005*** (0.000)	-0.0006*** (0.000)
Num. of children	-0.0005*** (0.000)	-0.0007*** (0.000)	-0.0001*** (0.000)	-0.0002*** (0.000)
Num. of elderly	0.0012*** (0.000)	0.0004*** (0.000)	-0.0005*** (0.000)	0.0001*** (0.000)
Married	-0.0208*** (0.000)	-0.0069*** (0.000)	-0.0037*** (0.000)	-0.0017*** (0.000)
year 2002	0.0202*** (0.000)	0.0113*** (0.000)	0.0121*** (0.000)	0.0171*** (0.000)
year 2004	0.0239*** (0.000)	0.0092*** (0.000)	0.0103*** (0.000)	0.0175*** (0.000)
year 2007	-0.0022*** (0.000)	-0.0052*** (0.000)	0.0005*** (0.000)	0.0052*** (0.000)
year 2008	-0.0038*** (0.000)	-0.0051*** (0.000)	0.0007*** (0.000)	0.0044*** (0.000)
year 2009	-0.0021*** (0.000)	-0.0045*** (0.000)	0.0014*** (0.000)	0.0058*** (0.000)
Pseudo R squared	0.090	0.114	0.110	0.084

Standard errors in parentheses

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

Notes: Probit regression is estimated separately by gender and region. Omitted variables include 'no education group', 'Punjab province', 'non-married', and 'year 2000'. The numbers represent the marginal effects with standard errors in parentheses.

Annexure 4 – Multinomial Logit for Employment Status by Region: Male

VARIABLES	Male					
	Urban			Rural		
	(1) regular employee	(2) casual employee	(3) self employed	(4) regular employee	(5) casual employee	(6) self employed
Age	0.1555*** (0.010)	0.0607*** (0.010)	0.1672*** (0.010)	0.2533*** (0.006)	0.1353*** (0.006)	0.2239*** (0.005)
Age squared	-0.0007*** (0.000)	0.0002 (0.000)	-0.0006*** (0.000)	-0.0024*** (0.000)	-0.0012*** (0.000)	-0.0017*** (0.000)
Less than primary	0.1093 (0.079)	-0.2374*** (0.075)	0.2256*** (0.077)	0.5871*** (0.051)	-0.0207 (0.042)	0.2133*** (0.041)
Primary	-0.1867*** (0.042)	-0.6811*** (0.040)	-0.2082*** (0.041)	0.6108*** (0.029)	-0.1745*** (0.024)	0.0822*** (0.023)
Lower Secondary	-0.0194 (0.035)	-1.1766*** (0.035)	-0.3552*** (0.035)	0.9643*** (0.026)	-0.6395*** (0.024)	0.0133 (0.021)
Pre-University and above	0.5089*** (0.042)	-2.5046*** (0.052)	-0.6696*** (0.043)	2.2179*** (0.040)	-1.3163*** (0.062)	-0.0907** (0.041)
Sindh	0.4076*** (0.027)	0.2773*** (0.028)	0.0276 (0.028)	-0.2918*** (0.026)	-0.8551*** (0.025)	-0.2037*** (0.021)
NWFP	-0.0118 (0.052)	-0.0687 (0.054)	-0.1155** (0.053)	0.2908*** (0.029)	0.2004*** (0.027)	0.0824*** (0.026)
Balochistan	-0.1724** (0.071)	-0.5587*** (0.078)	-0.4323*** (0.072)	-0.0747* (0.042)	-0.6296*** (0.040)	-0.4102*** (0.036)
Married	0.2001*** (0.037)	0.1764*** (0.039)	0.5550*** (0.038)	0.4665*** (0.029)	0.4287*** (0.026)	0.7854*** (0.024)
year 2002	0.0777 (0.049)	0.3419*** (0.051)	0.0093 (0.049)	0.1538*** (0.038)	0.3355*** (0.035)	0.1288*** (0.031)
year 2004	-0.0345 (0.047)	0.1311*** (0.049)	-0.0324 (0.047)	-0.0224 (0.037)	0.2011*** (0.034)	-0.0736** (0.030)
year 2007	0.0513 (0.046)	0.1911*** (0.049)	0.0209 (0.047)	0.0440 (0.036)	0.2290*** (0.033)	-0.1201*** (0.030)
year 2008	-0.0593 (0.046)	0.1002** (0.048)	-0.1120** (0.046)	0.0144 (0.036)	0.1027*** (0.033)	-0.1368*** (0.030)
year 2009	-0.1375*** (0.045)	0.0012 (0.048)	-0.1989*** (0.046)	-0.1002*** (0.036)	0.0628* (0.033)	-0.2720*** (0.030)
Constant	-2.8037*** (0.141)	-0.4666*** (0.141)	-3.0605*** (0.144)	-6.2311*** (0.103)	-2.7053*** (0.086)	-4.5884*** (0.082)
Observations	96,228	96,228	96,228	138,430	138,430	138,430

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Notes: Multinomial logit regressions are estimated separately by gender and region. Omitted variables include 'no education group', 'Punjab province', 'non-married', and 'year 2000'. The numbers represent the marginal effects with standard errors in parentheses. The base category is family workers.

Annexure 5 – Multinomial Logit for Employment Status by Region: Female

VARIABLES	Female					
	Urban			Rural		
	(1) regular employee	(2) casual employee	(3) self employed	(4) regular employee	(5) casual employee	(6) self employed
Age	0.2754*** (0.020)	0.2021*** (0.019)	0.2388*** (0.020)	0.2714*** (0.021)	0.0120 (0.009)	0.1988*** (0.009)
Age squared	-0.0032*** (0.000)	-0.0026*** (0.000)	-0.0028*** (0.000)	-0.0032*** (0.000)	-0.0004*** (0.000)	-0.0023*** (0.000)
Less than primary	0.4668* (0.273)	0.5494** (0.233)	1.3566*** (0.231)	0.8982*** (0.316)	0.2140** (0.106)	0.4128*** (0.119)
Primary	0.0007 (0.126)	0.1837* (0.101)	0.8651*** (0.105)	1.1037*** (0.148)	-0.1393** (0.060)	0.4327*** (0.059)
Lower Secondary	1.7055*** (0.090)	0.1582* (0.095)	1.0918*** (0.096)	4.0340*** (0.088)	-0.2221*** (0.078)	0.6365*** (0.071)
Pre-University and above	3.3158*** (0.109)	-0.0283 (0.132)	1.4960*** (0.120)	6.1763*** (0.125)	-0.0201 (0.209)	1.3361*** (0.148)
Sindh	0.4523*** (0.083)	0.3104*** (0.085)	-0.5483*** (0.100)	-0.4018*** (0.131)	-2.1077*** (0.090)	-1.7995*** (0.087)
NWFP	0.7456*** (0.173)	-0.4986** (0.223)	0.3385* (0.185)	0.6325*** (0.094)	-2.0661*** (0.114)	0.2299*** (0.049)
Balochistan	-0.1406 (0.239)	-0.9979*** (0.305)	-1.0987*** (0.311)	0.2857 (0.231)	-2.2624*** (0.241)	-0.9680*** (0.146)
Married	-0.6451*** (0.088)	-0.7676*** (0.089)	-0.5281*** (0.092)	-0.7576*** (0.087)	-0.4138*** (0.044)	-0.5296*** (0.046)
year 2002	-0.4608*** (0.146)	-0.2151 (0.145)	-0.2811* (0.152)	-0.0496 (0.139)	-0.0806 (0.060)	0.0535 (0.067)
year 2004	-0.7058*** (0.141)	-0.3982*** (0.141)	-0.3454** (0.146)	-0.0343 (0.133)	-0.3979*** (0.058)	-0.0044 (0.062)
year 2007	-0.9728*** (0.136)	-0.8309*** (0.137)	-0.6813*** (0.142)	-0.6003*** (0.130)	-0.7702*** (0.057)	-0.2604*** (0.060)
year 2008	-1.2536*** (0.137)	-0.9579*** (0.137)	-1.0599*** (0.145)	-0.4407*** (0.128)	-0.7503*** (0.057)	-0.2164*** (0.060)
year 2009	-0.9563*** (0.134)	-0.9397*** (0.136)	-0.7265*** (0.141)	-0.7170*** (0.129)	-0.8652*** (0.058)	-0.2919*** (0.060)
Constant	-4.4488*** (0.323)	-2.2823*** (0.305)	-3.8500*** (0.328)	-8.4859*** (0.363)	-0.2908** (0.142)	-4.7183*** (0.163)
Observations	10,186	10,186	10,186	35,110	35,110	35,110

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Notes: Multinomial logit regressions are estimated separately by gender and region. Omitted variables include 'no education group', 'Punjab province', 'non-married', and 'year 2000'. The numbers represent the marginal effects with standard errors in parentheses. The base category is family workers.

Annexure 6 – Multinomial Logit for Employment Sector: Male

VARIABLES	Male											
	Urban						Rural					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	primary	manufact uring	constructi on	comm- erice	transporta tion and finance	public	primary	manufact uring	constructi on	comm- erice	transporta tion and finance	public
Age	-0.0382*** (0.010)	0.0290*** (0.007)	0.0504*** (0.009)	0.0178*** (0.007)	0.0941*** (0.009)	0.2901*** (0.010)	-0.0126* (0.007)	0.0181** (0.009)	0.0608*** (0.009)	0.0389*** (0.008)	0.1399*** (0.010)	0.3684*** (0.011)
Age squared	0.0007*** (0.000)	-0.0005*** (0.000)	-0.0007*** (0.000)	-0.0002** (0.000)	-0.0012*** (0.000)	-0.0033*** (0.000)	0.0003*** (0.000)	-0.0005*** (0.000)	-0.0010*** (0.000)	-0.0004*** (0.000)	-0.0020*** (0.000)	-0.0042*** (0.000)
Less than primary	-0.6597*** (0.105)	-0.0830 (0.068)	-0.3710*** (0.084)	0.0883 (0.066)	-0.1194 (0.082)	-0.0491 (0.104)	-0.5826*** (0.059)	-0.1424** (0.070)	-0.5314*** (0.071)	0.0408 (0.068)	-0.1191 (0.075)	0.3092*** (0.094)
Primary	-0.5384*** (0.053)	-0.0574 (0.037)	-0.5422*** (0.046)	0.0415 (0.036)	-0.2664*** (0.045)	0.1550*** (0.053)	-0.7206*** (0.034)	-0.2219*** (0.040)	-0.5642*** (0.041)	0.0659* (0.039)	-0.2377*** (0.044)	0.4928*** (0.053)
Lower Secondary	-0.7774*** (0.045)	-0.1445*** (0.031)	-1.0679*** (0.040)	0.2271*** (0.030)	-0.2853*** (0.037)	0.8483*** (0.041)	-0.6882*** (0.032)	-0.3144*** (0.038)	-0.8769*** (0.039)	0.3277*** (0.036)	-0.2005*** (0.041)	1.6843*** (0.045)
Pre-University and above	-1.3889*** (0.063)	-0.4113*** (0.037)	-1.6345*** (0.055)	-0.1205*** (0.035)	-0.1408*** (0.042)	1.7217*** (0.043)	-1.7890*** (0.048)	-1.2518*** (0.065)	-2.5405*** (0.088)	-0.3629*** (0.054)	-1.2693*** (0.071)	2.5276*** (0.055)
Sindh	-0.0470 (0.040)	0.2090*** (0.025)	0.1410*** (0.034)	0.1548*** (0.025)	0.2013*** (0.030)	0.2803*** (0.029)	1.2560*** (0.042)	-0.0424 (0.051)	0.2907*** (0.051)	0.7088*** (0.046)	0.6025*** (0.052)	1.4645*** (0.049)
NWFP	0.1437** (0.070)	-0.6322*** (0.055)	0.1175* (0.062)	-0.0650 (0.048)	0.1498*** (0.057)	0.4780*** (0.055)	-0.1562*** (0.034)	-0.4230*** (0.043)	0.3780*** (0.040)	0.2290*** (0.038)	0.4097*** (0.043)	0.7181*** (0.043)
Balochistan	1.0657*** (0.100)	-0.7247*** (0.104)	0.4687*** (0.103)	0.5167*** (0.082)	0.3067*** (0.100)	1.6433*** (0.085)	1.2196*** (0.084)	-0.9094*** (0.124)	0.7436*** (0.094)	1.3219*** (0.088)	1.1557*** (0.095)	2.4821*** (0.091)
Married	0.2663*** (0.058)	-0.0229 (0.037)	0.2190*** (0.049)	0.1549*** (0.035)	0.2689*** (0.044)	0.2365*** (0.045)	-0.1744*** (0.038)	-0.1589*** (0.046)	-0.1946*** (0.046)	-0.0005 (0.044)	-0.0295 (0.050)	0.0789 (0.054)
year 2002	-0.1361** (0.067)	-0.0008 (0.044)	-0.0858 (0.060)	0.0133 (0.042)	0.0609 (0.055)	-0.0495 (0.050)	-0.3541*** (0.045)	0.0008 (0.056)	-0.0626 (0.057)	-0.0911* (0.053)	-0.0053 (0.061)	-0.3182*** (0.059)
year 2004	-0.1178* (0.065)	-0.0796* (0.042)	-0.1321** (0.058)	-0.0490 (0.041)	0.1546*** (0.052)	-0.2960*** (0.049)	-0.2852*** (0.045)	0.1129** (0.056)	0.0441 (0.056)	0.0262 (0.052)	0.0237 (0.061)	-0.3886*** (0.059)
year 2007	0.0140 (0.064)	0.0059 (0.042)	0.1953*** (0.056)	0.0450 (0.041)	0.2573*** (0.052)	-0.2135*** (0.049)	-0.3801*** (0.044)	0.1641*** (0.054)	0.1373** (0.055)	-0.0798 (0.051)	0.0240 (0.059)	-0.5680*** (0.058)
year 2008	0.0619 (0.064)	0.0911** (0.042)	0.2559*** (0.057)	0.0911** (0.041)	0.3253*** (0.052)	-0.2054*** (0.048)	-0.3124*** (0.044)	0.1083** (0.055)	0.1498*** (0.055)	0.0437 (0.051)	0.1562*** (0.059)	-0.5331*** (0.058)
year 2009	0.7208*** (0.067)	0.7336*** (0.047)	0.9436*** (0.060)	0.8958*** (0.045)	0.9595*** (0.056)	0.4392*** (0.052)	0.2976*** (0.050)	0.6814*** (0.059)	0.8223*** (0.059)	0.6974*** (0.056)	0.7673*** (0.063)	-0.0368 (0.062)
Constant	-0.1962 (0.174)	0.4223*** (0.119)	-0.9879*** (0.157)	0.2509** (0.115)	-2.0871*** (0.149)	-6.7804*** (0.170)	2.8389*** (0.117)	0.6596*** (0.141)	-0.0260 (0.143)	-0.3084** (0.135)	-2.1902*** (0.161)	-8.4569*** (0.192)
Observations	96,237						138,465					

Standard errors in parentheses

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

Annexure 7 – Multinomial Logit for Employment Sector: Female

VARIABLES	Female											
	Urban						Rural					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	primary	manuf uring	constructi on	comm- erce	transporta tion and finance	public	primary	manuf uring	constructi on	comm- erce	transporta tion and finance	public
Age	-0.1380*** (0.021)	0.0071 (0.018)	0.0481 (0.095)	-0.0016 (0.029)	-0.0080 (0.065)	0.2597*** (0.024)	-0.0771*** (0.017)	-0.0456** (0.020)	0.0447 (0.070)	0.0563* (0.031)	0.0592 (0.098)	0.3614*** (0.035)
Age squared	0.0016*** (0.000)	-0.0006** (0.000)	-0.0020 (0.002)	0.0001 (0.000)	-0.0001 (0.001)	-0.0029*** (0.000)	0.0007*** (0.000)	-0.0001 (0.000)	-0.0017 (0.001)	-0.0007* (0.000)	-0.0014 (0.001)	-0.0044*** (0.000)
Less than primary	-0.6273* (0.337)	1.0849*** (0.235)	1.0122* (0.598)	1.0833*** (0.348)	2.1094*** (0.807)	1.4000*** (0.347)	-0.1385 (0.278)	0.4633 (0.290)	-0.0806 (0.764)	0.0220 (0.491)	-2.5243 (4.304)	0.8421 (0.788)
Primary	-0.3408** (0.142)	1.0394*** (0.109)	-0.1124 (0.417)	0.8650*** (0.178)	1.6213*** (0.497)	0.6439*** (0.219)	-0.4239*** (0.131)	0.3279** (0.139)	0.3817 (0.313)	0.7024*** (0.187)	0.8895* (0.469)	1.6462*** (0.284)
Lower Secondary	-2.2413*** (0.150)	-0.1120 (0.075)	-0.7335** (0.308)	0.1324 (0.137)	1.4375*** (0.386)	2.1301*** (0.109)	-2.0556*** (0.095)	-1.2552*** (0.109)	-0.9776*** (0.323)	-0.4236** (0.175)	0.2022 (0.397)	4.0137*** (0.170)
Pre-University and above	-4.6717*** (0.292)	-2.6341*** (0.096)	-2.3712*** (0.396)	-1.3961*** (0.156)	1.6651*** (0.344)	2.2155*** (0.098)	-4.8681*** (0.131)	-4.0746*** (0.203)	-3.0242*** (0.619)	-2.9159*** (0.382)	-1.9852*** (0.695)	3.4411*** (0.172)
Sindh	-0.3249*** (0.099)	-0.1842*** (0.071)	-0.2089 (0.304)	0.1419 (0.122)	0.5404*** (0.188)	0.0261 (0.074)	1.5613*** (0.202)	-0.2074 (0.232)	1.6911*** (0.360)	0.2184 (0.318)	1.6131** (0.638)	2.2354*** (0.244)
NWFP	-0.1027 (0.204)	-0.3633** (0.161)	0.2289 (0.541)	0.3835 (0.240)	0.3505 (0.416)	0.9751*** (0.134)	-0.0712 (0.103)	-0.5648*** (0.124)	0.6794** (0.287)	-1.0381*** (0.255)	1.1739*** (0.385)	1.2468*** (0.131)
Balochistan	1.2495*** (0.319)	-0.7925** (0.396)	1.0337 (0.766)	1.0290** (0.429)	0.4544 (0.992)	1.9948*** (0.282)	1.6971*** (0.536)	1.2181** (0.555)	2.4672*** (0.728)	1.4599** (0.640)	3.0942*** (0.902)	3.3482*** (0.584)
Married	1.2388*** (0.101)	0.0476 (0.074)	0.4235 (0.317)	0.3132** (0.128)	0.3189 (0.234)	0.8282*** (0.078)	1.1416*** (0.081)	0.2764*** (0.092)	0.6980** (0.277)	0.6877*** (0.148)	-0.4671 (0.415)	0.7397*** (0.120)
year 2002	0.1669 (0.159)	0.3746*** (0.113)	-0.3788 (0.541)	-0.3238 (0.201)	-0.9234* (0.516)	-0.2058* (0.121)	0.1131 (0.135)	0.5337*** (0.161)	0.3567 (0.468)	-0.1501 (0.229)	0.8133 (0.596)	0.0789 (0.203)
year 2004	0.6751*** (0.151)	0.4697*** (0.111)	-0.0420 (0.492)	-0.3687* (0.198)	-0.6063 (0.441)	-0.5331*** (0.120)	-0.0095 (0.125)	0.5725*** (0.151)	0.1073 (0.453)	-0.2886 (0.214)	-1.0166 (0.788)	-0.1911 (0.197)
year 2007	1.0160*** (0.147)	0.4473*** (0.111)	0.7557* (0.433)	0.2358 (0.179)	0.3161 (0.373)	-0.4403*** (0.118)	0.2429** (0.123)	0.6284*** (0.148)	0.7422* (0.410)	0.1426 (0.198)	-0.1135 (0.624)	-0.5075*** (0.192)
year 2008	0.9735*** (0.151)	0.6314*** (0.113)	-0.0811 (0.517)	0.2731 (0.183)	0.6543* (0.368)	-0.3696*** (0.123)	0.2986** (0.123)	0.7521*** (0.148)	0.3885 (0.424)	0.0792 (0.202)	0.0945 (0.604)	-0.4643** (0.190)
year 2009	0.9481*** (0.147)	0.6156*** (0.109)	0.9825** (0.418)	-0.0135 (0.185)	0.7701** (0.355)	-0.2800** (0.116)	0.4349** (0.124)	0.9044*** (0.149)	0.3690 (0.430)	0.0972 (0.205)	-0.6205 (0.691)	-0.7011*** (0.192)
Constant	1.2390*** (0.342)	0.3964 (0.283)	-2.9912** (1.338)	-1.9381*** (0.492)	-4.6968*** (1.080)	-7.5084*** (0.416)	4.3306*** (0.306)	2.1495*** (0.349)	-2.6026** (1.082)	-2.0731*** (0.546)	-3.6210** (1.578)	-9.7807*** (0.599)

Observations

10,209

35,136

Standard errors in parentheses

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

Annexure 8 – Probit for Formal Sector Employment

VARIABLES	Male		Female	
	(1) Urban	(2) Rural	(3) Urban	(4) Rural
Age	0.0257*** (0.000)	0.0124*** (0.000)	0.0265*** (0.000)	0.0010*** (0.000)
Age squared	-0.0003*** (0.000)	-0.0001*** (0.000)	-0.0003*** (0.000)	-0.0000*** (0.000)
Less than primary	0.0254*** (0.000)	0.0355*** (0.000)	0.1554*** (0.002)	0.0049*** (0.000)
Primary	0.0333*** (0.000)	0.0460*** (0.000)	0.0292*** (0.001)	0.0150*** (0.000)
Lower Secondary	0.1267*** (0.000)	0.1288*** (0.000)	0.4093*** (0.001)	0.3586*** (0.000)
Pre-University and above	0.5508*** (0.000)	0.6687*** (0.000)	0.6366*** (0.000)	0.7365*** (0.001)
Sindh	0.0025*** (0.000)	0.0188*** (0.000)	-0.0130*** (0.000)	0.0047*** (0.000)
NWFP	0.0605*** (0.000)	0.0355*** (0.000)	0.1196*** (0.001)	0.0076*** (0.000)
Balochistan	0.1703*** (0.000)	0.0818*** (0.000)	0.2145*** (0.002)	0.0140*** (0.000)
Married	0.0325*** (0.000)	0.0077*** (0.000)	0.0966*** (0.000)	0.0004*** (0.000)
year 2002	-0.0005*** (0.000)	0.0017*** (0.000)	-0.0347*** (0.001)	-0.0004*** (0.000)
year 2004	-0.0217*** (0.000)	-0.0031*** (0.000)	-0.0697*** (0.000)	-0.0006*** (0.000)
year 2007	-0.0163*** (0.000)	-0.0065*** (0.000)	-0.0752*** (0.000)	-0.0015*** (0.000)
year 2008	-0.0113*** (0.000)	-0.0029*** (0.000)	-0.0334*** (0.001)	-0.0010*** (0.000)
year 2009	-0.0211*** (0.000)	-0.0102*** (0.000)	-0.0615*** (0.000)	-0.0021*** (0.000)
Pseudo R squared	0.286	0.345	0.347	0.600

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Notes: Probit regression is estimated separately by gender and region. Omitted variables include 'no education group', 'Punjab province', 'non-married', and 'year 2000'. The numbers represent the marginal effects with standard errors in parentheses.

Annexure 9 – Summary of Policy Issues and Recommendations

	Issues	Recommendations
Short term (Immediate interventions needed)	<ul style="list-style-type: none"> • Large unskilled stock of workforce • Disadvantaged group-youth and women • Unemployed workforce 	<ul style="list-style-type: none"> • Entrepreneurial support for productive self employment <ul style="list-style-type: none"> ○ Microcredit/microfinance/grants ○ Entrepreneurial skills training ○ Mentoring/counseling/consulting ○ Microfranchising • Targeted ALMPs <ul style="list-style-type: none"> ○ Technical and vocational skills training ○ Job search assistance/counseling ○ Employment intermediation/internship • Public Works
Medium term (Gradual reform needed)	<ul style="list-style-type: none"> • Low education/skills of population 	<ul style="list-style-type: none"> • Reform in education and TVET system <ul style="list-style-type: none"> ○ Governance and accountability ○ Private sector involvement ○ Financing and payment
Long term (Careful planning needed)	<ul style="list-style-type: none"> • High informality and little access to worker protection • Need for creation and expansion of business and establishments 	<ul style="list-style-type: none"> • Hiring and dismissal procedures <ul style="list-style-type: none"> ○ Balance between flexibility and security ○ Prioritization of core standards • Minimum wage <ul style="list-style-type: none"> ○ Establishment of minimum wage setting mechanism • Social Insurance <ul style="list-style-type: none"> ○ Expansion of coverage ○ Financial sustainability • Macroeconomic and Regulatory Environment <ul style="list-style-type: none"> ○ Macroeconomic stability ○ Infrastructure and business environment • Education <ul style="list-style-type: none"> ○ Expansion of opportunities ○ Improvement in quality

Annexure 10 – Snapshot of ALMPs in Pakistan

Name of Program	Number of Beneficiaries	Finances/Budget/Expenses	Per beneficiary cost ⁹⁵	Number of Regional Offices
Bureau of Emigration and Overseas Employment	403,528	N/A	N/A	4
People Works Program	227,734	Rs. 7,977,387,293	Rs. 35,029	N/A
NRSP	2,922,943	Rs. 660,269,925	Rs. 226 ⁹⁶	38
PRSP	81,754	Rs. 318,505,151	Rs. 3,896	6
Khushali Bank	284,000	Rs. 752,725,112	Rs. 2,650.	113
Kashf Foundation	319,153	Rs. 2,000,972,725	Rs. 6,270	5
BRSP	14,392	Rs. 159,941,400	Rs. 11,113	12
Sindh RSP	8,577	N/A	N/A	15
Sarhad RSP	1,200,000	Rs. 1,000,000,000	Rs. 833	4
BBSYDP	40,000	Rs. 2,500,000	Rs. 62.5	15
Sindh TEVTA	3,210 ⁹⁷	Rs. 500 million	N/A	5
Punjab TEVTA	541 ⁹⁸	Rs. 5.32 billion	N/A	21

⁹⁵ Note that these calculations are unlikely to be very accurate. Due to the lack of information on the expenditures of the program, we assume that the budget allocations were expended during the financial year.

⁹⁶ This is also an exaggerated number as the budget pertains to all of NRSP's programs while the beneficiary figures are only for its microcredit and training programs.

⁹⁷ These are only trainees enrolled in courses for which eligibility requirement is literacy.

⁹⁸ Same as above

Annexure 11 – Labor Regulations on Dismissal Policy Across Region

Regulation	EAP	ECA	LAC	MENA	SA	SSA	Pakistan
Forbidding fixed term contracts for permanent activities	0.2	0.6	0.7	0.4	0.3	0.4	1.0
Maximum lengths of fixed term contract (months)	44.0	46.9	28.8	33.6	24.0	38.2	9.0
Severance pay for redundancy dismissal (in salary weeks)							
Workers with less than 9 months tenure	1.8	6.8	2.9	2.2	0.3	2.1	3.2
Workers with 1 year tenure	3.5	7.3	3.8	2.7	3.3	3.3	4.3
Workers with 5 year tenure	13.2	10.1	14.7	8.9	12.4	12.9	21.4
Workers with 10 year tenure	24.7	13.5	26.3	17.6	23.4	26.1	42.9
Workers with 20 year tenure	45.1	19.7	48.2	35.9	42.4	59.0	85.7
Notice period for redundancy dismissal (in salary weeks)							
Workers with less than 9 months tenure	2.6	5.6	1.5	3.6	3.2	4.5	4.3
Workers with 1 year tenure	2.6	5.6	2.1	4.3	4.5	4.9	4.3
Workers with 5 year tenure	3.4	6.0	3.0	5.1	5.1	6.0	4.3
Workers with 10 year tenure	3.6	6.2	3.6	5.9	6.0	6.8	4.3
Workers with 20 year tenure	3.6	6.2	4.1	5.9	6.0	7.6	4.3
Notifying third party required? (Yes- 1 and No- 0, region average)							
Any dismissal	0.4	0.3	0.4	0.8	0.8	0.8	0.0
Dismissal of 9+ workers	0.6	0.4	0.4	1.0	0.8	0.9	0.0

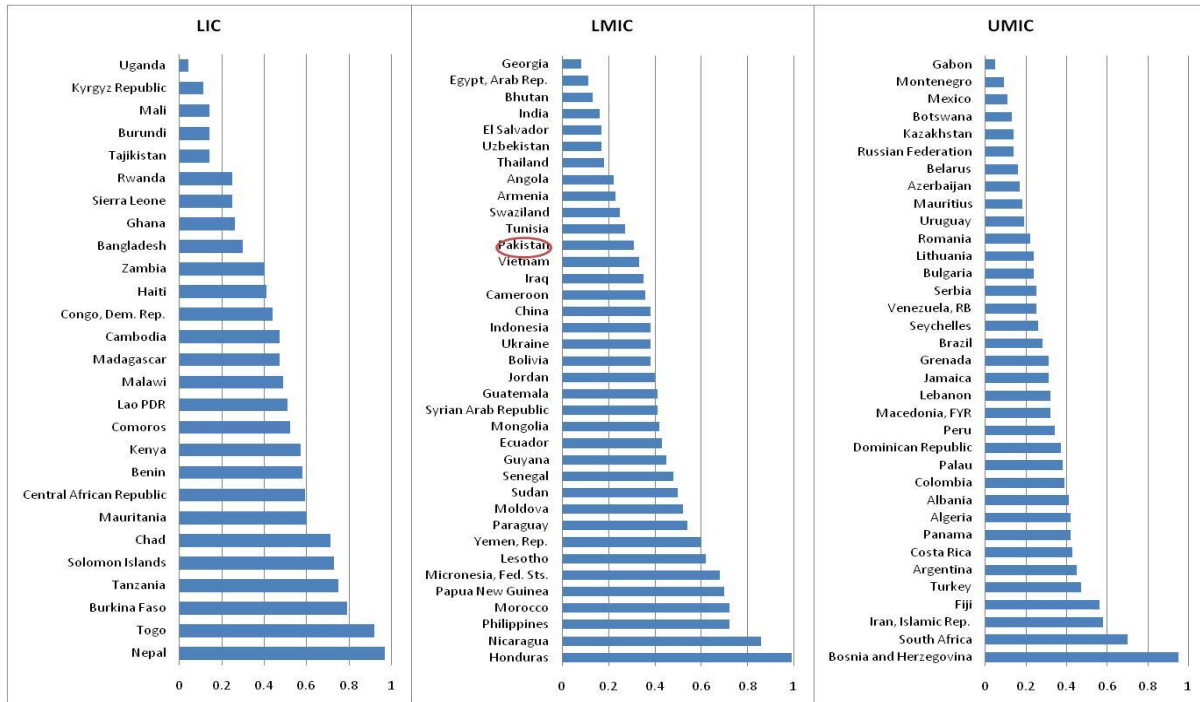
Source: Doing Business 2011.

Annexure 12 – Labor Regulation among Lower Middle Income Countries

Country	Region	Income	Worker Protection	Social Security	Health and Safety	Gender and Personal Needs
Armenia	Europe & Central Asia	Low er middle income	0.73	0.56	1.00	0.60
Belize	Latin America & Caribbean	Low er middle income	0.62	0.44	0.00	0.27
Bhutan	South Asia	Low er middle income	0.62	0.38	0.33	0.27
Bolivia	Latin America & Caribbean	Low er middle income	0.83	0.67	0.67	0.45
Cameroon	Sub-Saharan Africa	Low er middle income	0.40	0.22	1.00	0.64
Cape Verde	Sub-Saharan Africa	Low er middle income	0.62	0.67	0.00	0.55
Congo, Rep.	Sub-Saharan Africa	Low er middle income	0.56	0.33	0.00	0.36
Côte d'Ivoire	Sub-Saharan Africa	Low er middle income	0.58	0.44	0.00	0.64
Egypt, Arab Re	Middle East & North Africa	Low er middle income	0.92	0.75	0.67	0.45
El Salvador	Latin America & Caribbean	Low er middle income	0.69	0.56	0.33	0.45
Georgia	Europe & Central Asia	Low er middle income	0.69	0.22	0.33	0.50
Ghana	Sub-Saharan Africa	Low er middle income	0.85	0.44	0.67	0.36
Guatemala	Latin America & Caribbean	Low er middle income	0.77	0.44	0.00	0.55
Guyana	Latin America & Caribbean	Low er middle income	0.62	0.44	0.00	0.27
Honduras	Latin America & Caribbean	Low er middle income	0.54	0.71	0.33	0.55
India	South Asia	Low er middle income	1.00	0.78	0.33	0.45
Indonesia	East Asia & Pacific	Low er middle income	0.50	0.50	0.50	0.55
Iraq	Middle East & North Africa	Low er middle income	0.85	0.33	0.00	0.36
Kiribati	East Asia & Pacific	Low er middle income	0.46	0.25	0.00	0.55
Kosovo	Europe & Central Asia	Low er middle income	0.69	0.29	1.00	0.90
Lao PDR	East Asia & Pacific	Low er middle income	0.77	0.78	1.00	0.45
Lesotho	Sub-Saharan Africa	Low er middle income	0.27	0.11	0.33	0.36
Marshall Islands	East Asia & Pacific	Low er middle income	0.08	0.43	0.00	0.09
Mauritania	Sub-Saharan Africa	Low er middle income	0.62	0.44	0.50	0.45
Micronesia, Fec	East Asia & Pacific	Low er middle income	0.10	0.78	0.00	0.09
Moldova	Europe & Central Asia	Low er middle income	1.00	0.89	1.00	0.70
Mongolia	East Asia & Pacific	Low er middle income	1.00	0.56	1.00	0.45
Morocco	Middle East & North Africa	Low er middle income	0.69	0.56	0.33	0.64
Nicaragua	Latin America & Caribbean	Low er middle income	0.69	0.50	0.67	0.55
Nigeria	Sub-Saharan Africa	Low er middle income	0.62	0.33	0.33	0.36
Pakistan	South Asia	Low er middle income	0.40	0.50	0.67	0.27
Paraguay	Latin America & Caribbean	Low er middle income	0.62	0.44	0.33	0.73
Philippines	East Asia & Pacific	Low er middle income	0.75	0.67	0.67	0.55
São Tomé and P	Sub-Saharan Africa	Low er middle income	0.77	0.33	0.00	0.67
Senegal	Sub-Saharan Africa	Low er middle income	0.58	0.38	0.67	0.55
Solomon Islands	East Asia & Pacific	Low er middle income	0.09	0.44	1.00	0.27
Sri Lanka	South Asia	Low er middle income	0.69	0.44	0.33	0.27
Sudan	Sub-Saharan Africa	Low er middle income	0.20	0.56	0.67	0.36
Swaziland	Sub-Saharan Africa	Low er middle income	0.31	0.56	0.33	0.55
Syrian Arab Re	Middle East & North Africa	Low er middle income	0.75	0.50	0.33	0.45
Timor-Leste	East Asia & Pacific	Low er middle income	0.62	0.33	0.33	0.64
Ukraine	Europe & Central Asia	Low er middle income	1.00	0.88	1.00	0.67
Uzbekistan	Europe & Central Asia	Low er middle income	0.92	0.78	1.00	0.60
Vietnam	East Asia & Pacific	Low er middle income	0.92	1.00	0.00	0.45
West Bank and J	Middle East & North Africa	Low er middle income	0.62	0.00	0.67	0.36
Zambia	Sub-Saharan Africa	Low er middle income	0.08	0.44	1.00	0.27

Source: Author's calculation from the data for worker protection measures. The numbers in the table represent an aggregate index of each country in sections 'worker protection', 'social security', 'health and safety' and 'gender and personal needs', ranging from 0 (no specified protection measure) to 1 (all protection measures being specified in law). For each category, overall 176 countries, we calculated mean and standard deviation (SD). Each country is color coded to represent the extent of worker protection with **Red** meaning that the country's index is lower than 1 SD below the mean, **Green** meaning higher index by at least 1 SD above the mean, and **Yellow** being between them. Only the LMIC countries are presented here.

Annexure 13 – Minimum Wage as a Percentage of Average Value Added by Income Level⁹⁹



Source: Doing Business 2011

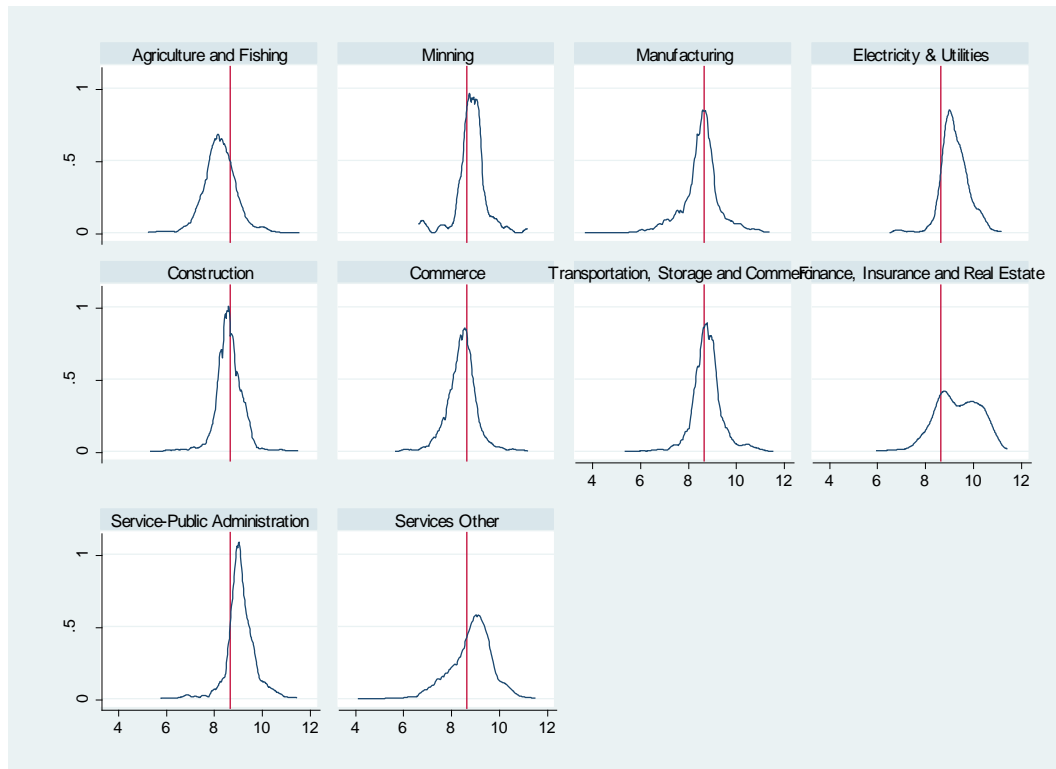
⁹⁹ Countries with minimum wage higher than 100% of value added by an average worker or with no information were dropped. Dropped countries for high minimum wage include Liberia (2.11), Zimbabwe (1.8), Mozambique (1.01). Countries with no information on minimum wage include Republic of Congo (2.46), and Ethiopia, Gambia, Guinea-Bissau, Ginea, Afghanistan, Eirtrea, Maldives, Kiribati, Nigeria, Tonga, Djibouti, Cape Verde, Cote d'Ivoire, Marshall Islands, Malaysia, Chile, Namibia, and Suriname.

Annexure 14 – Proportion of Workers below Minimum Wage

Sector	All	Regular	Formal	No education	Formal & No Education
Agriculture	72.7%	75.5%	-	76.5%	-
Manufacturing	49.7%	41.0%	39.0%	61.2%	-
Construction	51.1%	32.3%	-	54.8%	-
Commerce	61.8%	61.7%	25.0%	64.3%	-
Transportation and Finance	35.3%	32.1%	16.8%	43.9%	-
Public	12.2%	11.1%	11.3%	25.0%	20.3%
Other service	67.6%	68.7%	47.4%	78.8%	-

Note: Author's calculation based on LFS 09. Missing entry in case of few observations less than 10.

Annexure 15 – Kernel Density Graphs of Wage Distribution by Sector



Source: based on LFS 2008/09.

Note: The red vertical line indicates the level of minimum wage. The graphs were generated among all wage and salary workers in each sector.